

4.0 DESIGN EVOLUTION

Design Evolution and DR Panels

As part of the design process we presented this scheme to the RIBA Places Matter Design Review Panel four times in total. A summary of this process and how the design evolved is included below.

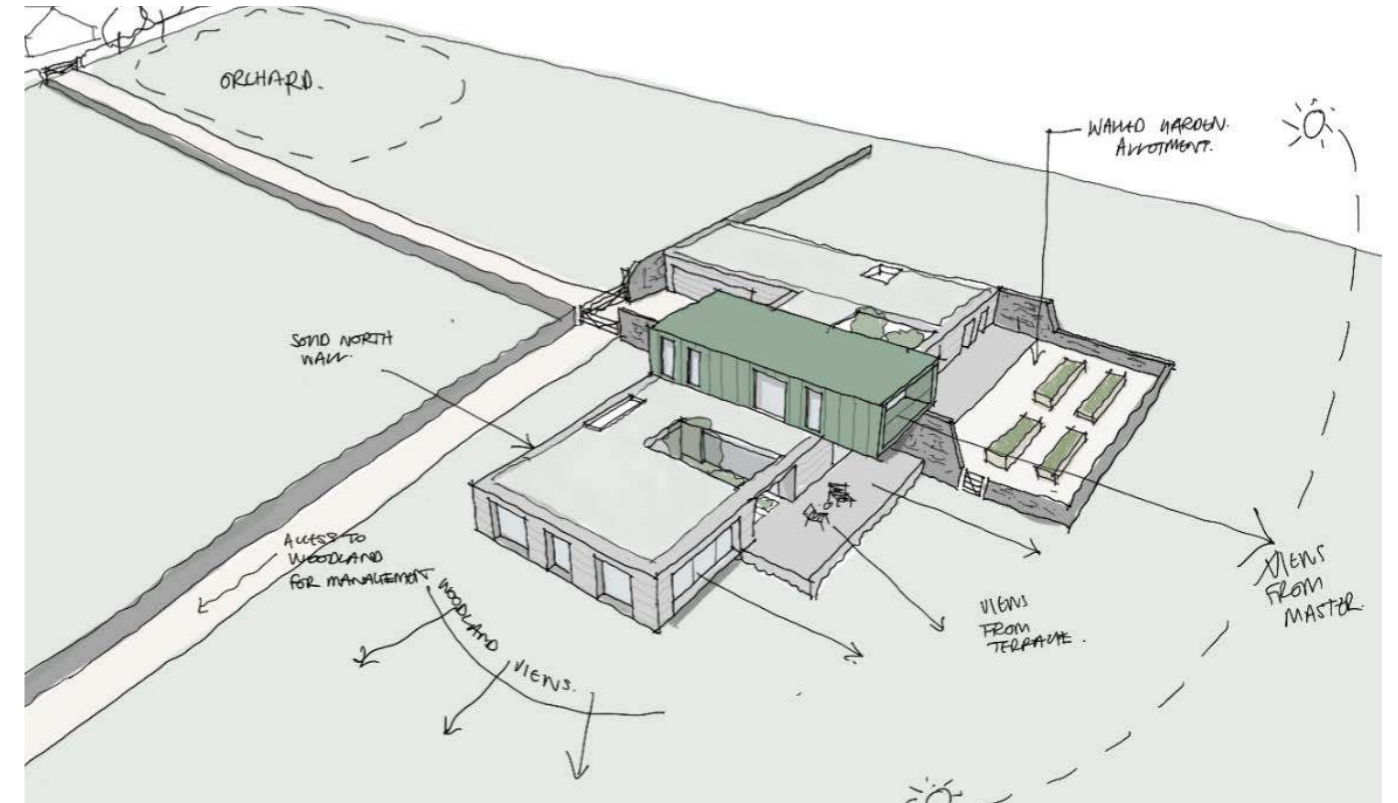
1st Review – 15 February 2023 (Report dated 28 Feb 2023)

Panel Feedback

- Proposal not yet at Paragraph 80e standard, but promising.
- Strong: connection to nature, bio-receptive concrete, rewilding ideas.
- Weaknesses:
 - Not yet “of its place” needed stronger context, townscape, and vernacular references.
 - Geometry too rigid; building alignment with Roman road/dry-stone wall not resolved.
 - Cantilever conceptually wrong – the “upper box” lacked depth of thought.
 - Sustainability underdeveloped, push for Passivhaus certification, ground source heat, carbon /Biodiversity Net Gain metrics.
 - Chimney oversized/alien; windows lacked proportionality.
 - Landscape integration insufficient – southern elevation too hard, pergola/garden details weak.
 - Suggested flipping functions (living upstairs with better views).

What we did following the review:

- Began reworking building geometry, rotation, and siting to align with site context / roman road.
- Explored courtyard/farmstead concepts.
- Brought in more sustainability thinking, including BNG strategy and low-carbon structure.
- Started refining materiality (stone, timber, gabions tested later).



