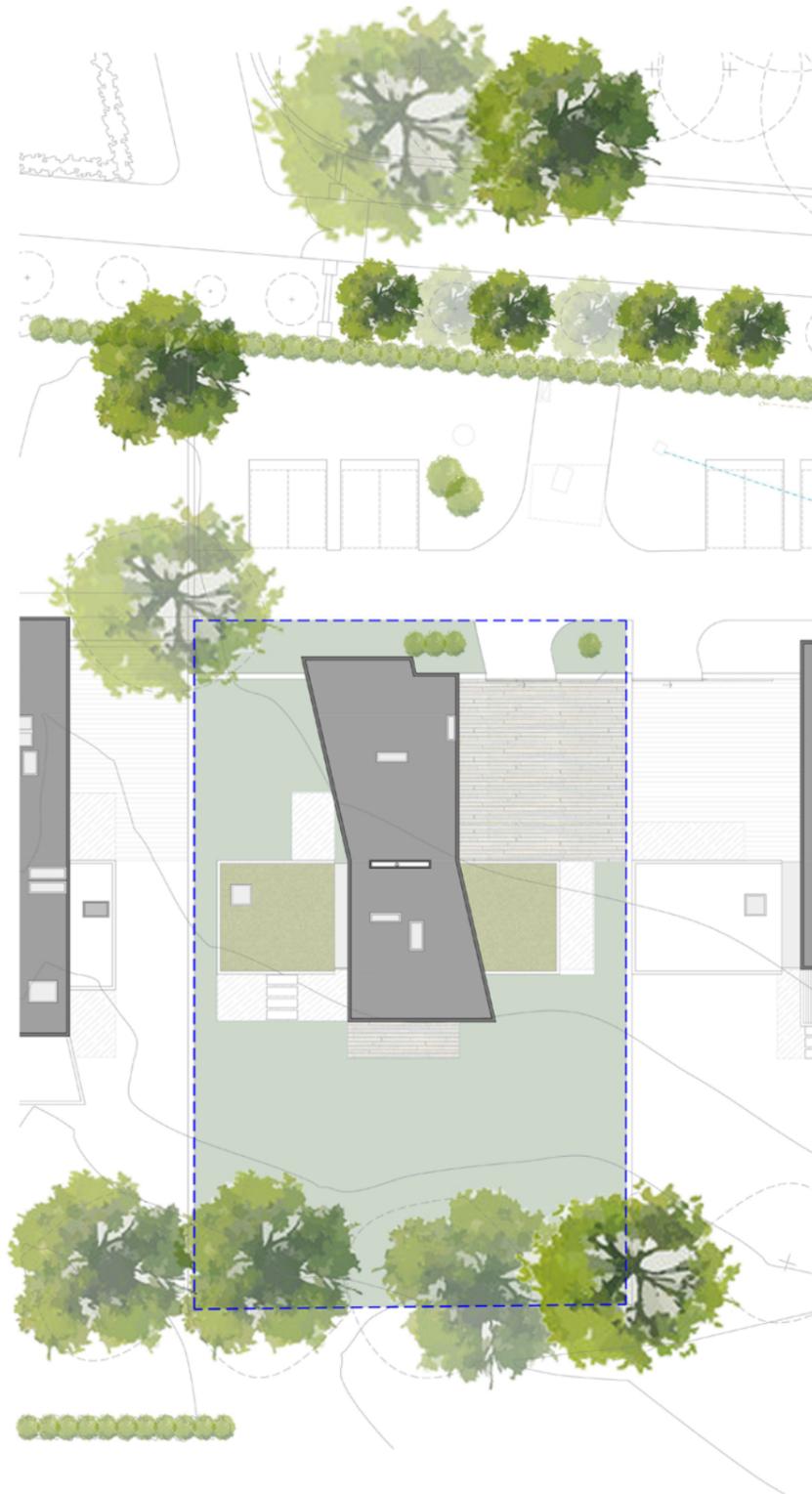


4.7.5 PLOT 05

4.7.5.1 Proposed Site Plan & Roof Plan



01 - Proposed Site Plan



02 - Proposed Roof Plan

4.7.5.2 Plot 5 - Floor Plans



01 - Ground Floor



Areas (GIA)

Ground Floor = 182.3m²
 First Floor = 143.4m²

Total GIA (excl. garage) = 325.7m²/ 3505 sqft
 Total GIA (incl. garage) = 372.7m²/ 4011 sqft

Plot Area = 1217m²

02 - First Floor

Room Legend

Ground Floor

- 01. Double Garage
- 02. Plant Room
- 03. Cloakroom
- 04. Entrance Lobby (double height)
- 05. Living Room
- 06. Kitchen
- 07. Utility/ Pantry
- 08. Shower Room
- 09. Sitting Area
- 10. Office
- 11. Games Room/ Family Room

First Floor

- 12. Bedroom 1 w/ En-suite
- 13. Family Bathroom
- 14. Bedroom 2 w/ En-suite
- 15. Bedroom 3 w/ En-suite
- 16. Master Bedroom w/ En-suite
- 17. Bedroom 5

Landscaping

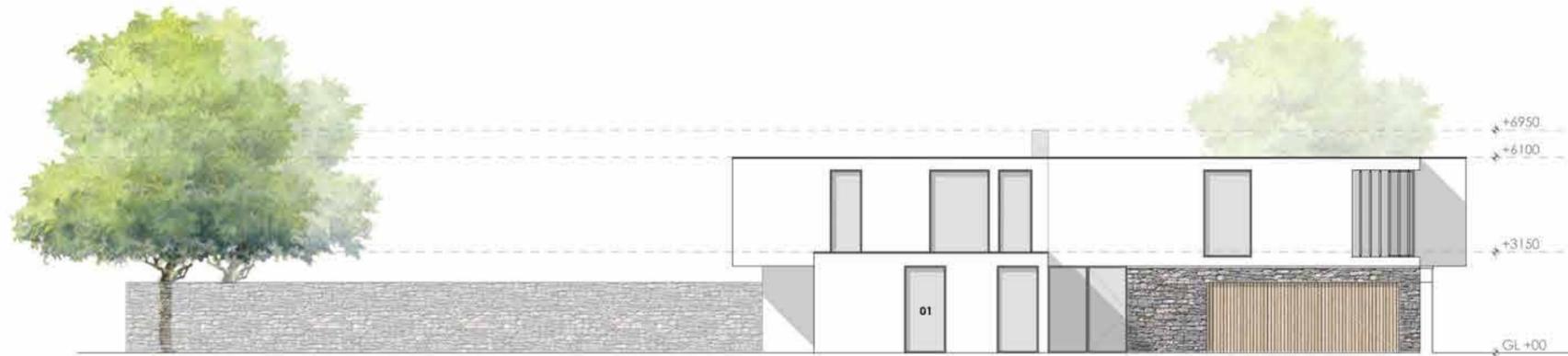
- 18. Decorative Pebbles
- 19. Permeable Paving
- 20. Bin/ Recycling Store
- * EV Charging Point

