

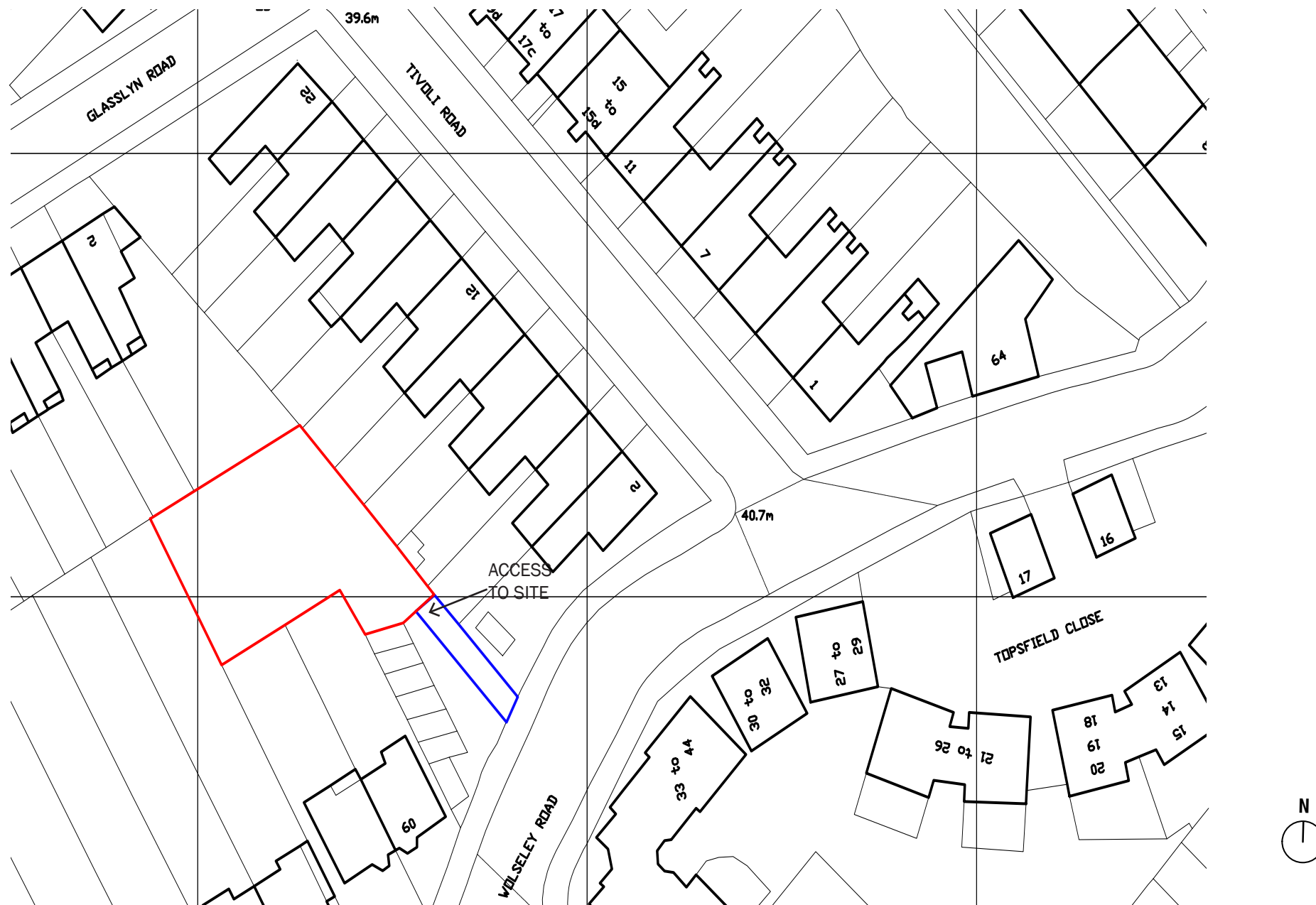
DESIGN AND ACCESS STATEMENT

NOVEMBER 2022

62 WOLSELEY ROAD, CROUCH END, LONDON N8 8RP: ECO HOUSE SCHEME

TABLE OF CONTENTS

1.	INTRODUCTION	1
2.	CONTEXT	2
3.	APPLICATION SITE	3
4.	PLANNING HISTORY	5
5.	SITE CONSTRAINTS	6
6.	STRATEGIC DESIGN	7
7.	ADJOINING PROPERTIES	9
8.	DESIGN AND LAYOUT	11
9.	DESIGN AND MATERIALS	13
9.	TECHNICAL DESIGN	16
10.	SUSTAINABILITY	17
11.	ECO HAUS	18
12.	CONCLUSION	18



1. INTRODUCTION

- 1.1. This design statement concerns a proposal for the erection of a two-storey house, on a vacant site in Wolseley Road, Crouch End.
- 1.2. The purpose of this document is to explain the proposal, design rationale, sustainability and access arrangements in relation to relevant planning policy. It is also intended to illustrate a strong commitment to design excellence in the delivery of a high-quality project that seeks to enhance the character of both the immediate context and the local area.
- 1.3. Design aspirations:
 - To provide additional residential accommodation, responding to identified national and local strategic objectives.
 - To make better use of a redundant, brownfield site to optimise its housing potential.
 - To provide a well-designed dwelling that is appropriate and carefully considered to preserve the character and appearance of the site and its context.
 - To build a new house that embodies low ecological principles, as an exemplar of low energy residential design, and in support of recent Central Government commitments towards addressing climate change.

1. LOCATION PLAN

SITE OUTLINED IN RED. ADDITIONAL LAND ASSOCIATED WITH THE APPLICATION SITE IN BLUE



2. CONTEXT

- 2.1. The application site is located on Wolseley Road, within the Crouch End Conservation Area, see (fig. 1).
- 2.2. The surrounding context is entirely residential, but disparate in date and architectural style. Tivoli Road and Glasslyn Road consist of two-storey, late-Victorian terraced, single-family houses. The north side of Wolseley Road, including the adjacent nos. 58 and 60, consists of 1930's-built semi-detached houses, whilst opposite the site frontage is Topsfield Close, an estate of predominantly three-storey flats built in 1996 (fig. 2).
- 2.3. The application site is located within 100 metres of the Local Centre of Crouch End, in which there are various shops, cafes and other local facilities, and within walking distance of several primary and secondary schools.
- 2.4. The application site is on the W5 bus route and within 100 metres of the W7 bus route on Park Road. Highgate Northern Line Underground station is within one kilometre walking distance of the site.
- 2.5. The application site is within the Crouch End Controlled Parking Zone B, which was designated in April 2011.

2. BIRDS EYE VIEW OF THE SITE FROM THE SOUTH-EAST



3. VIEW OF 60 WOLSELEY ROAD & ENTRANCE TO 62 WOLSELEY ROAD



4. VIEW OF 60 WOLSELEY ROAD FLANK WALL & GARAGE BLOCK

3. APPLICATION SITE

3.1. LOCATION

Although the application site is located on Wolseley Road, its frontage is set back approximately 17 metres from the public footpath, the intermediate space being a shared entrance courtyard serving six existing garages (fig. 4).

3.2. TOPOGRAPHY

The site has a complex topography, being located on a natural slope which falls across the site, from south-west to north-east. Although it is now relatively flat, the site has, in fact, been formed by retaining walls that follow the south-west and north-east boundaries of the site. This has created unusual and complex boundary conditions with the adjoining properties.

3.3. NORTH-WEST BOUNDARY

To the north-east of the site are the rear gardens of numbers 2 to 14 Tivoli Road, which are two-storey, late-Victorian terraced houses with original two-storey rear extensions. Due to the complex topography, the adjoining gardens are between 1 metre and 1.8 metres below the level of the application site. The boundary is defined by a reinforced concrete retaining wall on the application site, with a 1.8 metre high timber fence above. There is a dense planting of ivy and other climbers on the fence, so that the boundary is generally in excess of 2.5 metres high, viewed from the application site.

3.4. NORTH-EAST BOUNDARY

To the north-west of the site is the adjoining rear garden of no.2-4 Glasslyn Road, in part concealed by a 8 metre high Leylandii hedge (8). The adjoining garden is 17 metres in length, so that the main rear elevation of 2 Glasslyn Road is located 25 metres from the application site.

3.5. SOUTH-WEST BOUNDARY

To the south-west of the site are the ends of the rear gardens of nos. ,56, 58 and 60 Wolseley Road. These gardens are located at an elevated level above the application site, with the boundary defined by a reinforced concrete retaining wall on the application site and a 1.8 metre high close-boarded timber fence. In places, the garden of no.56, 58 and 60 Wolseley Road is in excess of 2 metres above the application site..

3.6. SITE AREA

The area of the site area is approximately 492 m2 in its current extent and has been assembled and added to over the course of 2020 and 2022 through the purchase of land from no. 58 Wolseley Road, so that the site boundary now forms a straight line across the entire length of the two semi-detached properties at 58 and 60 Wolseley road (fig. 5).



5. SITE EXTENT AND ADDITIONS



6. VIEW OF RETAINING WALL & FENCE TO REAR GARDEN OF 60 WOLSELEY RD



7.. ROOFS OF NOS.8-16 TIVOLI ROAD, SHOWING RECESSED LEVELS & DORMER WINDOWS



8. VIEW TOWARDS THE BOUNDARY WITH TIVOLI ROAD HOUSES.

4. PLANNING HISTORY

- 4.1. The application site has been occupied by a detached single-storey building, which was constructed in 1970 as a religious meeting room. At the same time, extensive retaining walls were built on the site boundaries with nos. 6-12 Tivoli Road and nos. 58-60 Wolseley Road to create an approximately level site.
- 4.2. In 1993 the property received planning consent (ref. HGY/42089) for change of use to residential, and the building was converted into a two-bedroom house, which was in occupation from January 1995.
- 4.3. Although single-storey, the house has an elevated ground floor level, approximately one metre above external ground, so that its overall height, to the top of its roof plant enclosure, is in excess of four metres from the adjacent ground level.