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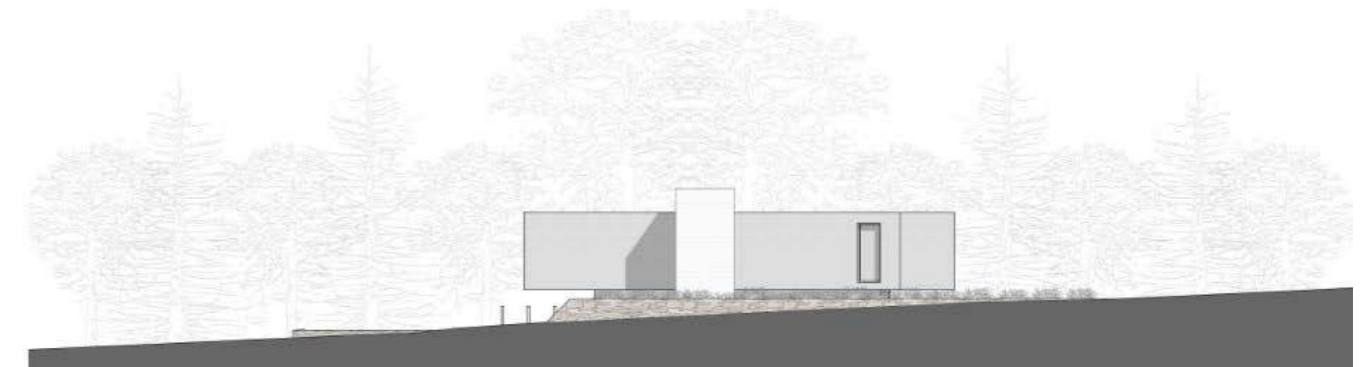
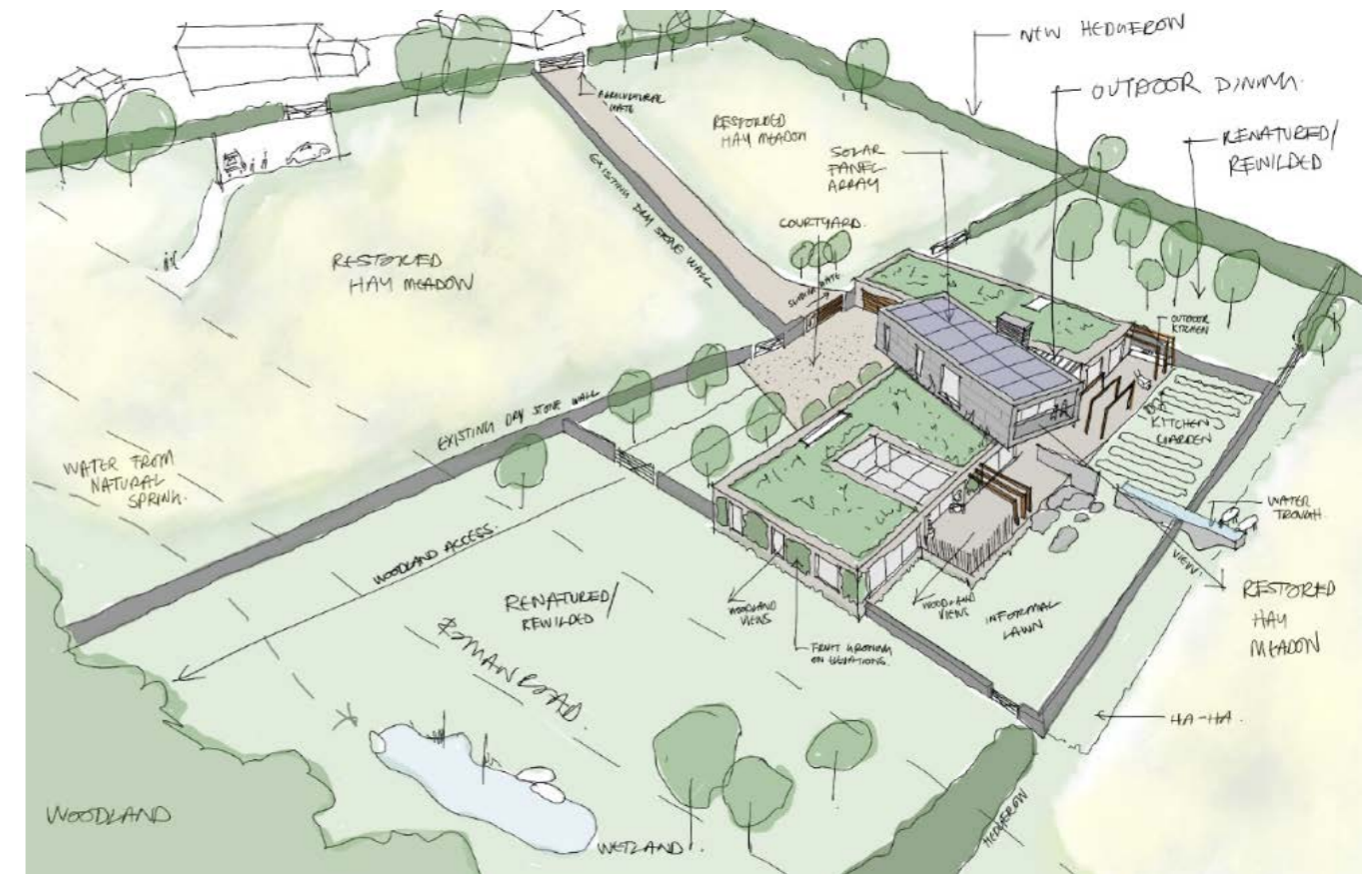
2nd Review – 19 April 2023 (Report dated 26 Apr 2023)