4.7.5.3 Plot 5 - Elevations

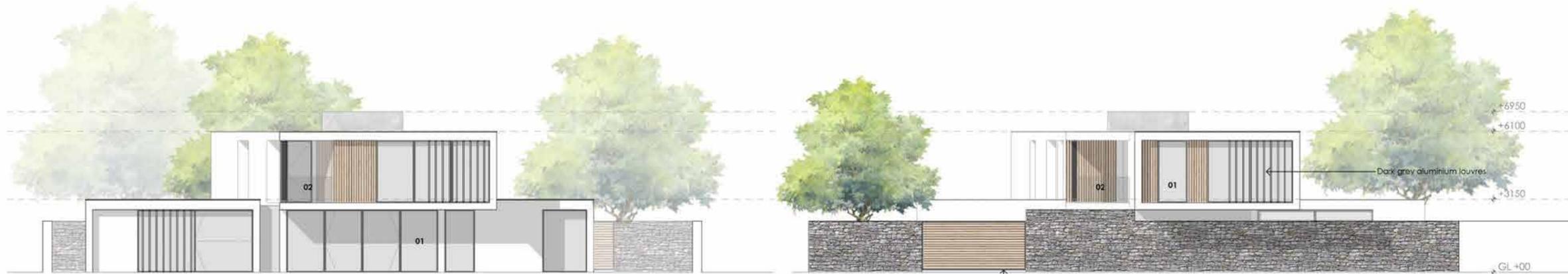


01 - South West Elevation

-  Natural Timber
-  Render
-  Natural Stone
-  Finished Concrete
- 01 Dark grey aluminium windows & doors
- 02 Frameless glass balustrade



02 - North East Elevation



03 - South East Elevation

04 - North West Elevation

4.7.5.4 Plot 5 - 3D Visuals



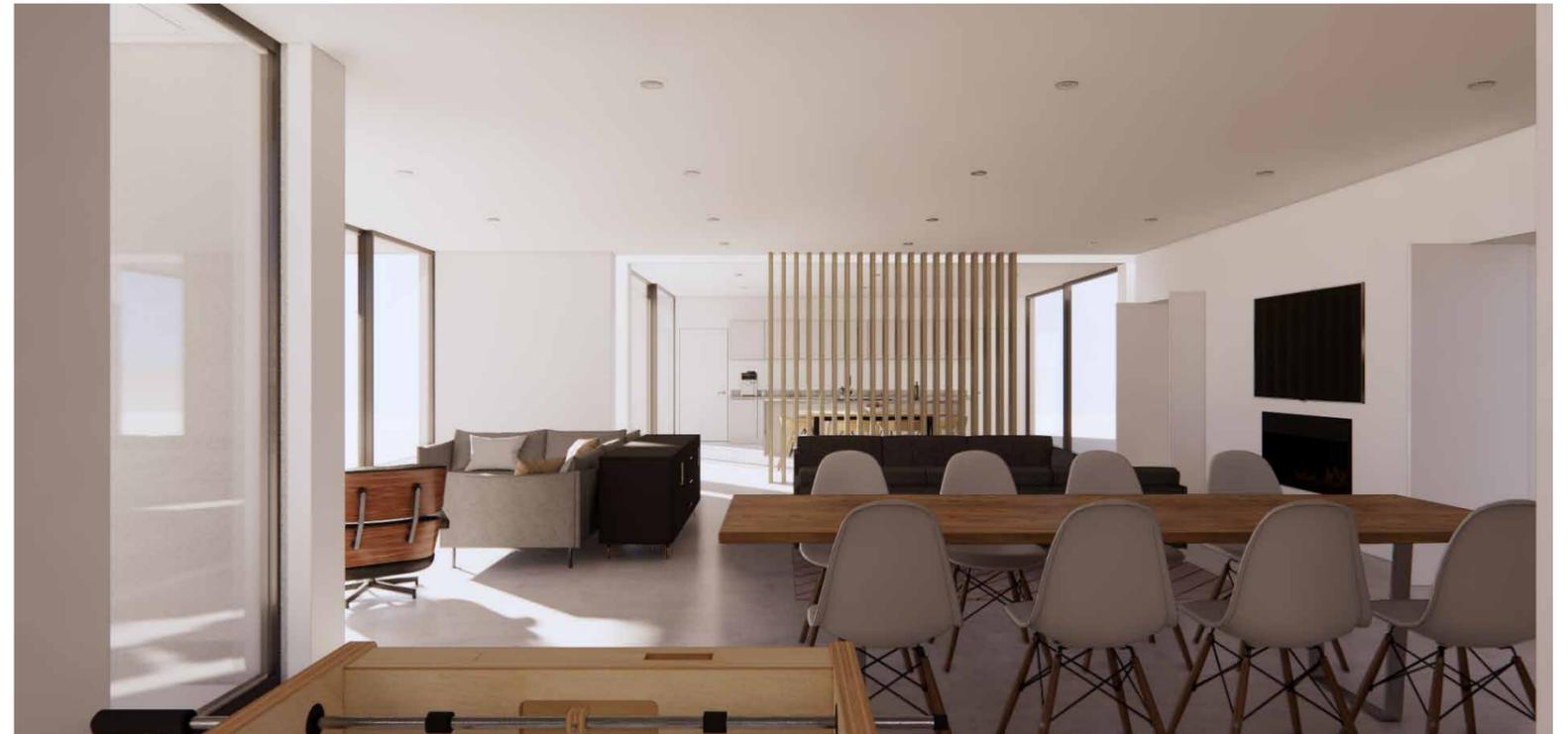
External View (South)



External View (North West)



External View (North)