- 4.4. All habitable rooms in the house are oriented towards the north-east, facing the rear elevations of nos 2-14 Tivoli Road, and due to the significant difference in level between the application site and the Tivoli Road properties, a significant level of mutual overlooking has existed since 1995.
- 4.5. In subsequent years, planning consent was granted for several loft conversions in these houses, i.e. no. 4 (2011), no. 6 (2003), no. 12 (2001), no. 14 (2003), no. 10 (2021) each of which has included a large rear dormer window. The dormers face south-westerly towards the windows of no.62 Wolseley Road, so that the privacy of both no.62 Wolseley Road and the Tivoli Road properties have been progressively diminished. (Fig 7. & 8)
- 4.6. Planning consent (Ref. HGY/2013/0460) and Conservation Area consent (ref. HGY/2013/0461) were granted in May 2013 for the demolition of the existing house and the erection of a part two-storey/part single-storey

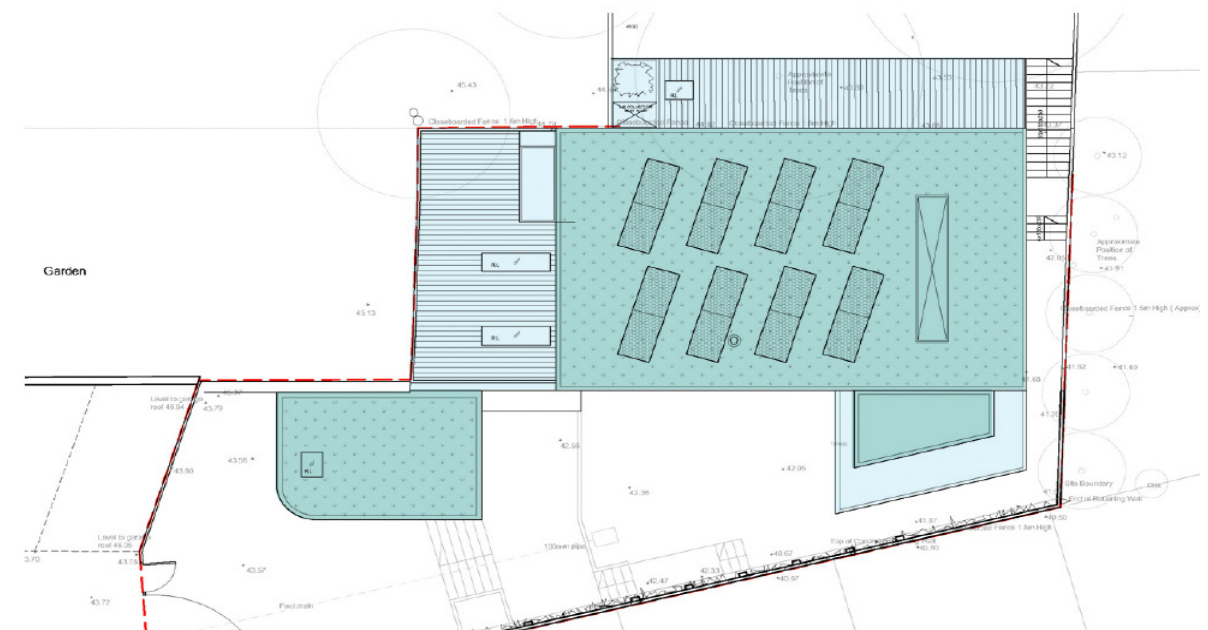


9. ROOF PLAN OF 2013 APPROVED SCHEME - HGY2013/4060

house, to be built as a self-build project (i.e. the 2013 House). (fig 9)

- 4.7. Construction of the 2013 House commenced in April 2016 but was suspended soon after and the site was sold in 2020'.

- 4.8. As part of the sale in 2020 a proposal, was granted for a two storey house that was designed to encompass the entire site, including the raised south-east section, and with the removal of the entire retaining wall along the north-east boundary.



10. ROOF PLAN OF 2020 APPROVED SCHEME - HGY2020/0423



11. ROOF PLAN OF 2021 APROVED SCHEME - HGY2021/0403

4.9. The application site had been extended beyond the boundary of no.62 Wolseley Road, by the acquisition of a garden area located to the rear of no.58 Wolseley Road, with the intention that this area will form additional accommodation and external amenity space for the new house. Ref: HGY/2020/0423 (fig 10)

4.10. Over the course of the pandemic in 2020 the design was reconsidered and a different more modular scheme was pursued. The idea was to build a "Garden Village" by creating a number of different volumes at first floor that appear out of a winding garden landscape, beneath which is a lower floor of secondary accommodation. Each of these volumes represent the primary spaces of the building: the Kitchen. Living Space, Master Suite and Live-Work space. The key consideration for this design was that it retained many of the

elements of the previous application, in terms of distances to neighbours and heights of the proposed structures. This design developed by McLarenExcell was also granted planning consent in 2021. (Ref. HGY 2021/0403) (fig. 11)

4.11. Unfortunately, as more details for this 2021 scheme emerged, it became clear that it the cost of construction, in particular the basement construction on the sloping site would render this scheme unfeasible given the budget constraints by the applicants.

4.12. This has led to the revisiting of the scheme that formed part of the HGY/2020/0423 application which provided a very cost effective envelope and a refinement of this scheme forms the basis of this new planning application.

5. SITE CONSTRAINTS

5.1. CONTAMINATED SOIL

A detailed Site Investigation has been undertaken that proves that there is no contaminated soil on the site. This negates the need for a planning condition, requiring method statements prior to commencing of work. Such as Condition 5, appended to the approved extant application's decision notice, HGY/2020/0423.

5.2. GROUNDWATER MOVEMENT

Following Site investigations, the consultants Site Analysis Services Ltd, established that: "There will be no influence on the groundwater movement caused by the basement, as the groundwater was not encountered within the 9m of drilling, and will likely be encountered within the Chalk, which could run at a depth of approximately 50m below ground level." Please see the consultant's report attached to this application.

5.3. TREES

An Arboricultural Report was previously commissioned with Liam McGough Tree Services to assess the building's impact on adjacent trees outside of the site. This has now been updated to reflect the impact of the new proposal.

5.4. It was noted that the Leylandii Hedge within 2 Glasslyn Road overhangs the boundary, but that it could be maintained through the pruning of roots and branches, providing it is advised upon by a qualified arborist. The Cherry Tree in 14 Tivoli Road was seen to be a sufficient distance from the building to not be at risk, but that it should be protected during the works

5.5. As the new application moves 600mm further away from the boundary nearest to both G1 and T3 the impact on these trees will be significantly reduced.

5.6. Liam McGough have recommended that appropriate reports should be provided prior to works commencing and we would therefore expect these to be included as conditions following planning approval:

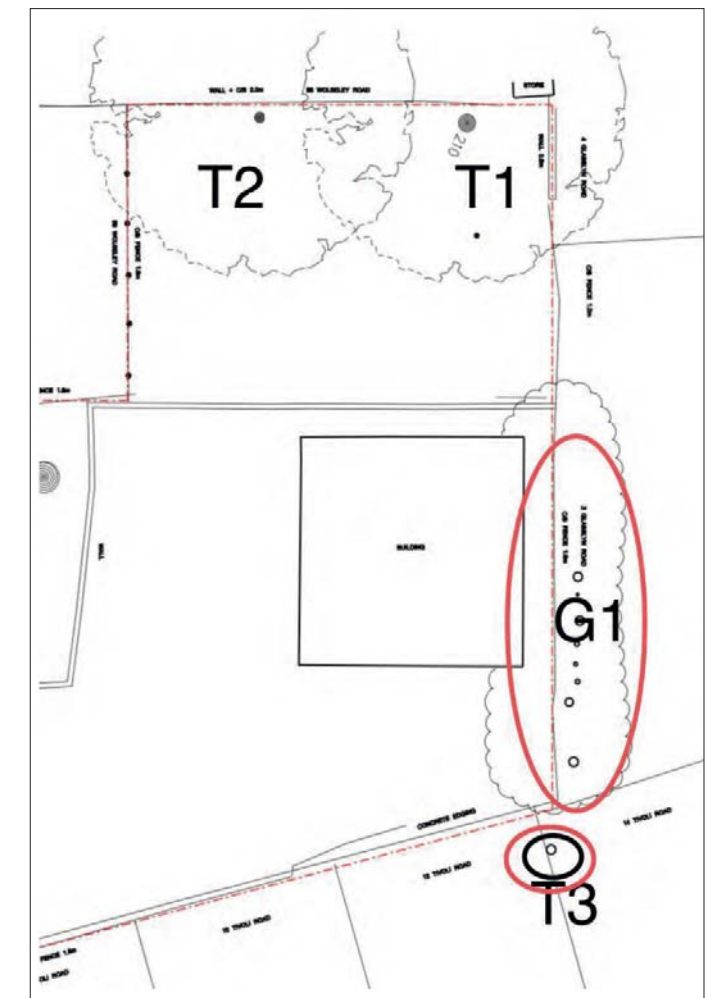
- Tree protection strategy, including a tree protection plan and arboricultural method

statement (in accordance with the BS 5837:2012 standard)

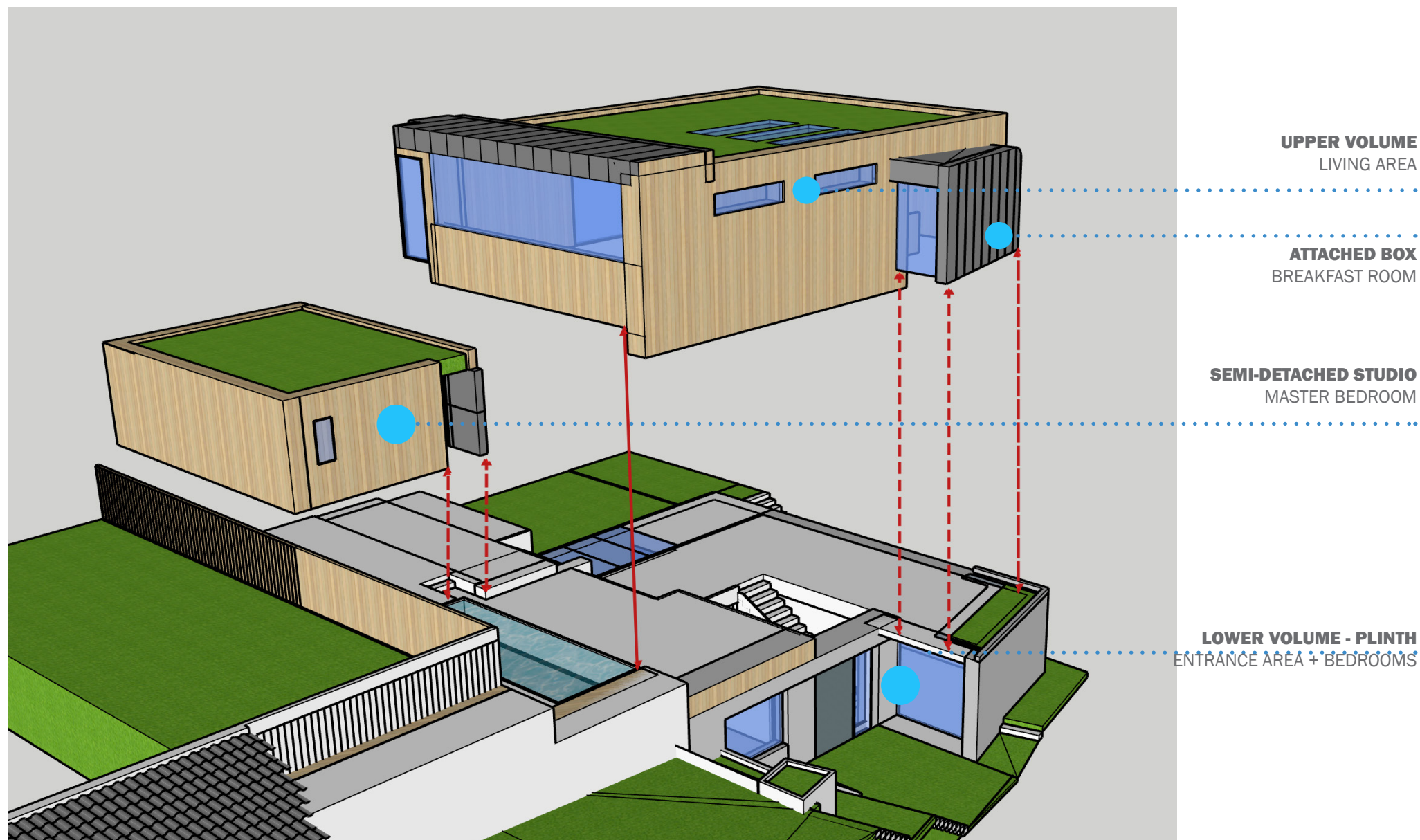
- Scheme of facilitation tree works, including pruning.(Fig 12)

5.7. OTHER REPORTS

As the types of changes made to the scheme are an evolution of HGY 2020/0423 with minimal below ground adjustments and very minimal changes to the appearance and shape of the above ground structures facing Tivoli road, the Basement Impact Assessment and Light study have not been updated as these will not be materially affected by the proposed changes.