Panel Feedback

- Still not yet at Paragraph 80e, but “very close.”
- Praised landscape-led approach (only 6% built on site, 39% BNG).
- Liked rotation + new geometry – building now sits better in landscape.
- Suggestions:
- Consider breaking massing into three built elements linked by glazing (farmstead/pavilion logic).
- Courtyard could be larger.
- Test materiality of the upper ‘box’ and details of the glass beam.
- Reconsider chimney and pergolas.
- Ensure architectural details (roof edges, junctions) are rigorously designed.
- Mirror upper floor layout for better chimney alignment + possible roof terrace access.

What we did following the review:

- Split form into three clear built volumes with glazed links.
- Realigned the geometry of the upper ‘box’ to site parallel with ground floor and roman road.
- Removed pergolas (later confirmed).
- Repositioned/rotated chimney and refined alignment.
- Continued testing materials (biophilic concrete with SIPs behind).
- Continued the development and testing and materials to the first floor ‘box’.
- Integrated sustainability narrative more strongly.



East Elevation



West Elevation

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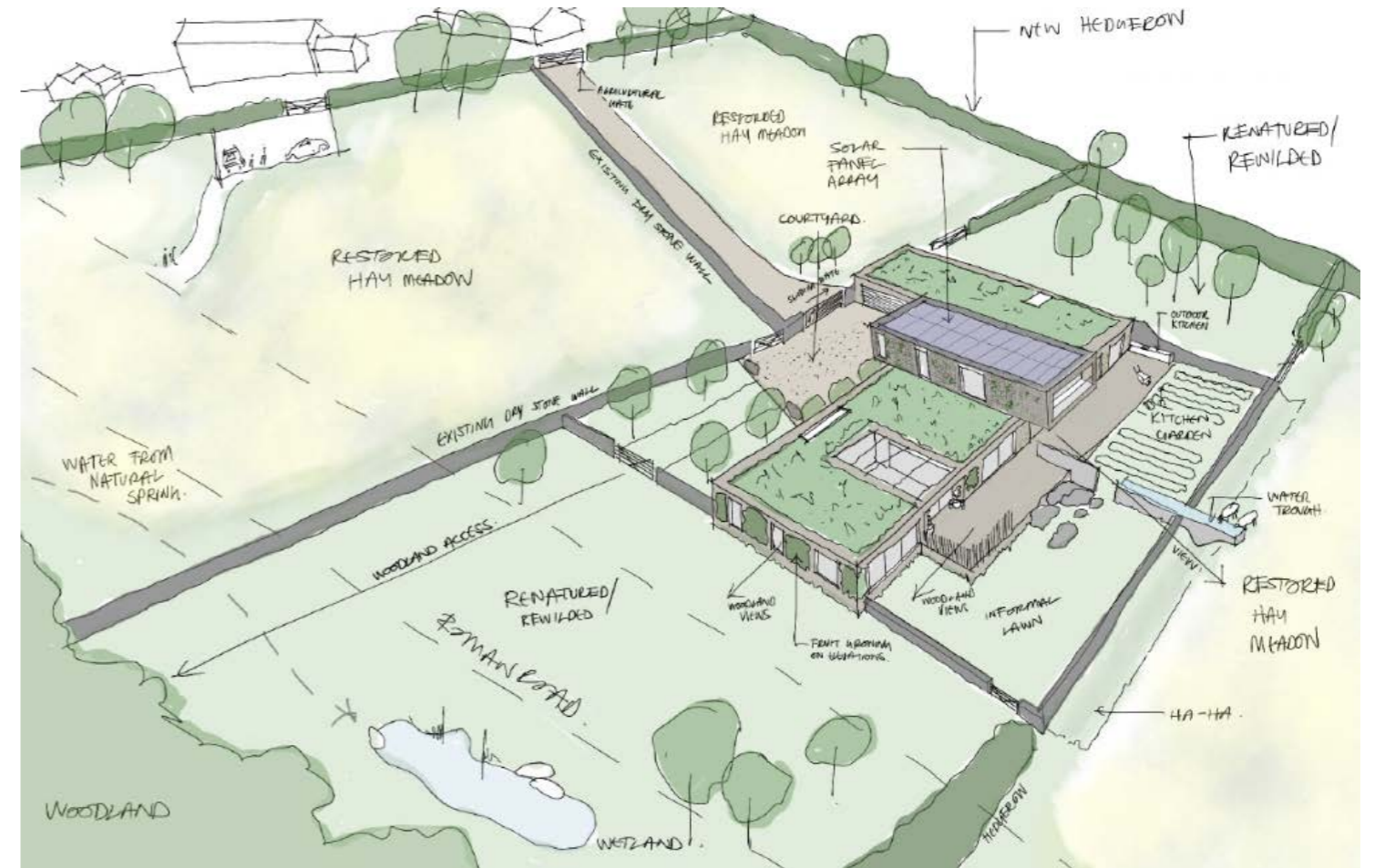
4th Review – Desk Review, 31 July 2023 (Report dated 1 Aug 2023)