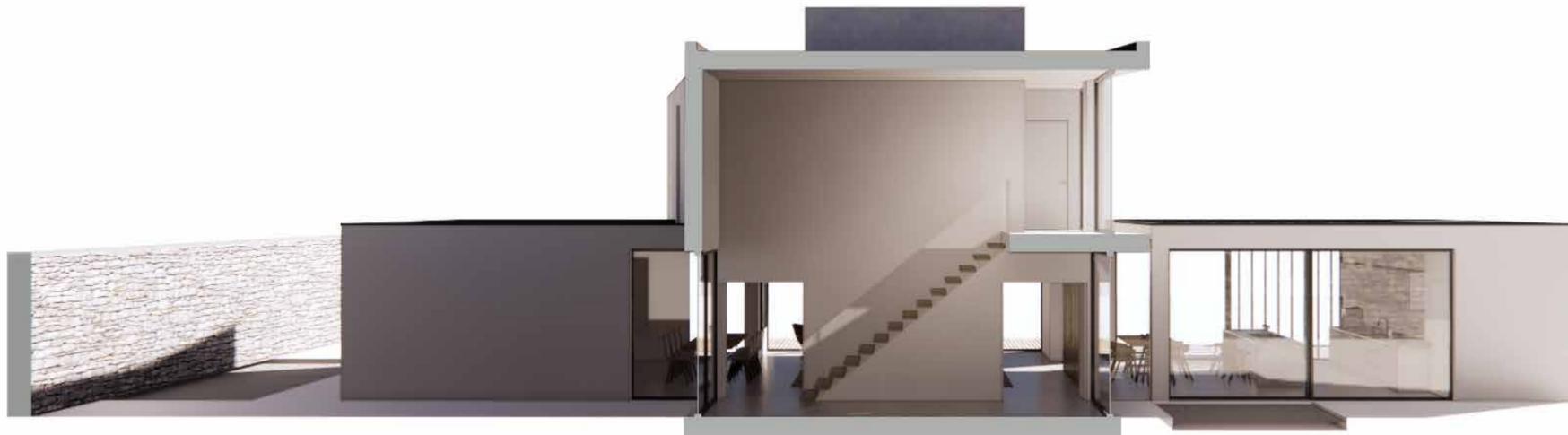


Interior Views

4.7.5.4 Plot 5 - 3D Visuals

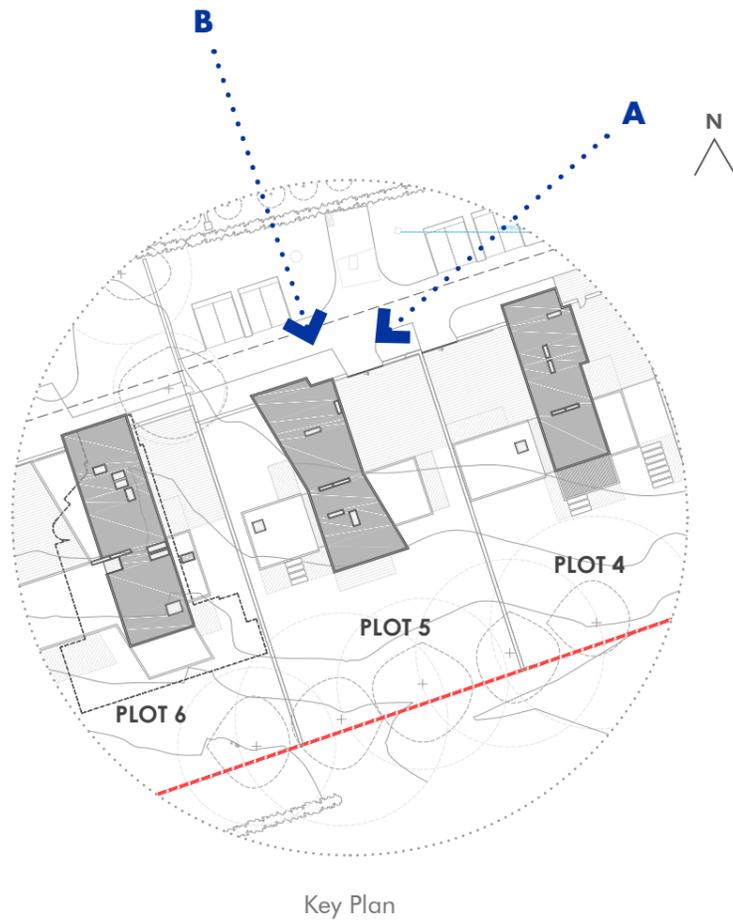


Long Section (North-South)



Cross Section (East-West)

4.7.5.4 Plot 5 - 3D Visuals



Key Plan

Site Features

- + Mature tree line to South
- + Access via new access road
- + Open aspect South
- + Private, enclosed courtyard/ driveway
- + Large landscaped garden