12. ARBORICULTURAL REPORT



13 DIAGRAM - DESIGN CONCEPT

6. STRATEGIC DESIGN

6.1. MASS AND FORM

The form of the house, i.e. the position and height of each part of the design, has been determined by two considerations:

- A. The form of the Approved House which was given planning consent in 2020.
- B. The relative height above the adjacent ground levels, in particular for the semi-detached studio.

6.2. DESIGN STRATEGY

The design of the house responds to the site, by:

- Integration with the complex topography of the site;
- Location of fenestration to prevent any overlooking of adjoining houses;
- A clear distinction between 'front' and 'back'.

6.3. INVERTED PLAN

The house is built into the natural slope of the site, so that the entrance and two bedrooms are located on the lower ground floor, and the living/dining room and kitchen are located on the upper floor, where there is abundant natural daylight, with the 3rd bedroom facing North in a semi-detached volume off the kitchen/dining block. (Fig. 13).

6.4. EARTH-SHELTERED

Designed to respond to the complex topography of the site, the house is built into the natural slope of the land in a unique earth-sheltered design (fig. 10).

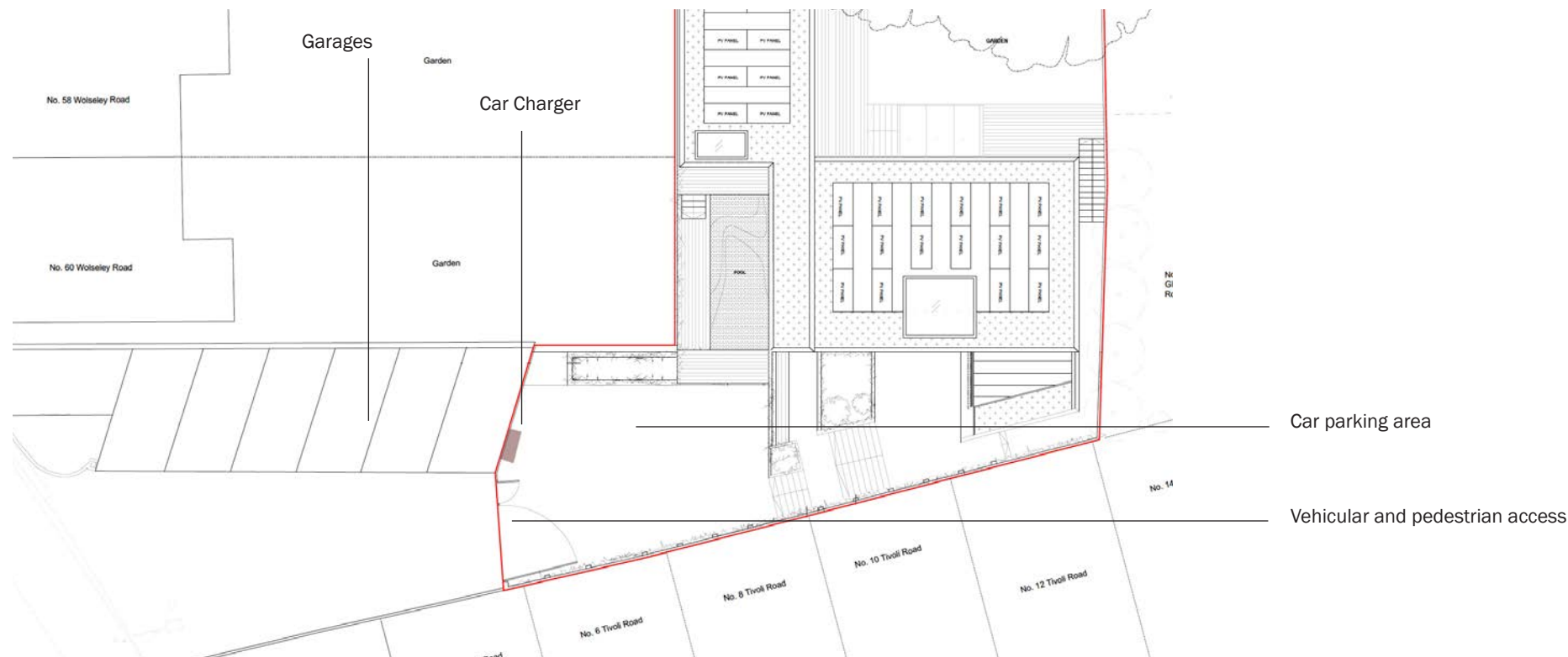
6.5. REDUCED GROUND LEVELS

The existing ground level of the site is reduced by at least one metre, to substantially conceal the house from neighbouring properties, and to minimise any impact on adjoining houses, particularly those in Tivoli Road.

6.6. FRONT AND BACK

The house is located on the site to clearly distinguish between the 'front' and 'back', forming private rear terraces and garden, and a distinct front entrance court (fig. 11).

6.7. APPROACH SPACE



14. SITE PLAN SHOWING ACCESS, CAR CHARGING AND PARKING



15. SITE PLAN SHOWING 3 DIFFERENT TYPES OF AMENITY SPACE

The house is approached via a paved entrance court off Wolseley Road, which is to be remodelled, with the existing garage block faced in new brickwork piers and an upper fascia, and re-surfaced in permeable block paving.

6.8. HOUSE ENTRY

The house is entered via gates at the end of the court, consisting of an automatically-operated vehicle gate, and a pedestrian gate operated by entryphone from the house.

6.9. ENTRANCE COURT

The gates open on to a upper Entrance Courtyard, surfaced in permeable block paving, which accommodates parking and manoeuvring space for a car, cycle storage, and refuse and recycling storage. (Fig. 14)

6.10. ENTRANCE TERRACE

The Entrance Court leads via two short flights of steps to a lower Entrance Terrace, off which the house is entered.

6.11. AMENITY SPACES

There are three separate amenity spaces, each of which has a different orientation and character (fig. 15):

1) A west-facing private garden, with both extensive new and existing shrub and tree planting, which is accessed from the first floor living space via full-width glazed doors as well as from the semi-detached master bedroom, also via full-width glazed doors.

2) A south-facing private terrace, accessed from the first floor living space via a glazed door.

3) An east-facing private garden, on to which two of the three bedrooms of the house face and for the bedroom on the lower level can be accessed via a glazed door.



16. AERIAL VIEW WITH THE PROPOSED BUILDING



17. STEPPED WALL AND FENCE - TIVOLI ROAD HOUSES

7. ADJOINING PROPERTIES

7.1. SUMMARY

This design represents a minor adjustment from the previously approved scheme, (HGY/2020/0423) and in all interactions with the adjoining properties maintains or stays very close to the approved shape, outline, heights, fenestration and distances.

7.2. EXISTING GROUND LEVELS REDUCED

The proposed scheme lowers the existing ground levels by approximately one metre adjacent to the boundary with nos. 8-12 Tivoli Road, reducing the visible mass of the new structure.

7.3. 60 WOLSELEY ROAD – 2 METRE WALL

As it is set into the existing slope, the new house adjoins the end of no.60 Wolseley Road rear garden with an open terrace, with the first floor of the house set back four metres from the site boundary (unchanged from extant planning permission). The height of the terrace and the overlooking onto Tivoli road presents no difference to the existing levels and current outlook.

7.4. TIVOLI ROAD HOUSES

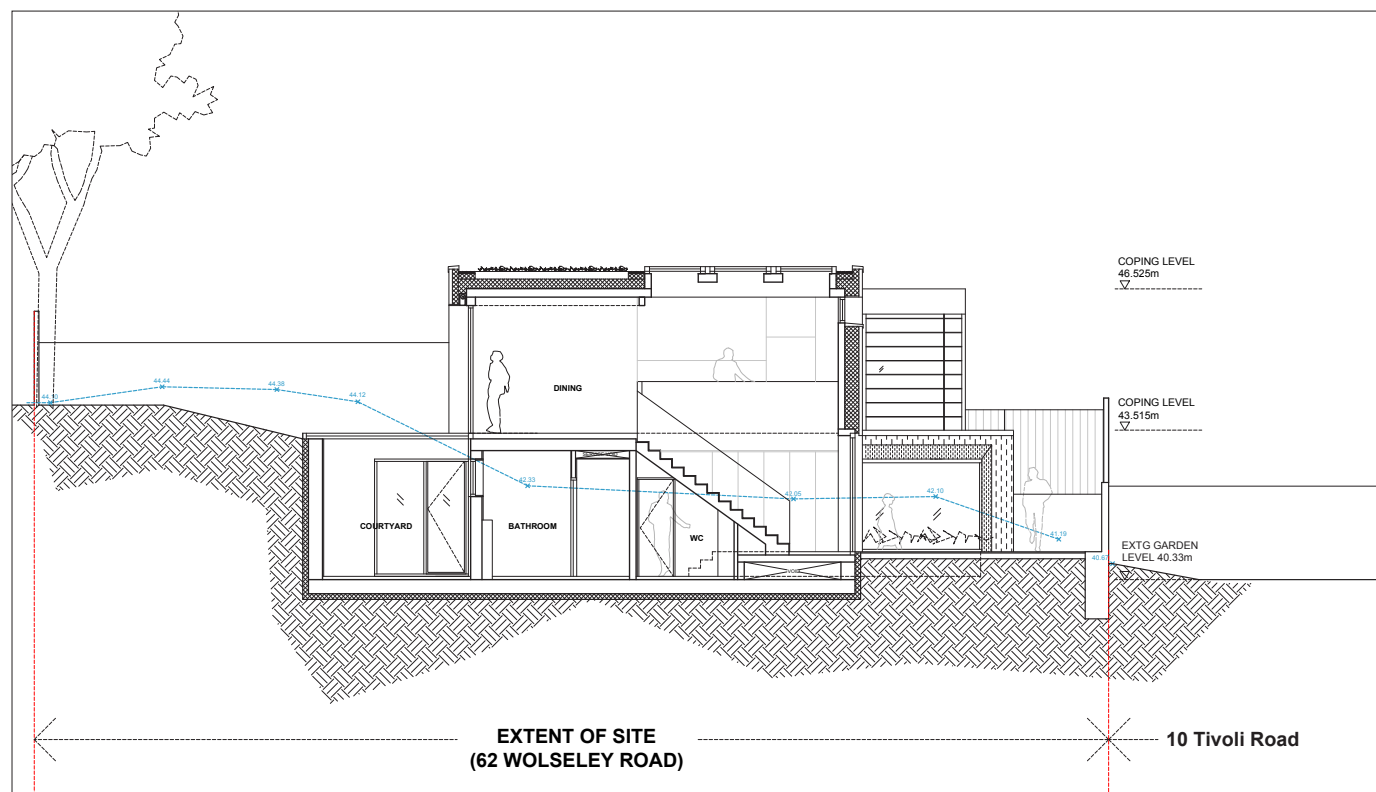
The design is almost identical to the approved design and as the entrance to the house is on a lower level than the previously approved design. With the lower entrance level we expect even less disturbance to the properties on Tivoli Rd, hence representing an improvement over HGY 2020/0423..