Panel Feedback

- Success: Proposal now meets Paragraph 80e.
- Considered “exceptional quality of design.”
- Praised the collaborative process and positive evolution.
- Recommended LPA attach conditions to ensure delivery as designed.

What we did following the review:

- Final refinements implemented in line with the above comments.
- Produced high-quality visuals, narrative, and animation that convinced the Panel.
- Submitted planning application.



5.0 DESIGN VISION

Design Vision

The design vision for this Paragraph 84 dwelling is to create a home that embodies architectural excellence while demonstrating a deep respect for its rural surroundings. The proposal seeks to deliver a building that is both sculptural and functional, seamlessly integrating with the topography and natural features of the site. The design takes inspiration from the textures, tones, and forms of the local vernacular, reinterpreting these elements in a contemporary language that celebrates craftsmanship and innovation.

A fundamental aspect of the design is the integration of a considered and ecologically rich landscape. The landscaping is conceived as an essential design feature that enhances the architectural composition and contributes positively to the local area. The scheme introduces a diverse range of habitats, including native wildflower meadows, species-rich hedgerows, and the planting of native tree species to strengthen existing ecological corridors. A network of ponds and wetland areas will support amphibians and aquatic life, while green roofs and living walls will provide valuable foraging and nesting opportunities for birds and insects – together forming a landscape that enriches both biodiversity and the character of the place.

Additionally, the design incorporates bat and bird boxes, bee hotels, and log piles to encourage a thriving ecosystem. Dark-sky-compliant external lighting will protect nocturnal wildlife while maintaining the rural character of the site. These measures, alongside a commitment to long-term management and monitoring, ensure the proposal not only mitigates its ecological impact but actively enhances the natural environment, setting a benchmark for sustainable rural development.

Sustainability and Environmental Performance

Sustainability is at the core of this Paragraph 84(e) proposal, aiming to deliver a dwelling that sets new standards for environmental performance. The design adopts a fabric-first approach, ensuring the building envelope maximizes thermal efficiency through high-performance insulation, airtight construction, and low-carbon materials. Renewable energy systems, including photovoltaic panels and an air-source heat pump, will provide clean energy for the home, reducing reliance on non-renewable resources.