Exterior View A



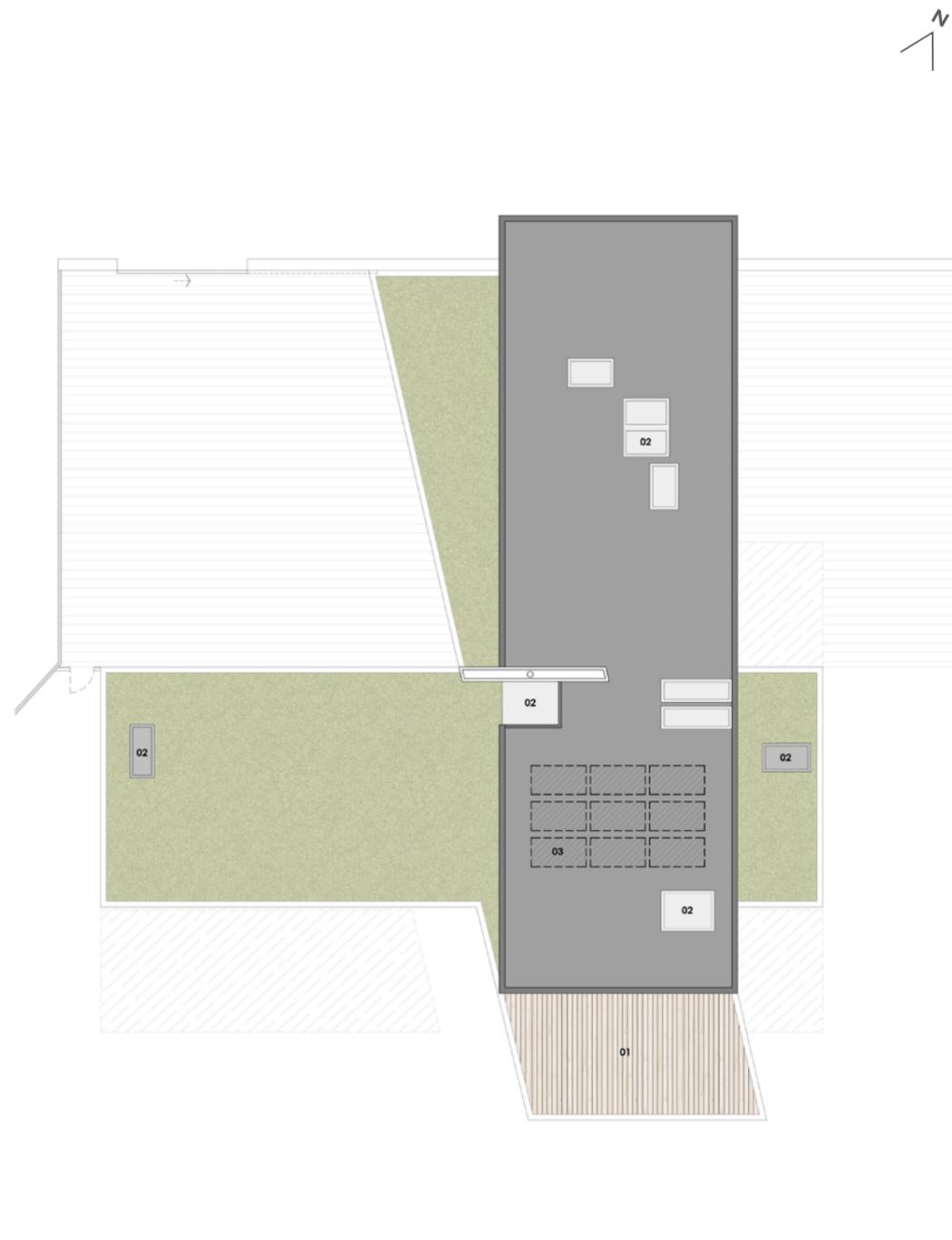
Exterior View B

4.7.6 PLOT 06

4.7.6.1 Proposed Site Plan & Roof Plan



01 - Proposed Site Plan

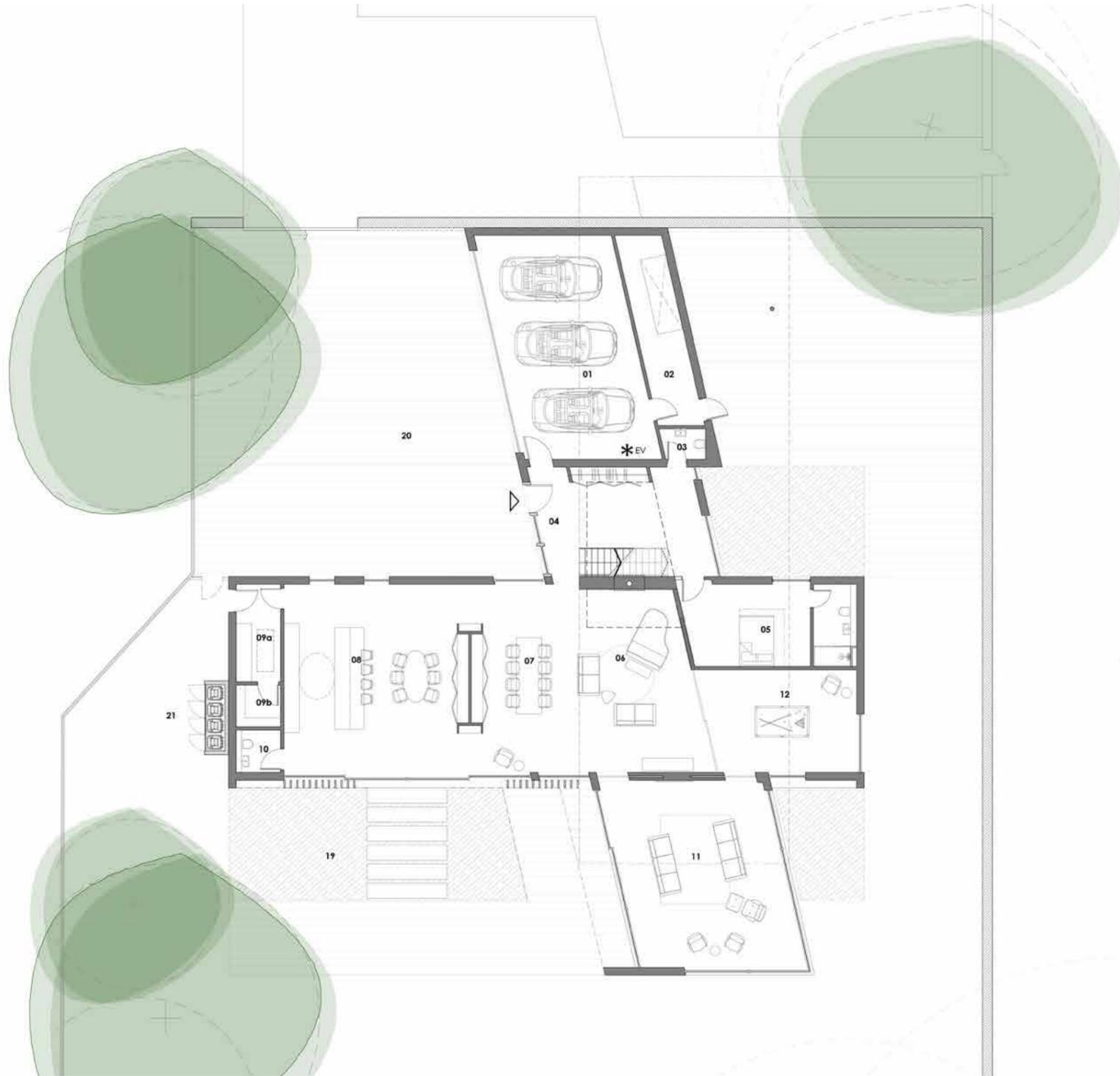


02 - Proposed Roof Plan

-  Plot Boundary
-  Single Ply Roofing
-  Sedum Roofing
-  Natural Timber
-  Landscaped Garden
-  Permeable Paving

- 01 External Terrace
- 02 Flat Rooflights
- 03 Solar PV Panels
(Quantity & size TBC)

4.7.6.2 Plot 6 - Floor Plans



01 - Ground Floor



02 - First Floor



Room Legend

Ground Floor

- 01. Triple Garage
- 02. Plant Room
- 03. Cloakroom
- 04. Entrance Lobby (double height)
- 05. Bedroom 5 w/ En-suite
- 06. Lounge
- 07. Dining Room
- 08. Kitchen
- 09a. Utility
- 09b. Pantry
- 10. WC
- 11. Garden Room
- 12. Family/ Games Room

First Floor

- 13. Bedroom 1 w/ En-suite
- 14. Bedroom 2 w/ En-suite
- 15. Bedroom 3 w/ En-suite
- 16. Family Bathroom
- 17. Master Bedroom w/ En-suite
- 18. Office

Landscaping

- 19. Decorative Pebbles
- 20. Permeable Paving
- 21. Bin/ Recycling Store
- * EV Charging Point

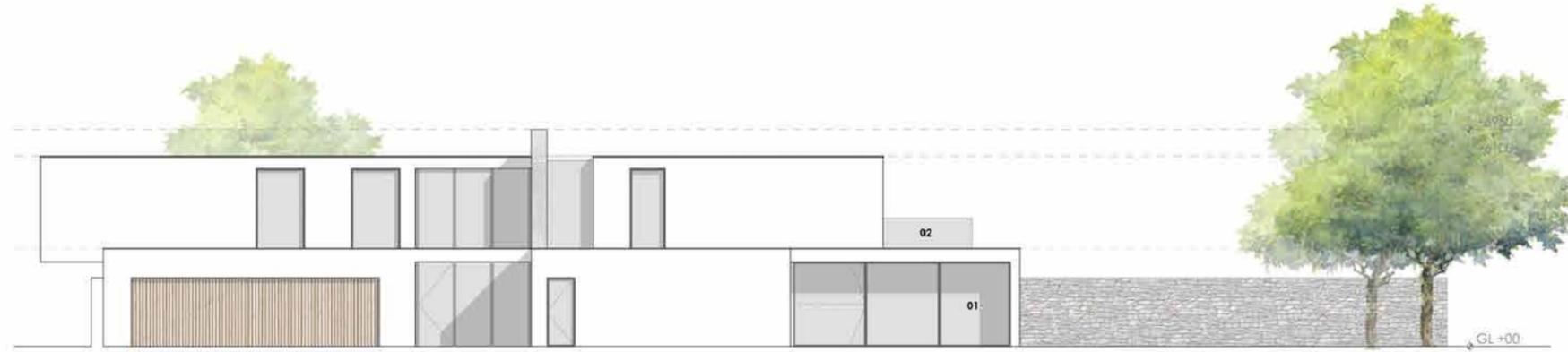
Areas (GIA)