7.5. TIVOLI ROAD HOUSES - RETAINING WALL

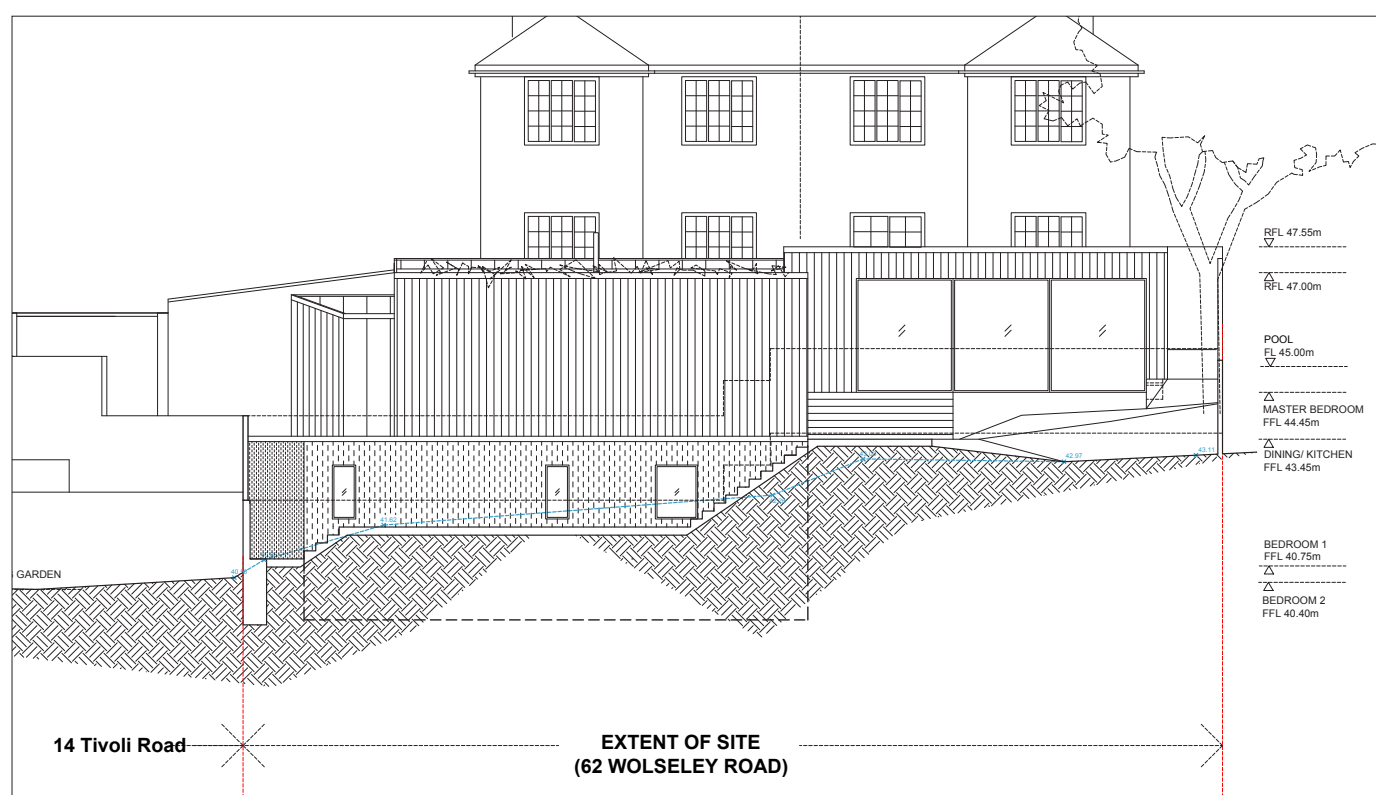
The scheme for the proposed house replaces the existing concrete retaining wall with a new reinforced concrete wall, with timber fence over, of similar height to existing, yet adapting the shape of the wall to follow a stepped pattern rather than a sloping wall. (Fig. 17)

7.6. 12 TIVOLI ROAD - PROJECTING ELEMENT

As the projecting element at the north end of the proposed house is located at the rear of the garden to no.12 Tivoli Road. As with the



18. PROJECTING ELEMENT AND SET BACK FROM BOUNDARY



19. NORTH FACING FACADE TOWARDS GLASSLYN ROAD

approved plans the height of the first floor element was reduced by 500mm and set back from the boundary by a further 600mm. The shape, height, distances and fenestration remains unchanged from the extant approved planning permission. (Fig. 18)

7.7. GLASSLYN ROAD

As with the currently approved planning applications (HGY/2020/0432 and HGY/2021/0403) the facade facing towards Glasslyn road no 2 has no windows above the level of the fence to rule out any issues with overlooking or loss of privacy. (Fig. 19)

7.8. OUTLOOK FROM SEMI-DETACHED VOLUME

The North-facing fenestration is set back from the boundary with Glasslyn road by 12m with the buildings no 2 and 4 set back an additional 13.8m, hence a total separation of over 25m. Furthermore the fence separating the two properties provides complete privacy. (Fig 20)



20. VIEW NORTH TOWARDS GLASSLYN ROAD FROM SEMI-DETACHED MASTER BEDROOM

8. DESIGN AND LAYOUT

8.1. ORIENTATION

The house is entered on the north-east elevation, and all external amenity spaces face to the South or the West, with all living spaces being dual aspect, to provide natural cross-ventilation.

8.2. LOWER VOLUME - ENTRANCE & BEDROOMS

The entrance hall on the lower level gives access to two bedrooms, each facing the garden, with service areas located in the rear spaces, such as bathrooms, utility room, plant room, storage areas and a cinema room/ gym (fig. 21).

8.3. UPPER VOLUME - LIVING / DINING / KITCHEN

The entrance hall on the lower level gives access via stairs to an upper volume which includes a kitchen/dining area with adjacent sitting area, and a projecting breakfast area with southeast-facing glazing (fig. 21).

8.4. ECO HOUSE ELEMENTS

The projecting breakfast area, together with the projecting extension to main bedroom on the lower ground floor below, provide essential and significant southerly-facing glazing (~37% of total southerly fenestration), which needs to be maximised to achieve passive solar heating and minimise energy consumption.

8.5. SEMI-DETACHED STUDIO / MASTER BEDROOM

A small, detached, single-storey block is located adjacent to the living room of the house, accommodating a master bedroom and an en suite (fig 20).

As this semi-detached studio represents the most significant change from the previously approved application (HGY/2020/0423) and the relative height above sea level now reaches 47.55, and while this exceeds the previously approved height of 46.96, it is merely 1.8m above the adjoining levels in the rear garden of 58 Wolseley Rd. and sits below the current fence level with the adjoining property at 47.57 (24)

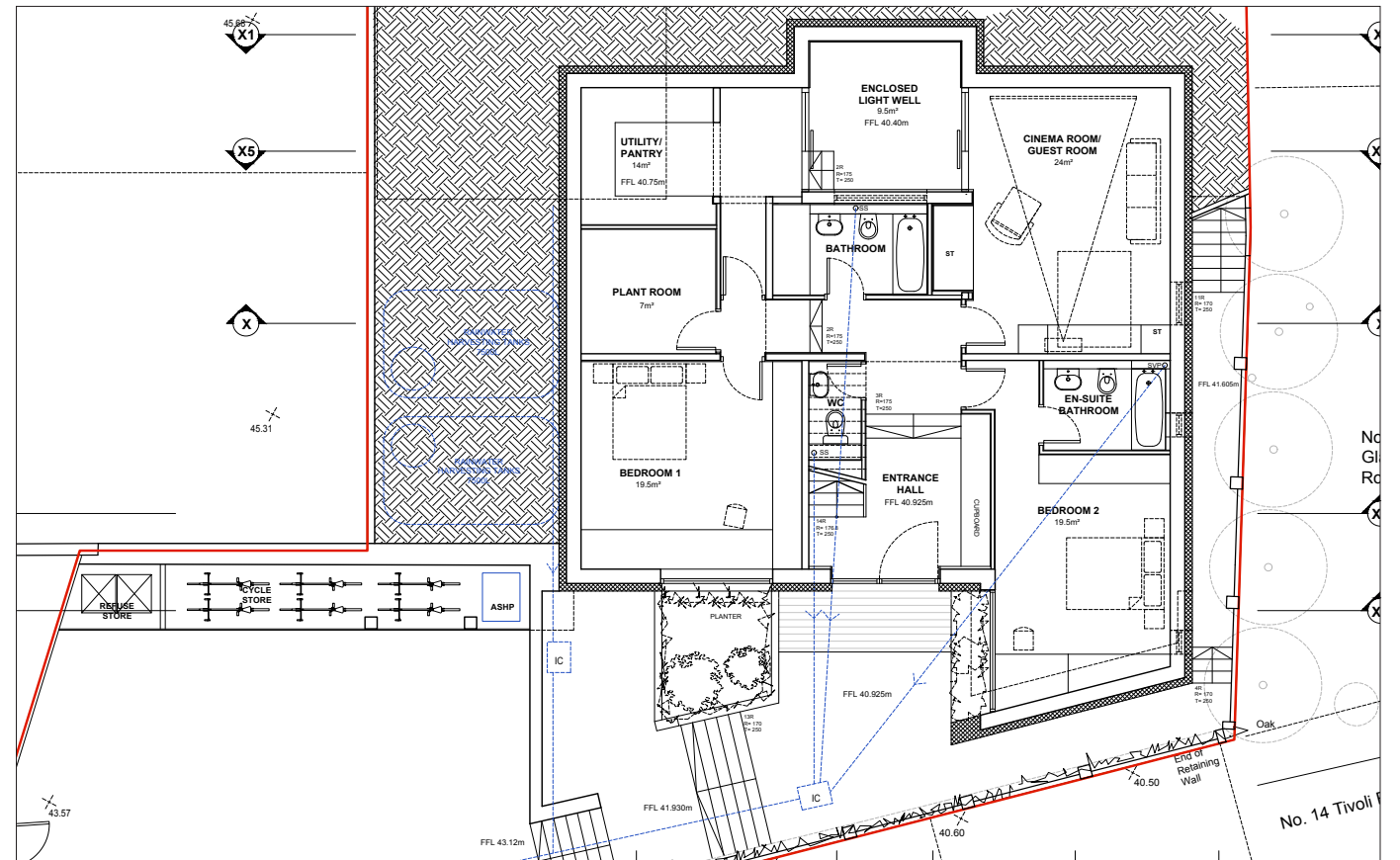
8.6. SPACE STANDARDS

The house meets all relevant space standards, both Nationally-Described and London Plan; in particular, the Gross Internal Area of the 4 bedroom/ 7 person house is 232 m², and the area of each room is well in excess of the standards. The floor to ceiling height of all habitable rooms is a minimum of 2500mm.