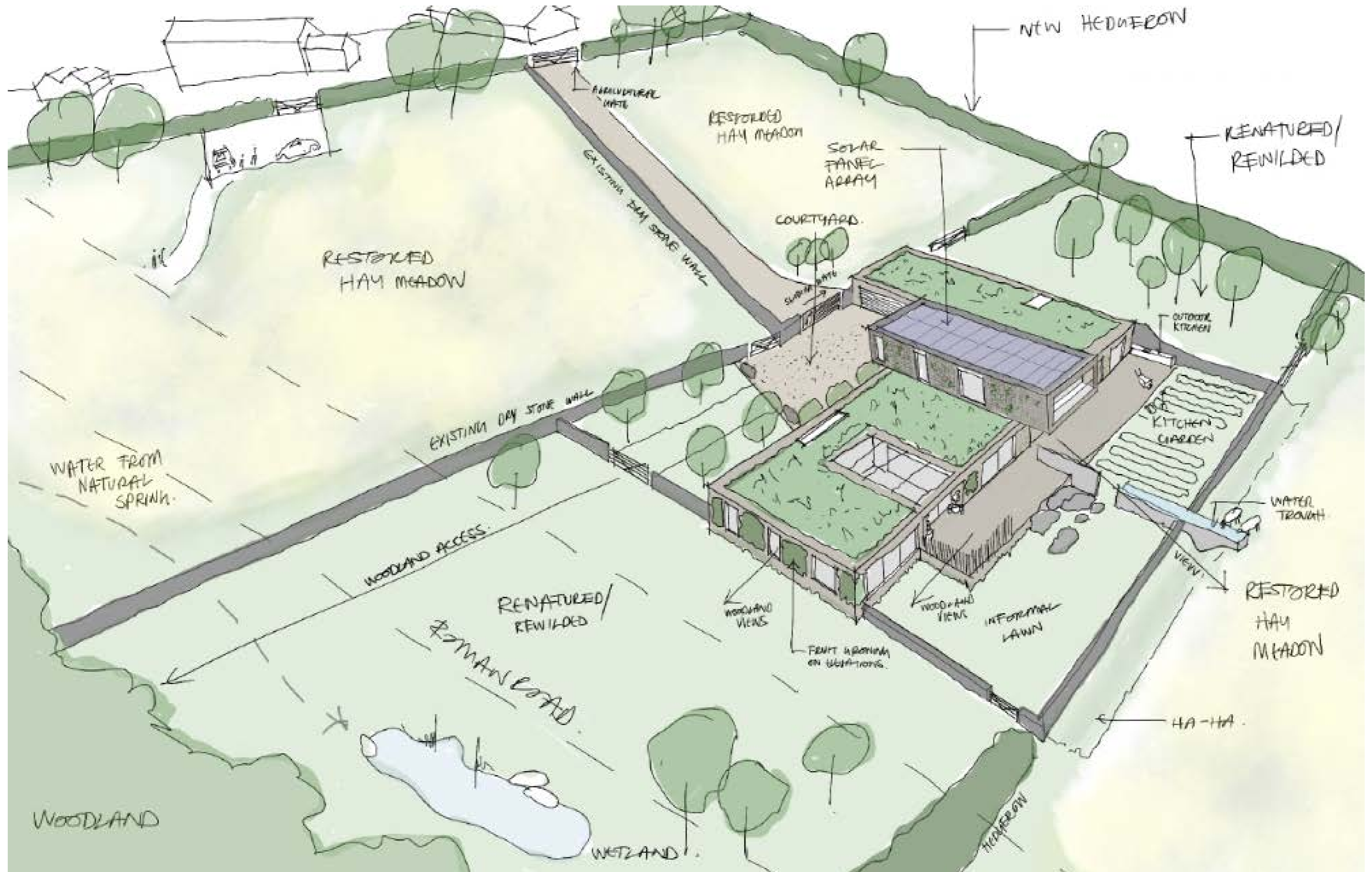
Water conservation is prioritized through rainwater harvesting systems, greywater recycling, and permeable landscaping solutions that minimize surface water runoff. The building's orientation and fenestration are carefully designed to optimize passive solar gain while minimising overheating, ensuring comfortable living conditions year-round with minimal energy use.

The proposal also embraces circular economy principles by integrating reclaimed and locally sourced materials, minimizing embodied carbon, and reducing waste during construction. The landscaping strategy incorporates carbon sequestration elements, such as extensive tree planting and soil regeneration techniques, to offset residual emissions.

By balancing high-performance architecture with regenerative environmental practices, this dwelling demonstrates a holistic approach to sustainability, making a positive contribution to the landscape and setting a precedent for future rural development.



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Concept Overview

A key aspect of the design is its integration of food production into the daily life of the occupants. The dwelling will feature dedicated greenhouses, allowing residents to cultivate their own food year-round. This self-sufficient model extends to the very fabric of the house, with the elevations designed to support vertical farming. Green walls will be incorporated into the structure, enabling the growth of edible plants such as herbs, vegetables, and fruits. This approach not only enhances the sustainability of the dwelling but also redefines the relationship between the home and the land, offering a sustainable way of living that responds to the modern need for local, organic food production. The grow houses are set into the plan and bring natural light into the building.

Materiality

The material palette for this project has been carefully selected to reflect both the local vernacular and the natural characteristics of the site, ensuring a seamless integration of the dwelling into its rural context while also introducing a modern, sustainable approach to construction.

Bio-Receptive Concrete

The ground floor of the dwelling will be constructed using bio-receptive concrete, a cutting-edge material that invites lichen, moss, and other forms of plant life to grow on its surface. This innovative material responds to environmental conditions, allowing for the gradual establishment of biological life, creating a dynamic, evolving facade. The inspiration for this choice comes from the existing stone walls on site, where natural moss growth has developed over time, blending the man-made structure with the natural environment. By incorporating bio-receptive concrete, the building's ground floor walls will not only blend visually with the landscape but will also support local biodiversity, fostering an environment where nature can take root and grow directly on the building.