Ground Floor = 266.3m²
 First Floor = 179.8m²

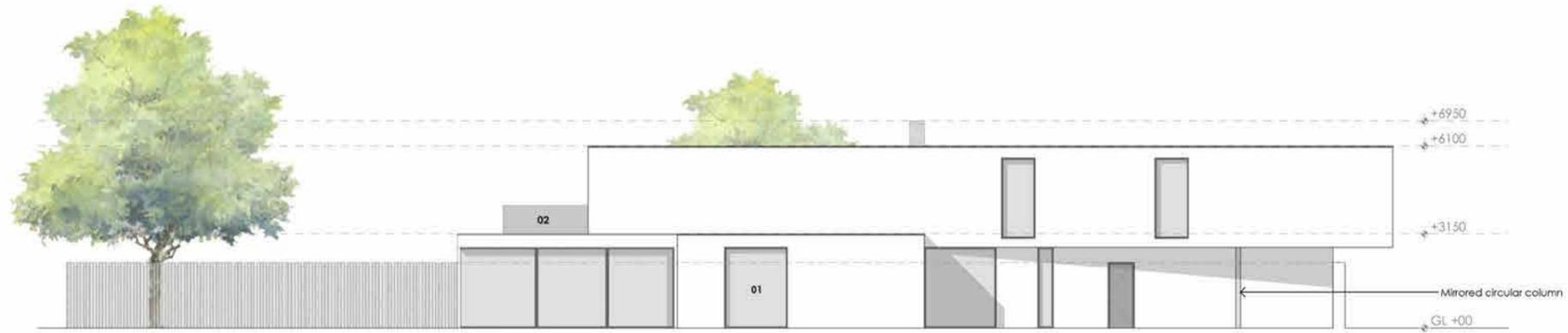
Total GIA (excl. garage) = 446.1m²/ 4801 sqft
 Total GIA (incl. garage) = 508.4m²/ 5472 sqft

Plot Area = 2096m²

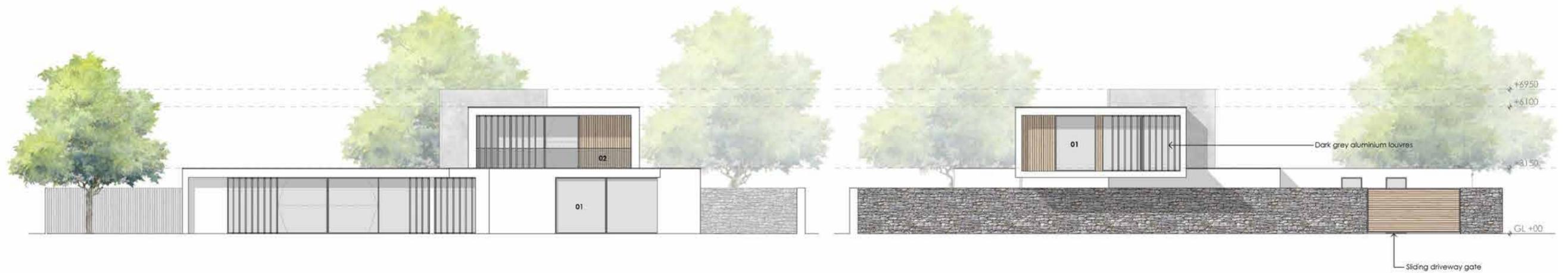
4.7.6.3 Plot 6 - Elevations



01 - South West Elevation



02 - North East Elevation



03 - South East Elevation

04 - North West Elevation

-  Natural Timber
-  Render
-  Natural Stone
-  Finished Concrete
- 01 Dark grey aluminium windows & doors
- 02 Frameless glass balustrade

4.7.6.4 Plot 6 - 3D Visuals



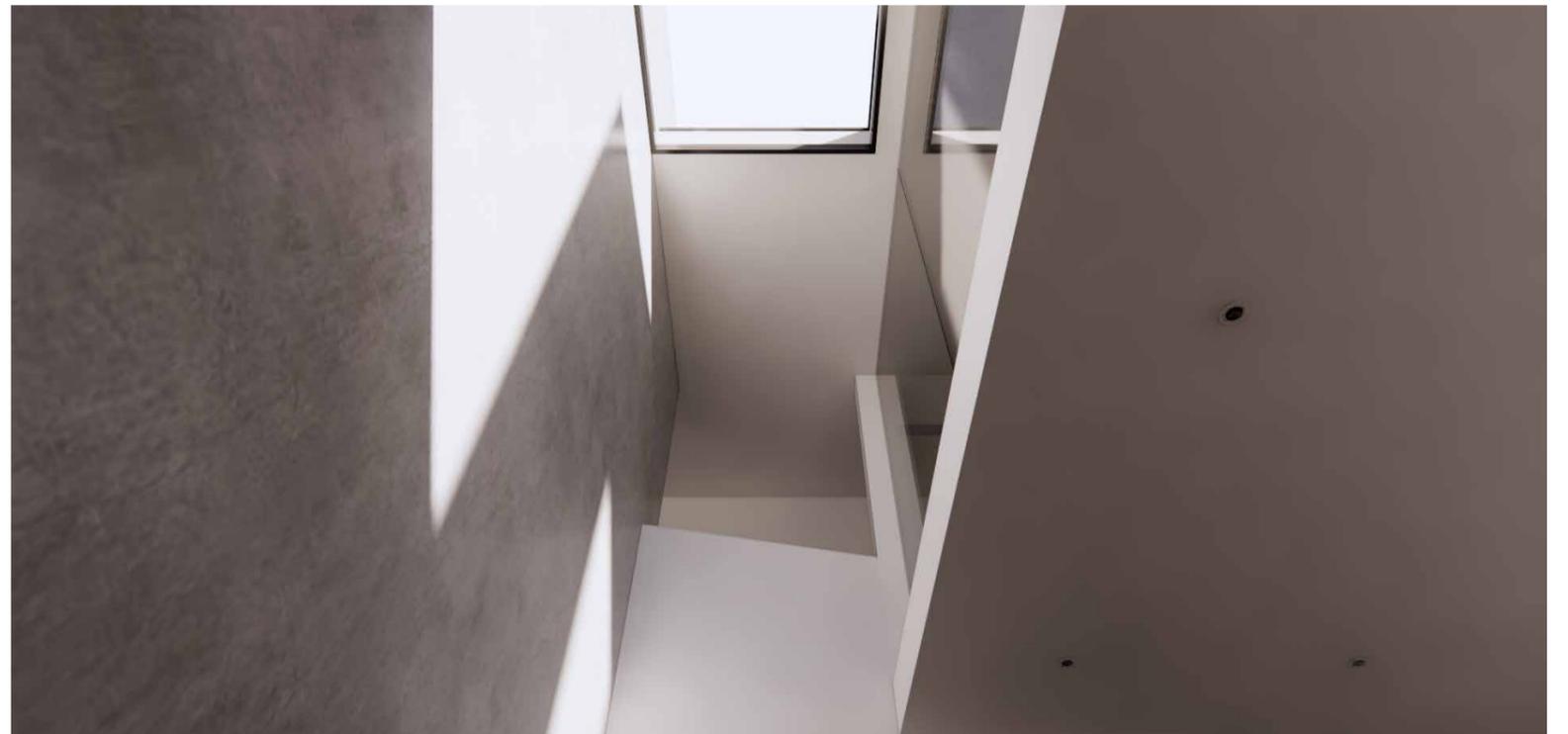
External View (South West)



External View (North West)



External View (North)