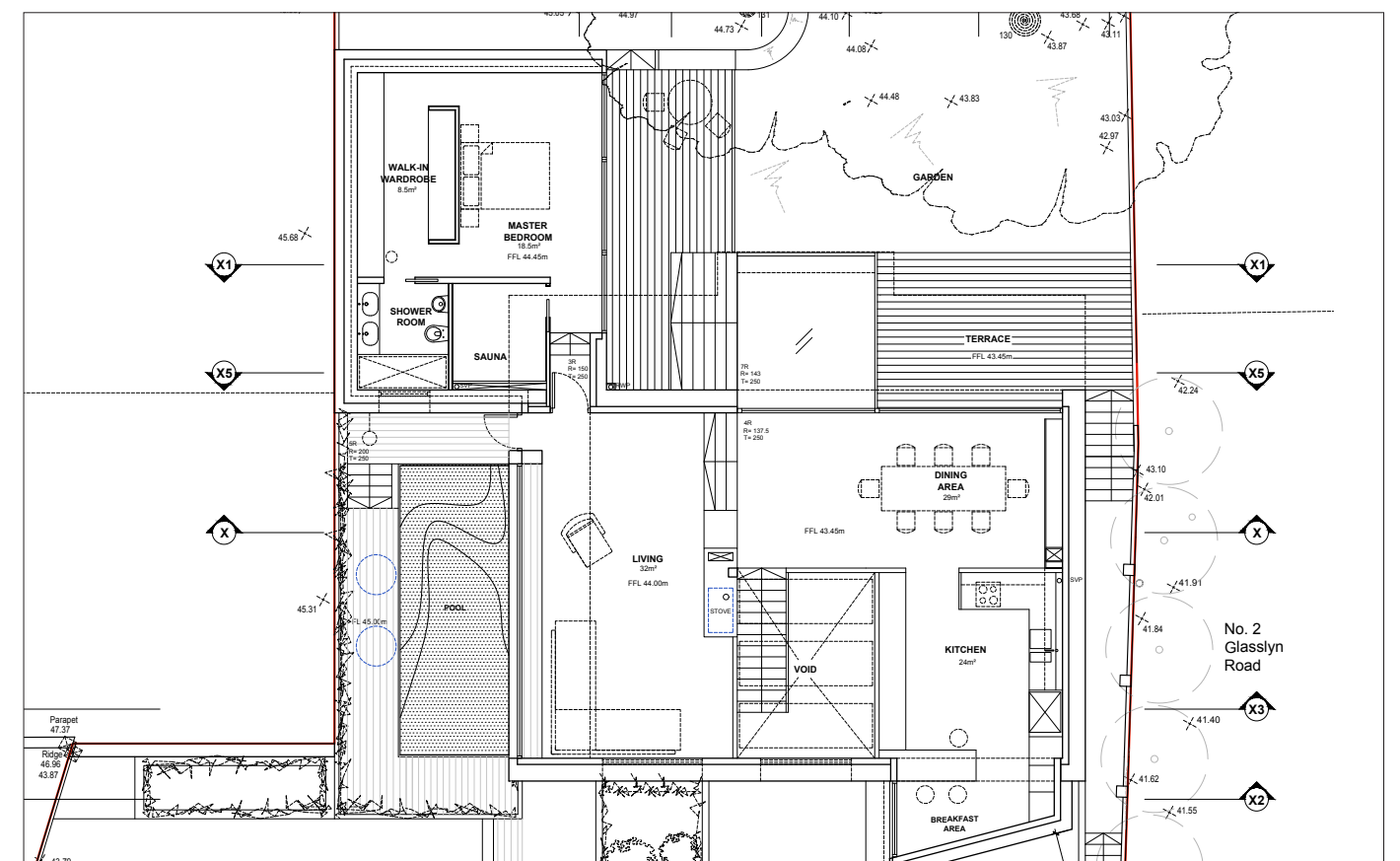
8.7. LIFETIME HOMES

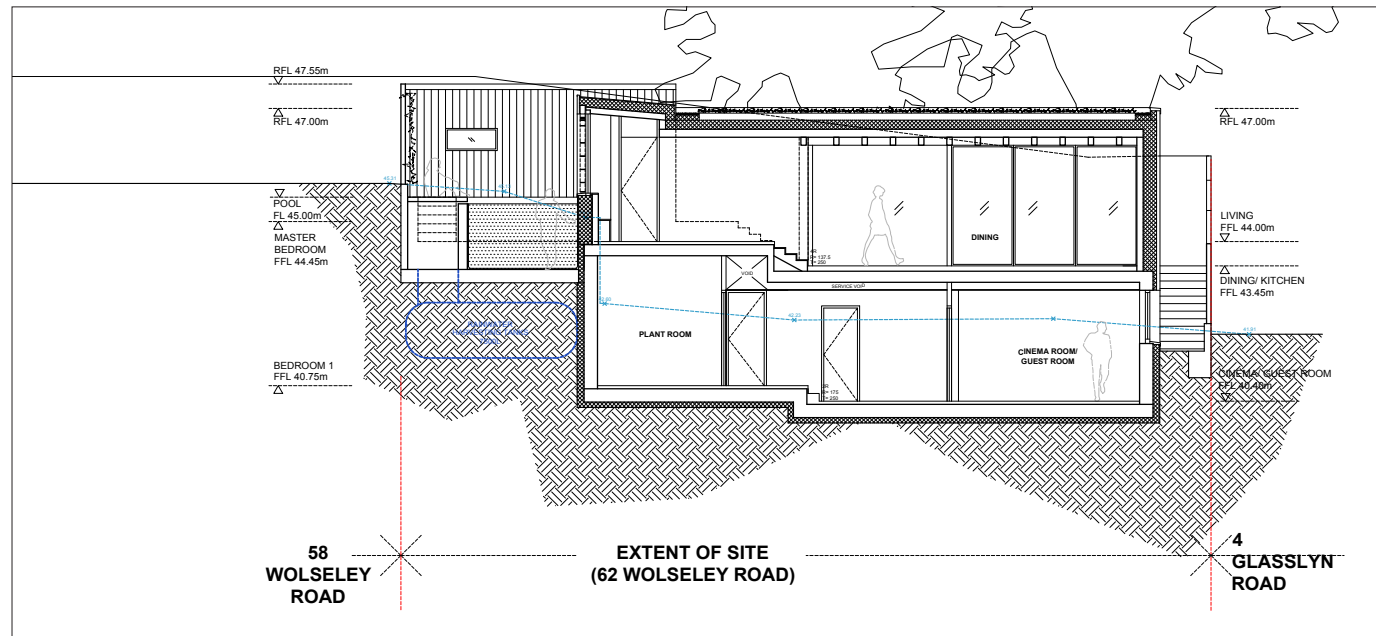
The proposed house and the overall scheme has been designed to comply fully with all relevant Lifetime Homes Standards.