Gabion Cages and Local Stone

The first floor is designed using gabion cages filled with local stone, which provides a contemporary interpretation of the traditional dry stone walls found across the region. The use of gabions—steel cages filled with stone—offers a robust and weather-resistant material solution, while the locally sourced stone helps the building maintain a strong connection to the surrounding landscape. The decision to use gabions is both functional and aesthetic, allowing the structure to echo the timeless qualities of dry stone walls while providing a modern twist through the use of an industrial material. The local stone's textures, colors, and patterns are carefully selected to ensure that the building responds sensitively to its environment, further reinforcing the idea of the dwelling as a continuation of the landscape.

Sustainability and Longevity

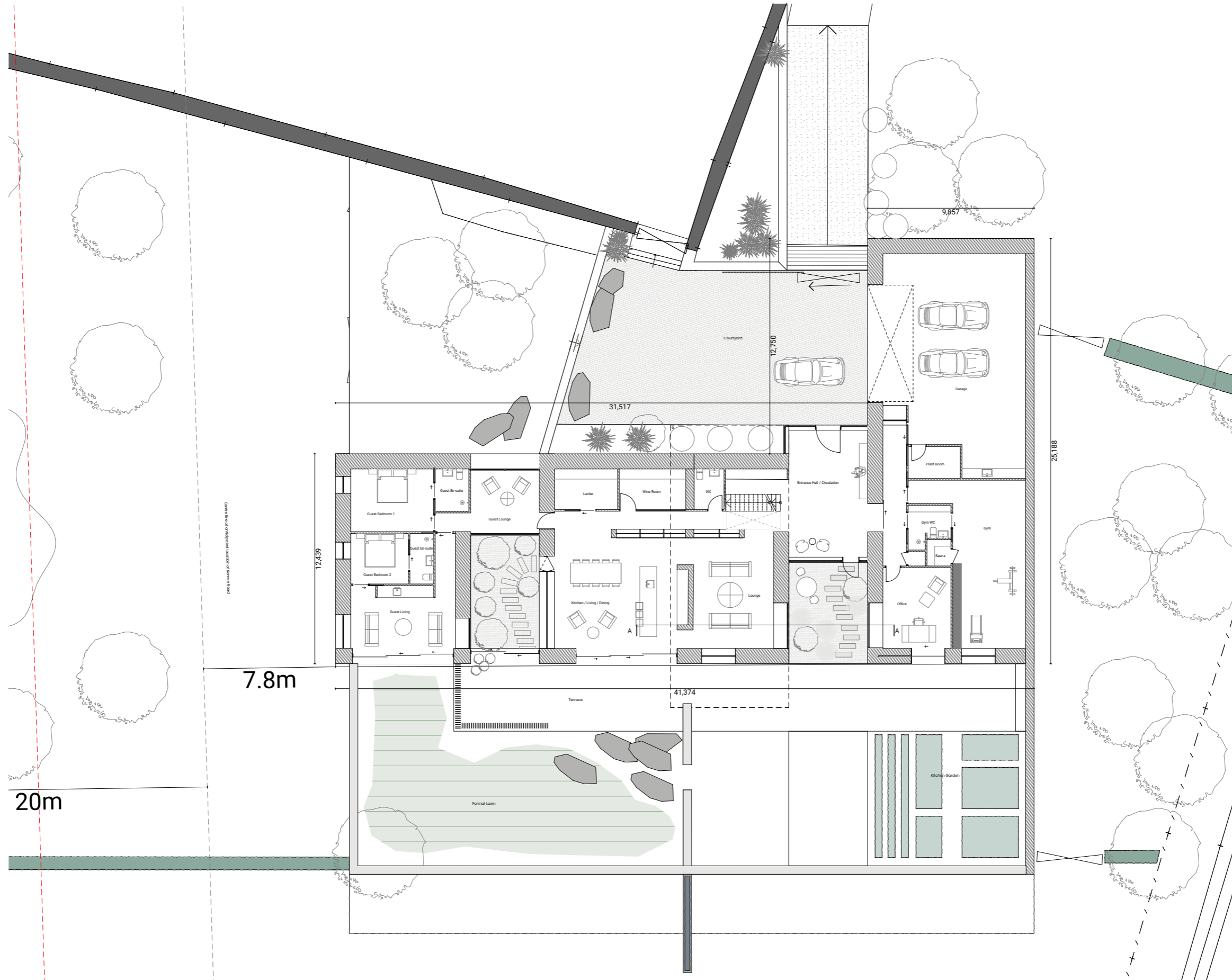
Both the bio-receptive concrete and gabion stone structures contribute to the sustainability and longevity of the building. The bio-receptive concrete's ability to support moss and lichen growth not only enhances the building's visual appeal but also improves its environmental performance by reducing surface temperatures and contributing to the creation of microhabitats. The gabion cages, filled with durable local stone, offer a sustainable building solution that is low maintenance, resilient to weathering, and naturally integrated with the surrounding rural context.