Interior Views

4.7.6.4 Plot 6 - 3D Visuals

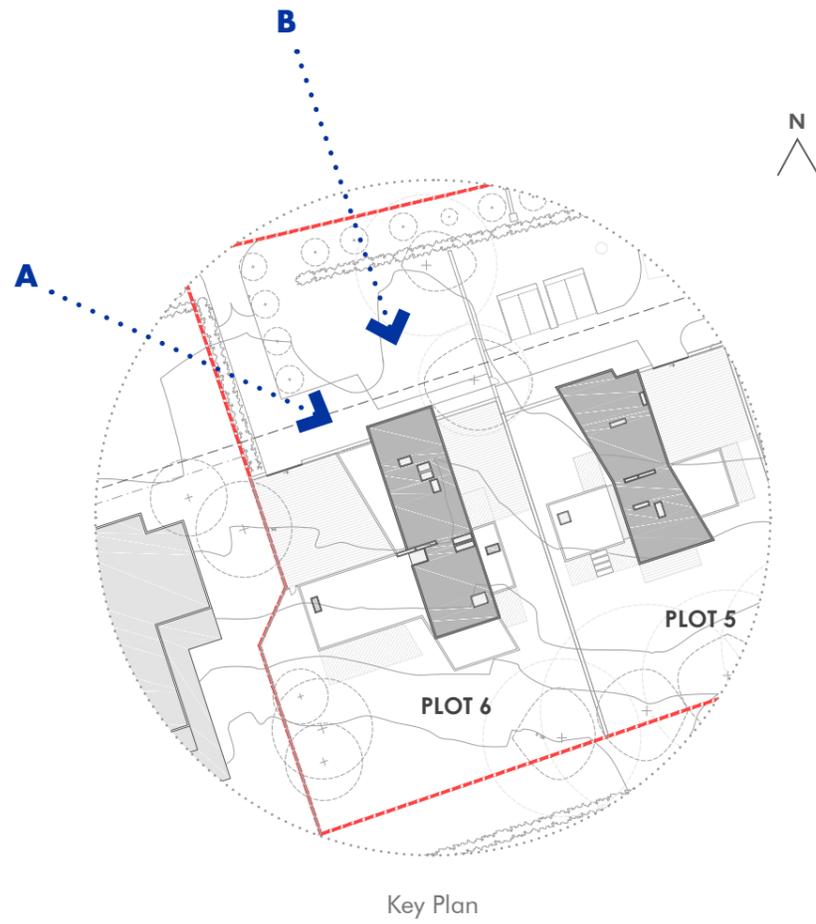


Long Section (North-South)



Cross Section (East-West)

4.7.6.4 Plot 6 - 3D Visuals



Key Plan

Site Features

- + Mature tree line to South
- + Access via new access road
- + Open aspect South
- + Private, enclosed courtyard/ driveway
- + Large landscaped garden

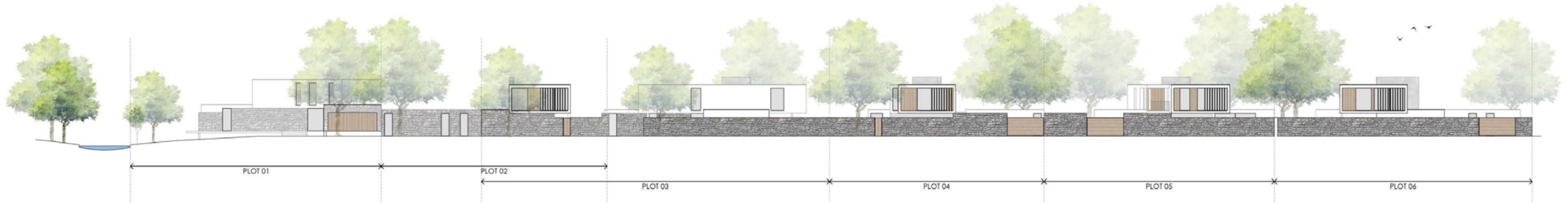


Exterior View A



Exterior View B

4.8 Site Drawings & Visuals



01 - Elevation A (NORTH WEST)



02 - Elevation B (NORTH EAST)



View looking South, from Castle Gates.



View looking East from new access road.



View looking West, towards Plot 4.



View looking South, towards Plots 4 & 5

4.9 Sustainability

At Block Nine, our core strategies involve the design and construction of sustainable projects and the belief that as architects and designers, we have a great responsibility to the environment and delivering environmentally sound buildings without compromising function or aesthetic.

Our vision for the new proposed development at Castle Gogar Rigg is to complete the already established residential neighbourhood using sustainable methods of construction, design innovation, materials and renewable energy.

As a step towards this, we have further considered the following:

- Maximising the efficient use of resources by using fewer raw materials and less energy, as well as causing less pollution and waste during construction stages
- How we can improve quality of life and offer client satisfaction
- Creating flexible design solutions to cater for future changes in use
- Enhance the natural environment

Integrated Design Considerations

The proposed dwellings will incorporate a number of easy-to-use systems that will enable the end user to understand the operation and maintenance of the dwellings and will allow full sustainability benefits to be realised over the building's whole lifetime. These include:

- Air Source Heating System
- Photovoltaics (concealed on flat roofs)
- EV/ Bicycle Charging points (noted on floorplans)
- Low voltage/ energy efficient lighting throughout
- Sedum roofing to promote biodiversity
- Water efficient sanitary fittings throughout
- Sufficient waste & recycling storage

Furthermore, the buildings will have a well-designed air-tight envelope that will maintain internal comfort levels. Naturally ventilated, the open-plan nature primary living spaces will also help facilitate air movement through the properties.

As the development is primarily south-facing, large expanses of glazing aim to maximise solar gain during the Winter months, while solar shading is also integrated to ensure over-heating is not an issue during the Summer months.

The intention will be to construct the dwellings with timber framing which has a lower embodied energy compared with other traditional methods of construction.

Sustainable Community

While measures for each individual dwelling have been considered, so too has the development as a whole.

The setting for the development sets the scene for a sustainable community. With its semi-rural context, emphasis has been placed on the connection with the environment which aims to improve people's sense of health and well-being. Shared green spaces contribute to this, ensuring safety and inclusivity for all.

Castle Gogar Rigg is also currently well-served by local bus and tram routes, enabling easy access to the city centre.

SUDS

Sustainable drainage solutions have been considered integral to the development, with a number of measures proposed to efficiently manage the flow of rainwater. A Surface Water Management Plan also accompanies this submission.

Proposed measures include:

- Using primarily soft landscaping
- Where new roads/pathways are proposed, using porous asphalt/ paving

Sustainable Construction

At the onset of the project on site, the Main Contractor will be asked to provide a Site Waste Management Plan.

At their core, the plans will include arrangements for monitoring and reporting on resource use including the type and quantity of waste. They will identify the individuals responsible for resource management, types of waste generated, resource management options and appropriate, licensed contractors.

SWMPs should provide a structured approach to management and recycling on site as well as reducing costs of waste management and increasing profit margins. They should also make it easier to comply with laws on materials and waste.

Conserving the Environment

An ecology report accompanies this submission and all mitigation measures shall be fully incorporated into the proposed development to ensure there is no adverse affect on existing wildlife.



5.0 Summary

At the onset of this project, our aim was to work closely with our client and other sub-consultants to assess how we might successfully produce design proposals that would meet the criteria set out in local and national design and development policies.

In considering the proposals, first, from a “macro” perspective, this allowed us to put the context of the site at the forefront of our design process. From this, existing views, buildings and natural landscape features ultimately informed the overall composition, materiality and density of the proposed site layout and, indeed, the completion of the Castle Gogar Rigg community.

Then, at the “micro” level of design development, we were able to interrogate the individual plots and dwellings more closely, ensuring fundamental design decisions such as scale and proportion, height and form, daylight/sunlight, privacy and outlook were fully considered and integrated.