21. PROPOSED LOWER FLOOR

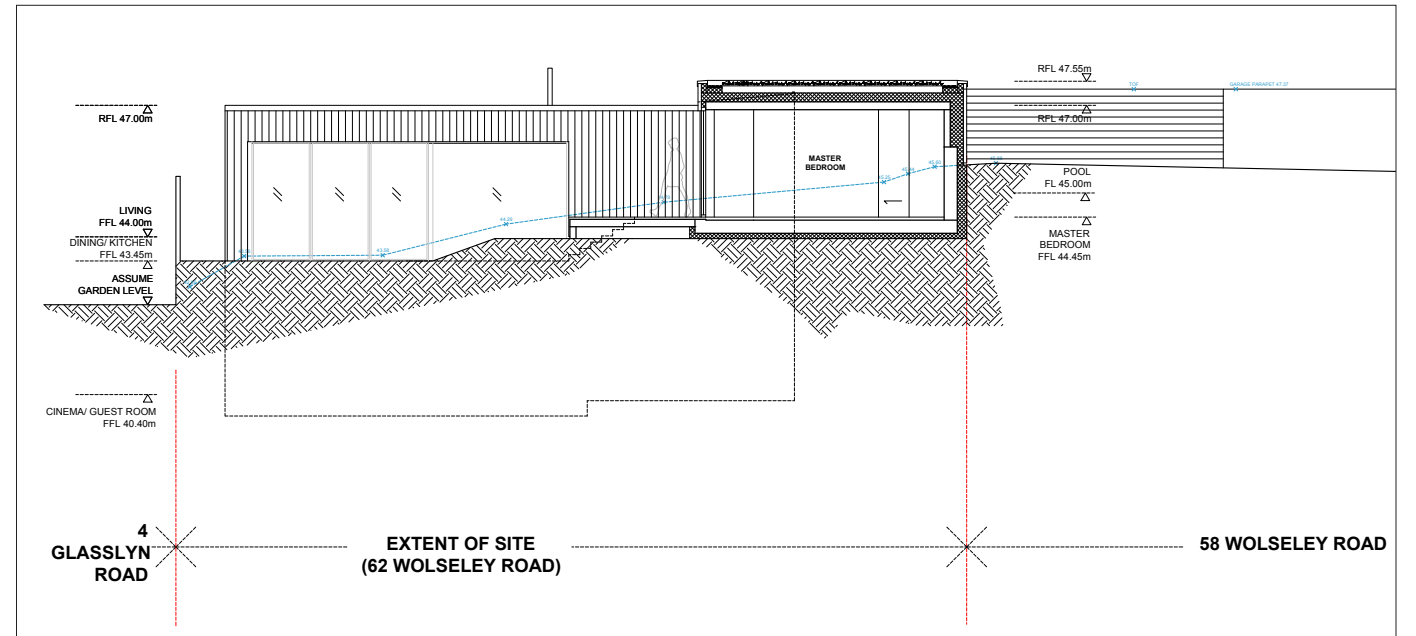


22. PROPOSED UPPER FLOOR & SEMI-DETACHED VOLUME

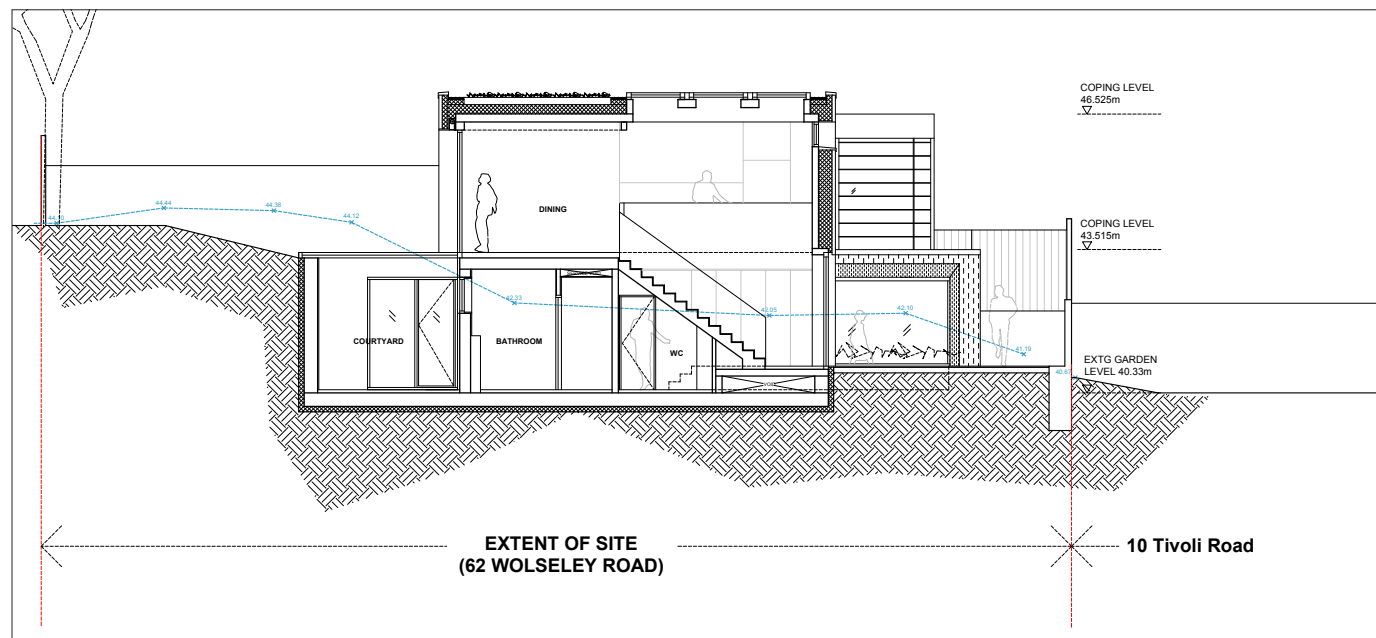




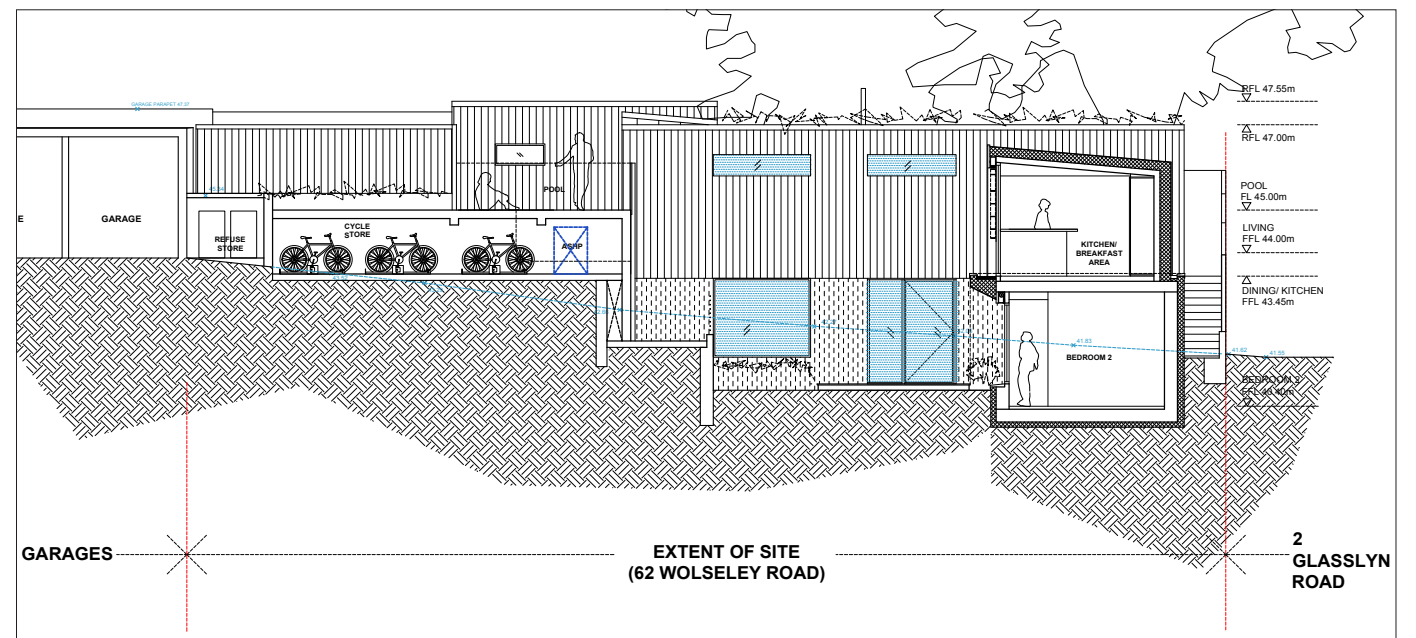
23. PROPOSED SECTION X



24. PROPOSED SECTION X1



25. PROPOSED SECTION Y1



26. PROPOSED SECTION X2



27.



29.



28.



30

9. DESIGN AND MATERIALS

9.1. CONCEPT

The proposed material palette is limited to a small number of high quality materials, chosen to reflect the site context and the contemporary design of the scheme, and used in a balanced composition, with each material appropriate to its particular use and context.

9.2. BUILDING FACADE

The upper floor walls of the house are finished in timber cladding, whilst the lower floor walls of the house are finished in self-coloured render, pale grey colour.

9.3. WINDOWS

All windows are framed in thermally-broken aluminium, with a dark grey anodised finish, consisting of large panels of highly-insulated fixed glazing, together with sliding glazed and louvred panels.

9.4. EXTENSIVE GREEN ROOF

The roofs of the house are flat, with minimal parapets. The extensive green roof covering of the main roof provides increased biodiversity on the site and a green outlook when viewed from existing houses in Tivoli and Wolseley Roads..

9.5. BOUNDARY WALLS

The boundary walls, facing the gardens of both Tivoli and Wolseley Roads, are faced in an earth-coloured, buff-grey stock brick, that relates to the London stock brick used on the rear of the houses. The brickwork wall facing the Tivoli Road gardens is designed as a living 'green wall'.

9.6. LOW-IMPACT LIGHTING

The external lighting is to be low-level and low-impact to minimise any adverse impact on adjoining properties.