The chosen materials reflect a deep respect for the site's natural features and regional heritage while embracing contemporary techniques that foster sustainability and environmental synergy. The materials serve as a tangible manifestation of the design's commitment to blending modernity with tradition, creating a harmonious relationship between architecture and nature.

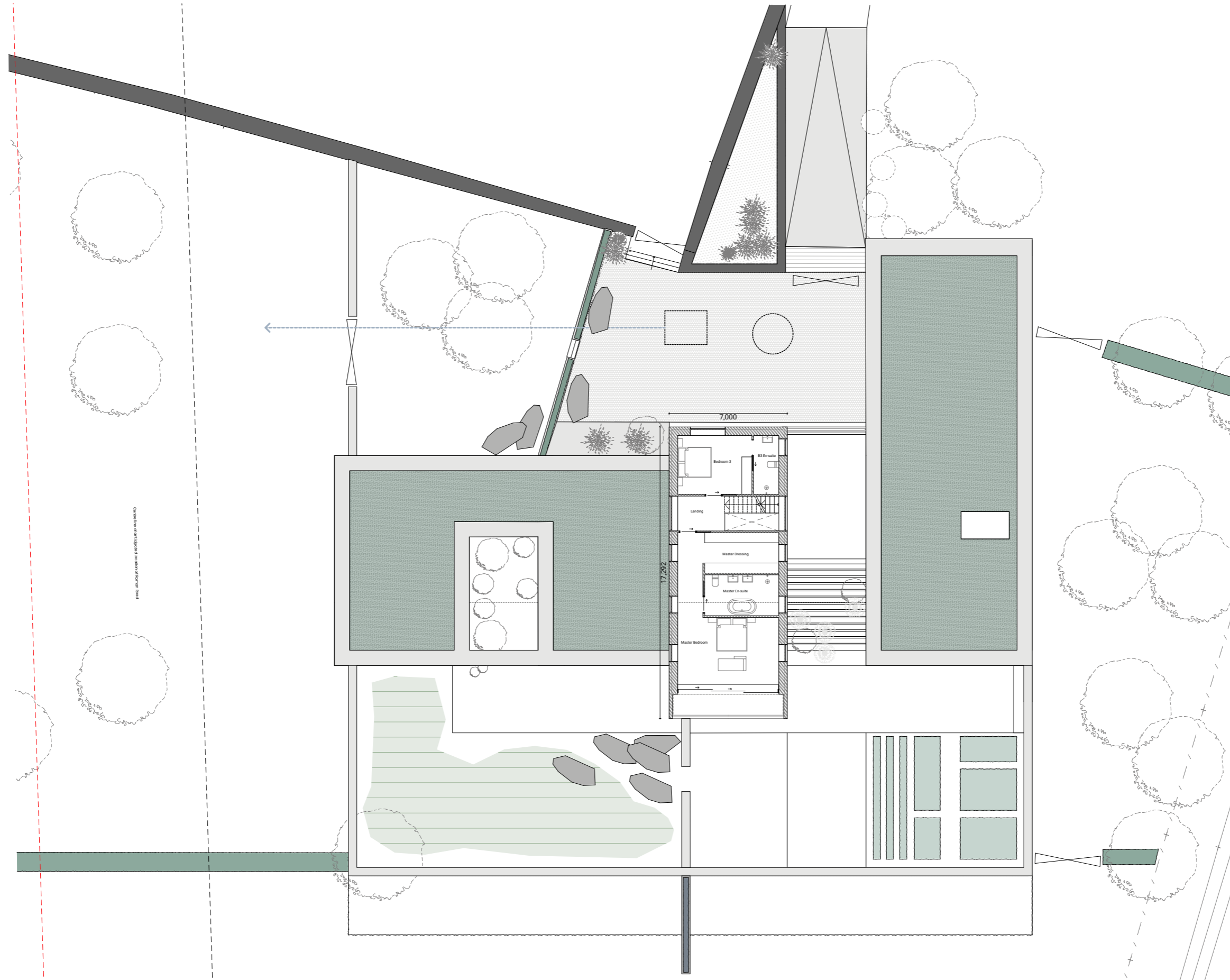


View through one of the growing spaces

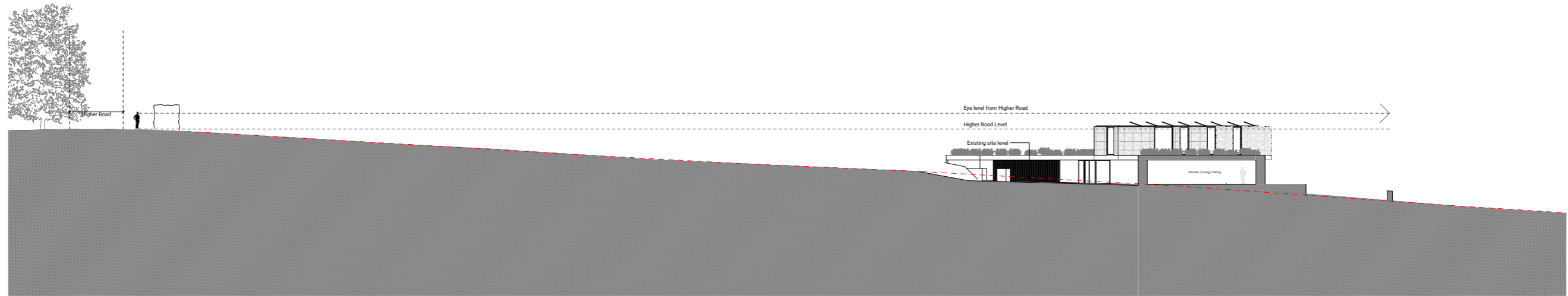
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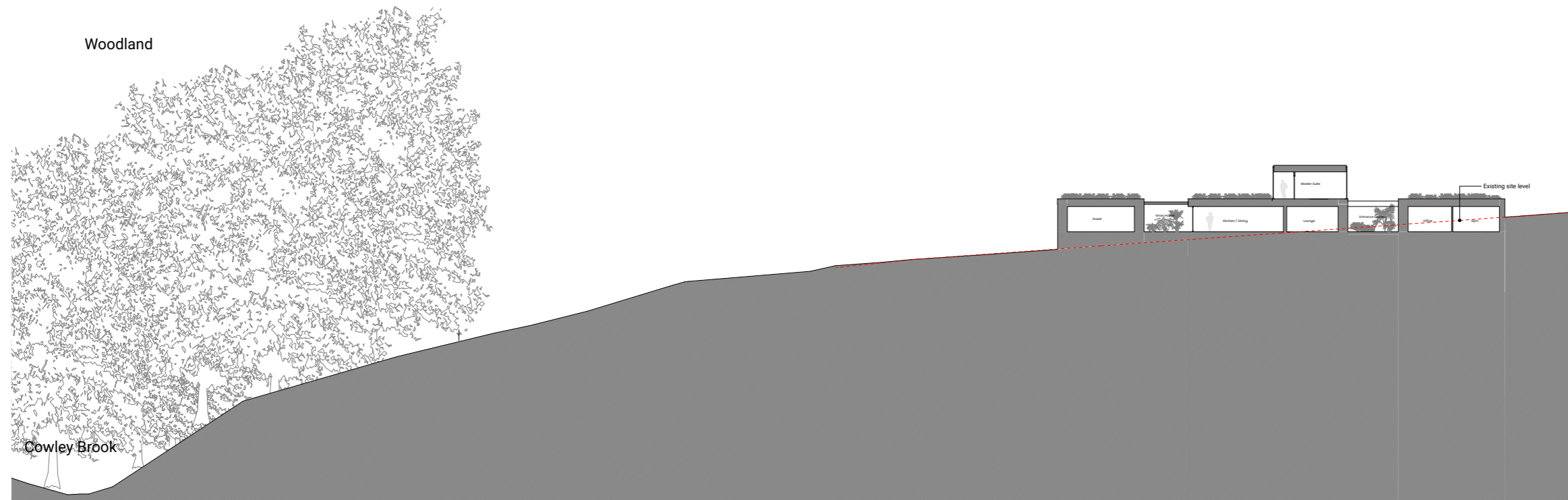
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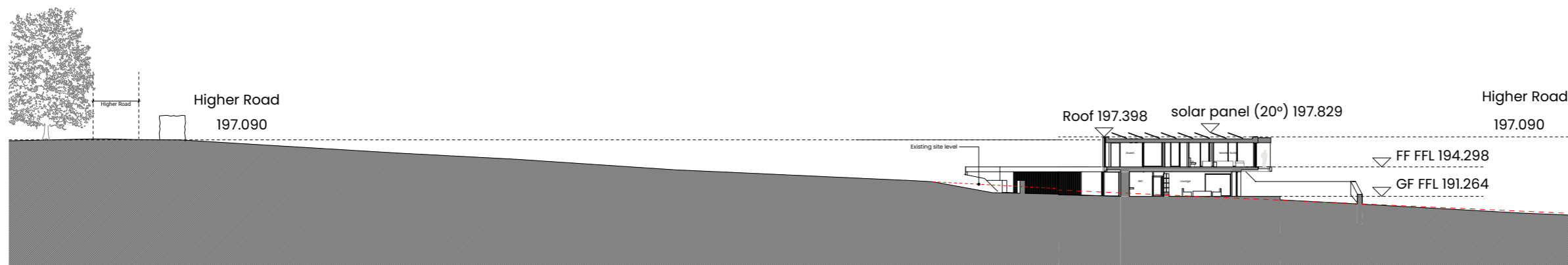
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Section C-C 1:200



Section D-D 1:200