Throughout this process, the existing landscape in particular has played a significant role and our proposals illustrate minimal alterations to this.

Ultimately, we consider that our proposals meet all relevant policies and design guidance.

We believe we have comprehensively illustrated how our client’s aspirations for developing the remaining, vacant portion of land within the curtilage of Castle Gogar Rigg can be successfully realised without compromising the unique setting.



View looking West at night.

BLOCK NINE ARCHITECTS

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CALEDON
TREE SURVEYS

BS5837:2012 Tree Survey

**Land at Castle Gogar Rigg,
Edinburgh**

February 2021

Revision R1 issued April 2022

 T. 0141 427 0427 | M. 07778 233 703

 info@caledontreesurveys.com

 www.caledontreesurveys.com

 56 Aytoun Road, Glasgow G41 5HE

Abstract

Site: Land at Castle Gogar Rigg, Edinburgh

Grid Reference: NT 16455 72922

Client: APT Planning & Development

Date: February 2021; Re-inspected April 2022

Survey Reference: BS_050221

Document Reference: BS_050221-SR Revision R_1 issued 22 April 2022



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Report Overview

1 Structure of report

The report comprises the following sections:

- This **Overview**: a guide to navigating the Report and a summary of the survey findings
- **Preliminaries**: background information about our commission and how we approached the project
- **Tree Survey**: the essential data about the trees and some more detailed interpretation of our findings; also a note of any works which might need done to make the trees safe
- **Arboricultural Impact Assessment**: What the developer's proposals might mean for the trees and how that might be mitigated
- **Appendices**: Photographs, maps and keys to the survey terminology

2 Executive Summary

2.1 The canopy assessed in this study comprises elements of the designed landscape surrounding a historic residential property on the western periphery of Edinburgh which has, in part, been developed for residential use.

2.2 The most notable feature of the canopy in arboricultural terms is a long-established formal avenue of mixed broadleaves approaching the entrance to Castle Gogar from the SE. There are also further mature broadleaves on the margins of an adjacent field, and a number of younger landscape trees.

2.3 Historic canopy management has been rather deficient, with multiple instances of ill-advised tree surgery and uncorrected structural defects, most notably among the avenue specimens.

2.4 A programme of felling and tree surgery is required to address current safety issues on the avenue, and a higher standard of arboricultural management will be required to provide an enduring future for this historic landscape feature.

2.5 The present report is issued as a revision to our February 2021 survey on the property, and reflects a number of alterations to the canopy.



Preliminaries

3 Terms of Reference

3.1 Title

B55837 Tree Survey: Land at Castle Gogar Rigg, Edinburgh.

3.2 Definition of survey area

As outlined on drawing *Proposed Residences -Gogar Rigg -Houses Three to Eight* by Ian Aitken, Architect, ref PL L(90)03 dated 24 02 2019.

3.3 Authority

The survey was instructed by Tony Thomas of APT Planning & Development, 6 High Street, East Linton, East Lothian EH40 3AB.

Instruction issued 31 03 2022.

3.4 Survey team

David Gallacher, Graeme Millar.

David Gallacher is a Lantra qualified Professional Tree Surveyor and Inspector and is a professional member of The Consulting Arborists Society. Caledon Tree Consultants was established in 1995.

3.5 Date(s) of inspection

20 April 2022.

3.6 Purpose of survey

The objective of the survey is to provide an assessment of and report on the nature, condition and essential characteristics of the tree canopy on land which is being considered for development.

3.7 Scope of survey

The scope of the survey is defined as a *Stage 1 Visual Tree Assessment* (Mattheck & Breloer, 1995) and the report is compliant with *British Standard Specification No 5837:2012*. All comments on specimen condition are made with reference only to the status-quo position of the site. Unless specified, the survey excludes any reference to underground services.

3.8 Limitations

This report is the property of and for the sole use of the clients cited above and should under no circumstances be relied upon by third parties. The findings contained herein are strictly related to the condition of trees and the pattern of usage of surrounding land evident at the time of the inspection.

3.9 Note on hazard and risk in relation to trees

3.9.1 Trees are complex living organisms subject to biotic and abiotic influences and the unpredictable forces of nature. In addition, latent defects both above and below ground which may impinge on the health and structural stability of a tree can be present without physical evidence being available to the naked eye. As noted by the Hon Mr Justice Mackay in a recent landmark ruling relating to the issue of tree safety: *"Both experts in the case agree...that there is no such thing as an entirely safe tree"*¹.

3.9.2 The issue of safety surrounding a tree comprises a balance between Hazard (defined as the potential to cause harm) and Risk (the level of likelihood that a hazardous tree will cause damage). It is part of the purpose of this document, within the specified limitations, to note defects and other conditions within and surrounding the trees which constitute a hazard.

3.9.3 Assessment of the level of risk associated with any recorded hazard has been made on the basis of current manifest evidence (eg proximity of roads, footpaths etc) but it is the responsibility of the client to take account of any alterations to surrounding conditions or pattern of land-use.

¹ *Bowen (A Child) & Ors v The National Trust [2011] EWHC 1992 (QB) (27 July 2011)*



4 Site Characteristics

4.1 Location

The survey area comprises designated areas of land to the south and south-west of Castle Gogar, a historic residential property in the Ingliston area of west Edinburgh.

4.2 Elevation

40m above sea level.

4.3 Topography

Generally level with minor landscaped embankments.

4.4 Surrounding landscape

Slightly inclined from north to south.

4.5 Wind exposure

Moderate-substantial. The subject property stands within an open, largely undeveloped landscape adjacent to Edinburgh airport, and is notably exposed to prevailing south-westerly winds.

4.6 Environment

4.6.1 Soil analysis was not carried out but soil quality is taken to provide an adequate growing medium for the trees.

4.6.2 Drainage as it affects the trees appears to be generally effective in most parts of the site, although land to the south of the driveway to Castle Gogar presents some indications of waterlogging.

4.6.3 Notwithstanding the presence of Chalara Ash Dieback within a single tree of that species, the physiological condition of the specimens is generally good, reflecting a favourable biotic environment.

5 Survey Methodology

5.1 Inclusion criteria

In line with our briefing the assessed canopy features:

- Trees No 3751-3809 individually recorded trees which meet the minimum size criteria for inclusion as defined by BS5837:2012
- Tree No E1: an external tree on adjacent land, the Root Protection Area (RPA) of which is assessed as being significant to the subject property.
- Hedges H1 & H2

5.2 Chalara Ash Dieback

5.2.1 The canopy includes a single mature European Ash specimen. A serious pathological condition (Chalara Ash Dieback) is having a widespread impact on trees of that species throughout the country, and the disease has been identified within the subject property.

5.2.2 The progression of this evolving condition can be uneven, and it should not be assumed that infected specimens will be killed in the short term.

5.2.3 However this consideration must be balanced by an assessment of the practical hazard presented by diseased trees, particularly since timbers affected by dieback can become structurally unstable.

5.2.4 It is significant in this context that the present study was undertaken in winter when evidence of foliar necrosis associated with Chalara Ash Dieback was not available. It is essential that a follow-up inspection is carried out in summer 2022 to more accurately record the progression of the disease and to define an appropriate response.

5.2.5 For the purpose of the present study specimens are assessed and categorised with reference to the likely impact of the disease on the anticipated lifespan of the individual tree.