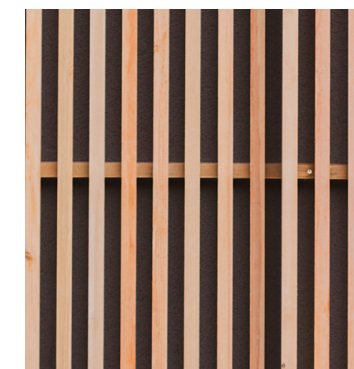


31. PROPOSED SIDE ELEVATION WITH MATERIALS

1. CONCRETE RENDER



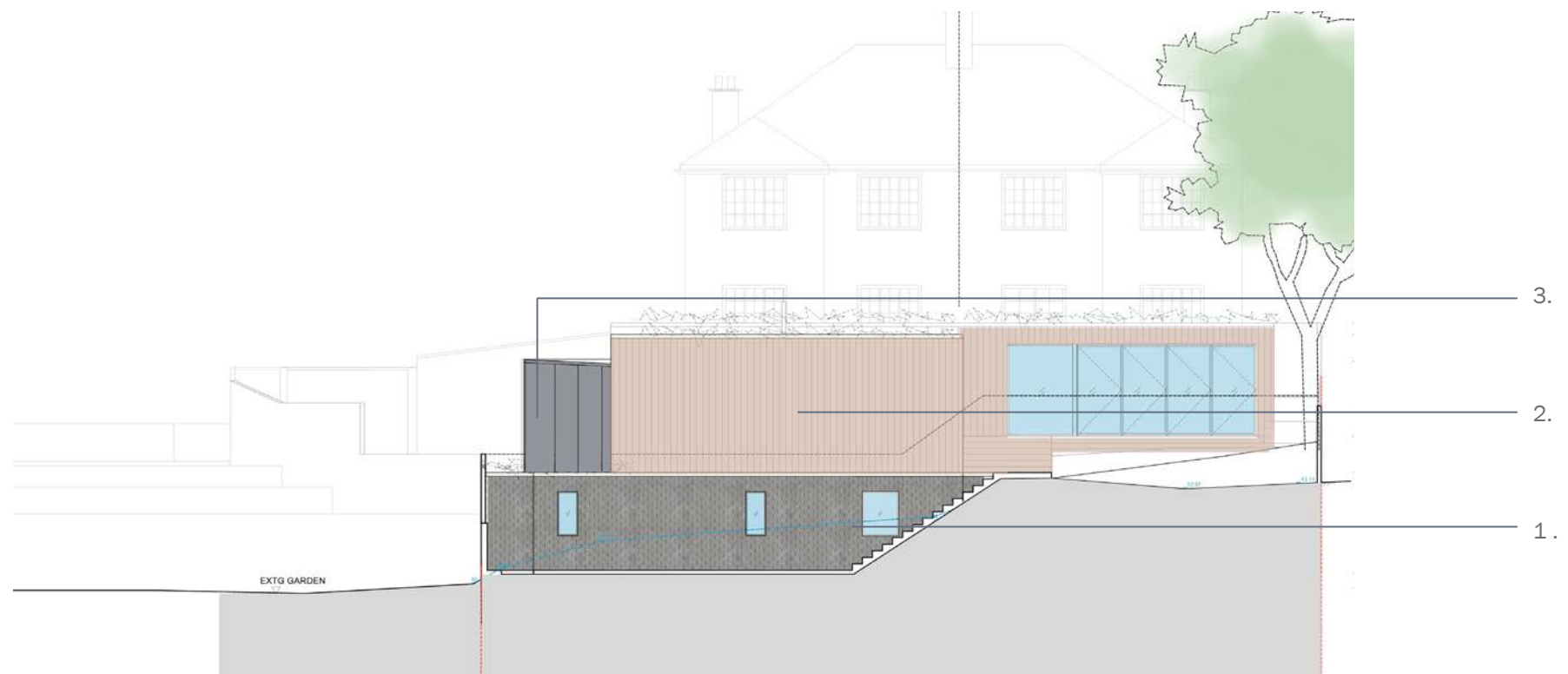
2. TIMBER CLADDING



3. DARK GREY ZINC



4. ALUMINIUM WINDOWS



32. PROPOSED REAR ELEVATION WITH MATERIALS



32. INDICATIVE INTERNAL VIEW



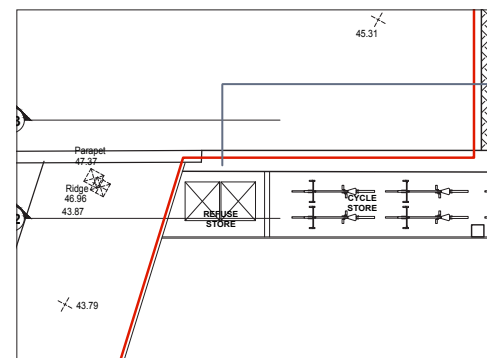
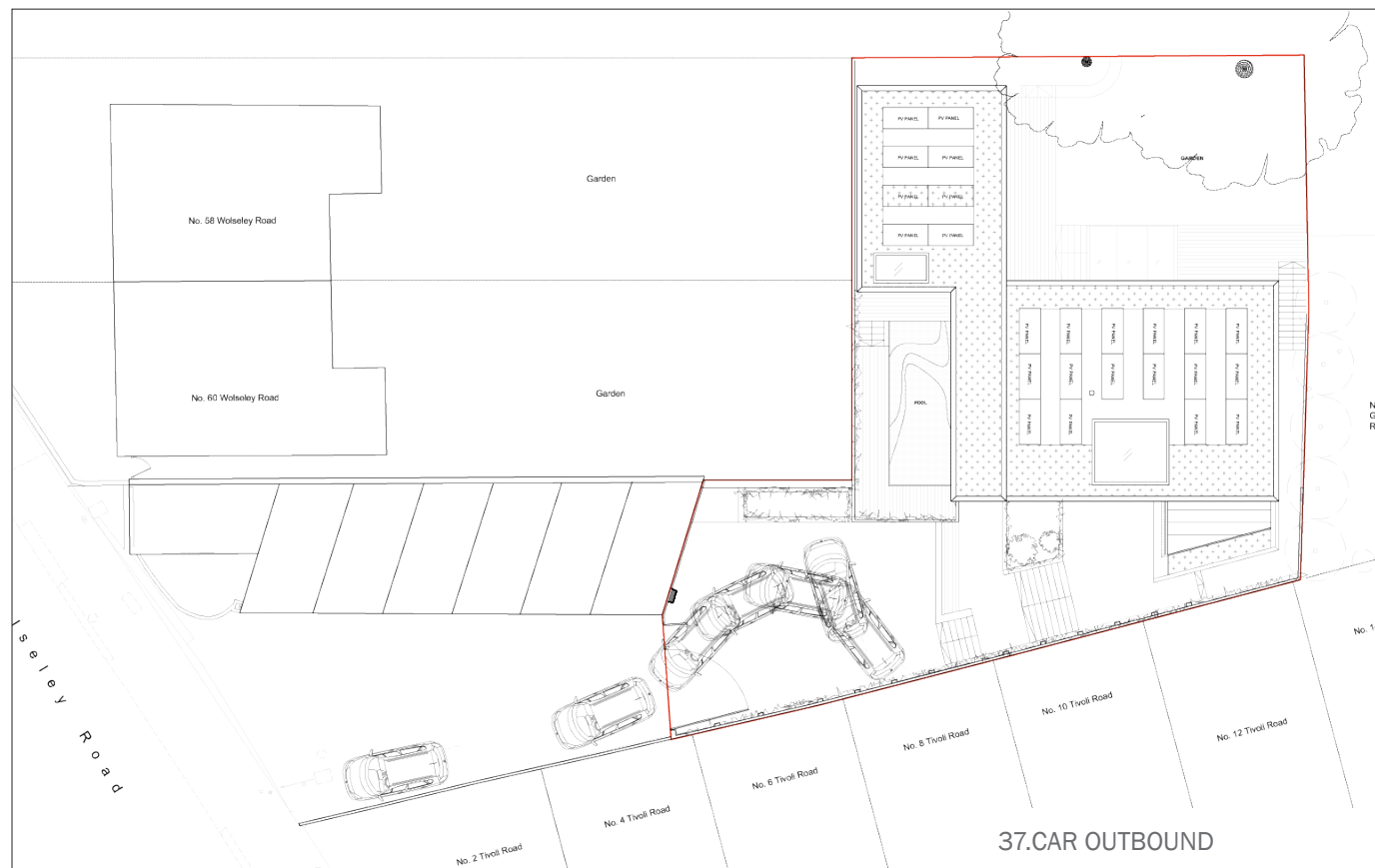
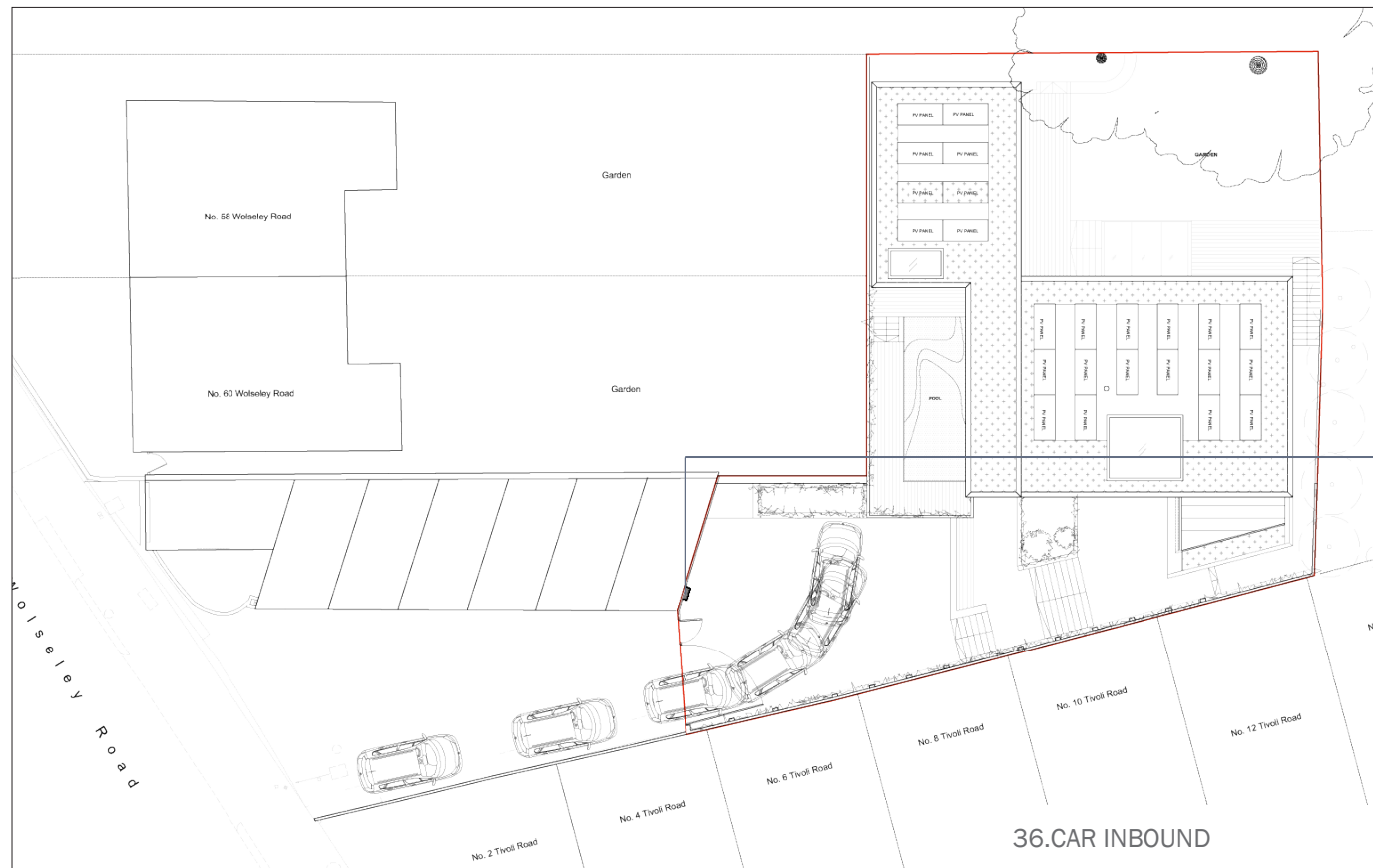
33. INDICATIVE INTERNAL VIEW



34. INDICATIVE INTERNAL VIEW (GODSON STREET / EDGLEY DESIGN)

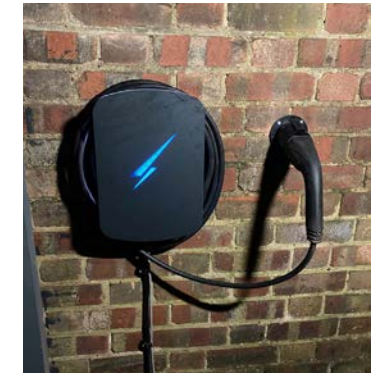


35. INDICATIVE INTERNAL VIEW



5. CAR CHARGER

6.. REFUSE & RECYCLING



10. TECHNICAL DESIGN

10.1. VEHICULAR ACCESS

The application site is accessed off the entrance courtyard serving no. 6. existing garages, to which there is direct vehicular access from Wolseley Road via an existing 8m wide crossover.

10.2. CHARGING POINT

The electric car charging point is mounted on the wall of the existing garages at the entrance to the site.

10.3. CAR PARKING

An on-site car space is located in the upper courtyard which is 6.7m wide at the narrowest point and over 9 m wide at the entrance of the site.

10.4. CYCLE STORAGE

Cycle storage for no. 6 cycles is provided within covered car-port, located in the upper courtyard.

10.5. REFUSE AND RECYCLING STORAGE

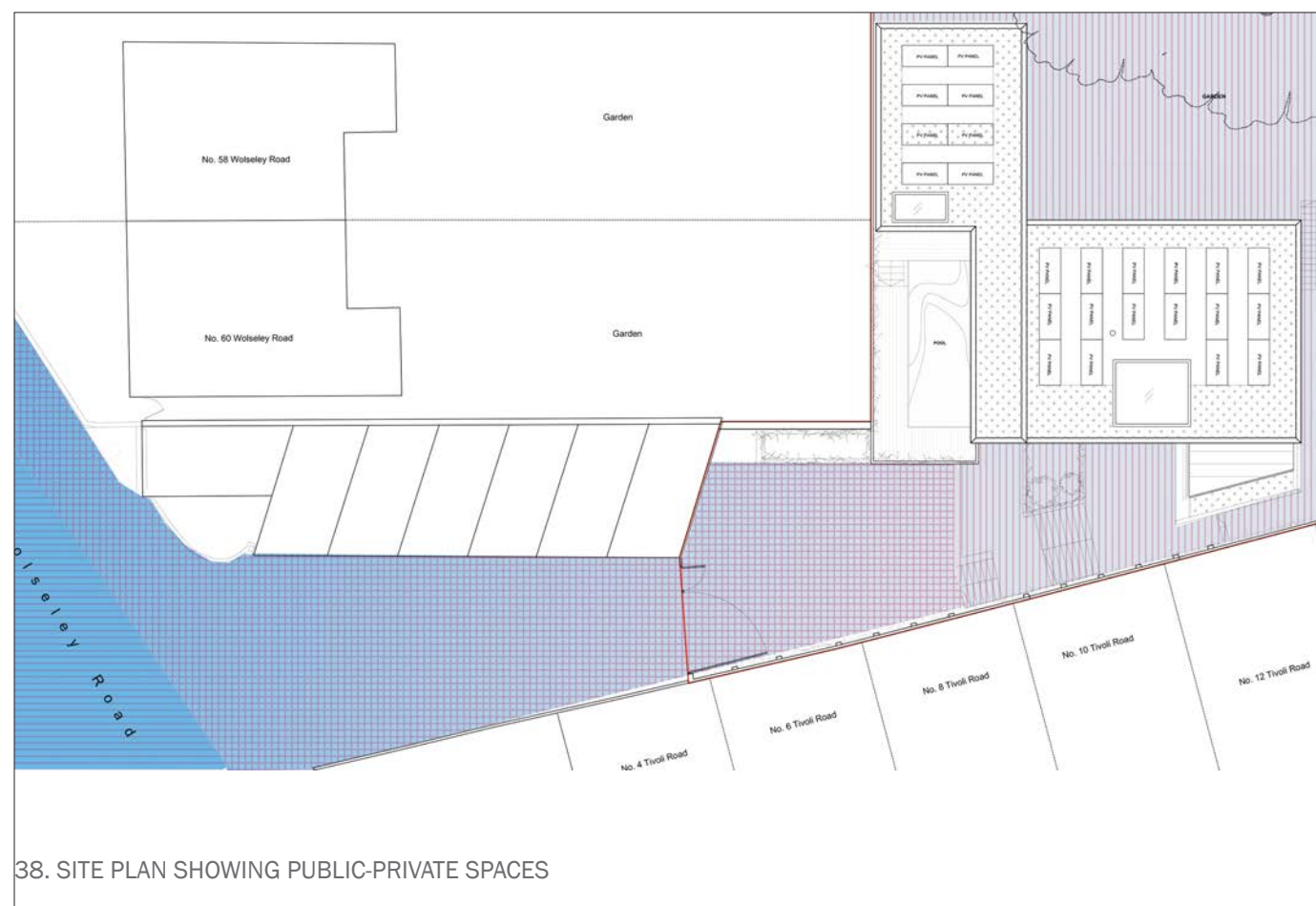
A store for both refuse and recycling bins is located adjacent to the covered car-port, in the upper courtyard. The bins would be taken to the Wolseley Road frontage, adjacent to the public footpath prior to collection day.

10.6. EXTERNAL LIGHTING

The pedestrian access to the houses is lit by low-energy lighting bollards, providing downward lighting to prevent light disturbance to adjacent properties.

10.7. NEW PLANTING

Extensive new shrub and tree planting is proposed in the lower garden, adjacent to the Tivoli Road gardens, as well as in the upper garden at the rear of no.58 Wolseley Road. The new trees are to be native species to benefit local and indigenous biodiversity.



11. SUSTAINABILITY

11.1. EARTH SHELTERED

In response to the site topography, the house is an earth-sheltered design with high thermal-mass construction, reducing diurnal temperature cycles, allowing energy use to be minimised and increasing thermal comfort.

11.2. HIGH THERMAL INSULATION

The house is designed as a highly-insulated enclosure equivalent to Passivhaus standards with thermal insulation levels significantly higher than Building Regulations requirements, the level of thermal bridging minimised, and high-performance external doors and triple-glazed windows incorporated.

11.3. PASSIVE SOLAR DESIGN

The house is designed to maximise passive solar gain, particularly in winter months, by the use of large south-west and south-east facing windows to the upper-level living space and kitchen (fig.38).

11.4. CONTROLLED VENTILATION / HEAT RECOVERY

The house incorporates a whole house heat recovery system, using foul air extracted from kitchen, bathrooms and the utility drying room to warm the fresh incoming air, which ventilates the habitable rooms of the house.

11.5. HEAT PUMP / UNDERFLOOR HEATING

The house uses a air/water heat pump, located below the south-facing terrace. The air-source module is used to extract energy from the ambient air via a heat exchanger which in turn uses a thermal transfer to the underfloor heating system of the house.

11.6. PHOTOVOLTAIC PANELS

Photovoltaic panels are proposed on the main roof, enabling the house to provide 10kW of electricity, which is considered sufficient to meet all the electrical requirements, including from the heat pump and electric car charging during the spring, summer and autumn months.

11.7. EXTENSIVE GREEN ROOF

The house incorporates an extensive green roof over the living/dining space, with ecologically-selected indigenous plants, which, by using the rainwater falling upon it for plant growth, assists in the control of water run-off (fig. 38).

11.8. WATER-COLLECTION ROOF

The extensive green roof as well as the hard-surfaced south-facing terrace is used to collect rainwater for use in the flushing system of the WCs, and for the watering of gardens. The proposed tanks hold 15m³ of water and can be configured in a hybrid configuration to act as a storm water management system and rainwater harvesting tank. The tanks are placed below the south facing terrace. (Fig. 23 & fig. 41)

11.9. SUSTAINABLE DRAINAGE SYSTEM

All surface water is dealt with entirely on site, without connection to the sewer system, using permeable SUDS paving in all hard areas.

11.10. LOW-ENERGY LIGHTING & APPLIANCES

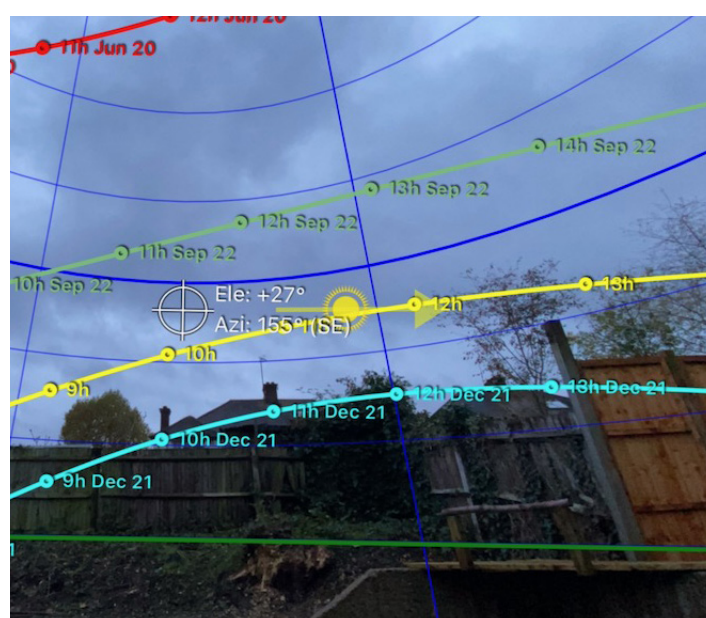
All internal and external lighting uses dedicated low-energy fittings and automatic controls, operated by movement or daylight, to minimise energy usage, and all appliances are Energy Saving Recommended.

11.11. GREEN POD

An intensive green roof to the projecting element on the east elevation provides a dense growth of evergreen climbing plants to fully conceal the first floor pod.



39. CLT BUILD SYSTEM



40. DIAGRAM OF SOLAR GAIN IN WINTER MONTHS VIA SOUTH-WEST UPPER-LEVEL WINDOWS.



41. EXTENSIVE GREEN ROOF

12. ECO HOUSE

12.1. SUSTAINABLE MATERIALS

All structures above ground will be formed of prefabricated CLT (cross laminated timber) which is a highly sustainable material choice. As the panels are extremely accurately produced using CNC machines, this also improves the level of airtightness and thermal performance, partially negating the need for added insulation to achieve Passive House levels. In sum, CLT is a very eco-friendly construction method from a managed sustainable source, providing a positive CO2 balance. Furthermore the assembly process will produce significantly less carbon than the more traditional methods, and the extremely short installation period will reduce impact on the neighbouring properties in terms of noise, pollution and disruption. (Fig. 39)

12.2. INSULATION STRATEGY

The planning for the walls and insulation calls for a minimum insulation of 200mm below ground and 350mm above ground yielding U-values of around 0.1 - 0.15 throughout the building envelope and hence in many instances exceeding the newly introduced building standards. In addition the building will use triple glazing and high performance windows throughout with airtightness in line with passivhaus standards (0.6 ACH).

12.3. SHADING STRATEGY

As the summers become hotter and sunnier shading strategy is increasingly important even in UK homes and especially on southerly facing aspects. In this instance the shading will be external venetian blinds which are very effective in keeping the building cool during the sunniest hours of the day.

12.4. WARM PHPP PRELIMINARY RESULTS

The previously approved scheme (HGY /2020 / 0423) was modelled using the Passivhaus Planning Package (PHPP) and while we expect the addition of some North facing fenestration will slightly diminish the energy performance, which will be partly offset by the larger and slightly higher South facing fenestration. While

we have not re-modelled this scheme we expect primary energy demand to be in the region of 20-22 kWh/m2 yr - well below the new building requirements introduced in 2022.

13. CONCLUSION

13.1. LOW CARBON PASSIVHAUS DESIGN

The new house is a highly sustainable, low-carbon scheme, designed to Passivhaus standards. The new house will be an exemplar for the infill development of vacant brownfield sites, based on principles of design that are applicable to many other urban sites.

13.2. LOW-IMPACT DESIGN

The design of the new house carefully considers the privacy and views enjoyed by neighbouring residents and, by responding sensitively to the complex topography of the site, minimises any impact on its surroundings.

13.3. EARTH SHELTERED DESIGN

The new house is an earth-sheltered design closely embedded to the site, using indigenous planting within an extensive 'green roof', together with an intensive 'green wall' to encourage the close integration of the house with its site.

13.4. DEVELOPMENT AS CATALYST

The proposed development will enable the re-facing of the existing terrace of dilapidated garages, removing an existing eyesore, reducing the possibility of future dumping, and significantly improving the appearance of the Crouch End Conservation Area.

13.5. PRINCIPLE OF DEVELOPMENT

The proposal replaces an existing derelict house on a disused brownfield site, with a new house designed on sustainable principles in new landscaped gardens, thereby enhancing the character and appearance of the site and its context.