6 Statutory Framework

6.1 Tree protections

6.1.1 Our briefing and enquiries with the Local Planning Authority indicate that there are currently no statutory protections on trees within the survey area in terms of Tree Preservation Orders or designated Conservation Areas*.

***TO BE CONFIRMED**

6.1.2 However development works are proposed at the time of the survey and it is likely that trees on site will be the subject of condition(s) on any planning consents issued by the local planning authority (LPA).

6.1.3 Under the terms of such conditions it may be prohibited to cause or permit interference, damage or destruction to any tree, group of trees or woodland specified in the condition without the express permission of the relevant local authority department.



Tree Survey

7 Commentary

7.1 Overview

7.1.1 Composition

The assessed canopy comprises:

- Mature broadleaf trees forming a formal avenue to the entrance of Castle Gogar, as well as several younger specimens recently planted to augment the avenue.
- Young trees in avenue profile leading towards a modern residential development.
- Mature (and some younger) trees on the margins of a plot identified for development to the south of Castle Gogar.
- Trees within a smaller proposed development plot to the south-west of Castle Gogar.
- Minor hedges within the application area.

7.1.2 Condition

7.1.3 The overall condition of the mature trees is varied, but includes a significant number of valuable specimens which have been subjected to rather severe tree surgery over an extended period. This is most evident on the formal avenue, where the quality of the historic landscape has suffered as a consequence of poor management.

7.1.4 Trees on the margins of the main application area present a similar history, with the added detriment of apparently altered ground conditions within the rooting areas.

7.1.5 The younger trees and hedges are in generally good condition, although there is some evidence of mechanical damage likely have been caused by grass-cutting machinery.

7.2 Avenue from Gogar Burn Bridge to Castle Gogar Entrance

- **Mature broadleaf specimens: trees No 3751-3778 (discontinuous)**
- **Young avenue specimens: trees No 3758, 3759, 3774**

7.2.1 Comprising substantial mature examples of Sycamore, Lime, Horse Chestnut, Norway Maple, Ash and Beech, this well-structured formal avenue constitutes an important historical and landscape feature. See Image No 01, below.

7.2.2 The structural condition of individual specimens varies considerably, with an occasional pattern of dominant trees suppressing adjacent specimens having developed, as well as one markedly subdominant example (Sycamore 3754). See Image No 02, below.

7.2.3 The avenue is characterised by the legacy of unsympathetic canopy management, most notably in repeated pruning to raise crown heights. See Image No 01, below for example. To some extent poor pruning techniques have been deployed, resulting in multiple instances of decaying branch stubs and stem decay cavities from flush cuts.

7.2.4 The exposed location is also reflected in instances of substantial limb fractures which have not benefited from remedial tree surgery, with consequential decay from tear wounds and unviable branch stumps. See Image No 07, below for example.

7.2.5 This unfortunate history is reflected in the reduction in the anticipated Safe, Useful Life Expectancy (SULE) of many important trees, and in their being graded variously at BS5837 Retention Category A, B or C. However the avenue as a whole should be regarded as being of Category A significance in terms of historic and landscape values.

7.2.6 Sycamore 3673 is a substantial specimen presenting very poor physiological condition with extensive sites of necrosis on the lower bole and associated crown dieback -see Images No 03 & 04, below. Evidence of significant pathological fungi have also been noted within the decay zone, and we now recommend that the tree is removed on grounds of safety.



7.2.7 Norway Maple No 3771 is co-dominant from 2.5m with a major decay cavity at the base of the east co-leader, which should be removed to the bifurcation. See Image No 06, below.

7.2.8 In addition to the removal of Sycamores No 3754 & 3763, a programme of remedial tree surgery is required to mitigate current hazards to users of the property. However the avenue as a whole would benefit from a more active and informed regime of canopy maintenance.

7.2.9 Semi-mature Sycamores No 3758, 3759 & 3774 have been gap-planted into the avenue in the relatively recent period. All have established successfully and are in reasonably good condition.

7.3 Young Birches on avenue to modern residential properties

- **Trees No 3779-3788**

7.3.1 Formal line of Silver Birch on lawns to south of internal road.

7.3.2 Structural condition varies among this group, with most of the young trees having good development potential.

7.3.3 However a number of specimens present substantial sites of mechanical damage to the root-collar, most likely resulting from the use of grass-cutting machinery.

7.4 Trees on west and south margins of main development area

- **Mature broadleaf specimens: trees No 3790-3996 (discontinuous) & 3801**
- **Young fence-line specimens: trees No 3799, 3800, 3802, 3803**

7.4.1 Substantial mature examples of Sycamore, Norway Maple, Lime and Horsechestnut, possibly associated with former field hedgerows.

7.4.2 The structural condition of these trees is characterised by the same historic canopy management practices evidenced in the mature avenue trees (see s7.2, above), with a pattern of repeated and unsympathetic hard pruning.

7.4.3 There is also evidence of generally depleted vigour among mature trees in this sector, a condition which may be associated with excessive water retention and possibly of site disturbance within the rooting areas.

7.4.4 Sycamore 3795 features a fairly deep basal cavity, as well as fructifications of the pathogenic fungus *Kretzschmaria deusta* in a small decay cavity on the bole -see Image No 09, below. This condition will inevitably shorten the SULE of the specimen, but in reflection of the presently limited scale of the disease and the absence of an evident failure target we do not currently recommend the removal of the tree.

7.4.5 Trees No 3799, 3800, 3802 & 3803 are early-mature Acer specimens similar in age and character to the gap-planted young trees on the avenue (see s7.2.9, above), all apparently well-established and in reasonably good condition.

7.5 Central application area

7.5.1 Trees No 3804-3809 and E1

7.5.2 Sycamore 3809 is a reasonably well-formed mature example on the SW edge of an open amenity area.

7.5.3 Other trees in this area comprise young Birches and Alders, all reasonably well-established and in generally good condition, with the exception of Alder 3808, which presents significant crown dieback.

7.5.4 E1 is a young Larch within the adjacent property to the east which is included in the survey in reflection of its size and proximity to the application area.

7.6 Hedges

7.6.1 H1 & H2

Young, well-established and reasonably well-maintained lines of Beech hedging.



8 Summary of Recommendations

The following interventions are currently recommended in order to meet the owner's or occupier's Duty of Care to users of the site and in the interests of the ongoing management of the canopy:

8.1 Emergency Interventions Required

None

8.2 Interventions Required within 1 Month

None

8.3 Interventions Required within 3 Months

8.3.1 Trees No 3754, 3763

- Remove to ground level

8.3.2 Tree No 3752, 3757, 3764, 3768, 3771, 3790

- Tree Surgery as specified in Survey Schedule

8.4 Interventions Required within 6 Months

8.4.1 Tree No 3766

- Assess for symptoms of Chalara Ash Dieback in late summer 2022

8.5 Interventions Required within 15 Months

8.5.1 Tree No 3795

- Assess for progression of *Kretzschmaria deusta* fungus

8.6 General Canopy Management Recommendations

- Routinely remove epicormic growths from affected specimens to facilitate ongoing canopy inspections.

8.7 Re-Inspection of Canopy

The canopy should be re-inspected and this report updated within a period of **fifteen months** of the date of issue of this report by a qualified arboricultural consultant.

