PROPOSED MAISONETTES:

SITE ON CORNER OF ROSELEIGH CLOSE AND CAMBRIDGE PARK, EAST TWICKENHAM, TW1 2JT

Design and Access Statement

Deon Lombard Architects

August 2023

Design and Access Statement

Contents

1.0 Introduction

This Design and Access Statement (DAS) has been prepared by Deon Lombard Architects in support of a Full Planning Application for the proposed development of 3 no. maisonettes located on the site at the junction of Roseleigh Close and Cambridge Park, East Twickenham, Middlesex.

Following a Planning Pre-application Meeting and Report (*dated 12 August 2022),* recommendations have been responded to and further information provided as requested, including updated and additional specialist consultant reports. *(Refer to the Index at Appendix A).*

This is also an 'umbrella' document, covering specific submission requirements with references to the accompanying specialist consultant reports, documentation and drawings (*referenced in bracketed italics)* in accordance with the Council's Local Validation Checklist, the NPPF and the London Plan. This DAS should thus be read in conjunction with the drawings and reports that together comprise the planning application. The background, constraints and design proposals are set out within the context of the site and its location in East Twickenham in demonstrating that the proposal is policy compliant *(Refer to the Planning Statement - The Boisot, Waters, Cohen Partnership, August 2023)*.

Fig.1 View of the Site looking across Roseleigh Close from the west

2.0 Site Location and Appraisal

The maisonettes are proposed for a suburban location on an undeveloped site at the junction of Roseleigh Close and Cambridge Park, East Twickenham. This corner site is level and roughly square in shape, covering an area of some 562 sq. metres. A 6-unit maisonette block (34 Cambridge Park) is located east of the site, and a similar maisonette block (23-28 Roseleigh Close) is located beyond a twin garage unit to the north of the site. A large three-storey mansion block, Cambridge Park Court, is located opposite the site on Cambridge Park.

Site boundaries are clearly demarcated along Roseleigh Close to the west, Cambridge Park to the south, the garage unit side wall and timber boarded fence along the northern boundary, and a timber boarded fence down the eastern boundary. Along its street boundaries a wire mesh fence is set some 1.5 metres from the back of pavement boundary line.

The most prominent feature of the site is a line of five closely spaced protected mature horse chestnut trees along the Cambridge Park pavement. Together with trees further along and on the opposite side of the street, they form a distinctive avenue leading towards the Cambridge Park footpath connection to the Thames Path. Three small trees are located along the north-east boundary. The remainder of the site is covered in scrub and grassland. *(Refer to the Ecological, Biodiversity and Landscaping Assessment - Furesfen, October 2022, and the Tree Survey and Arboricultural Impact Assessment – Rootcause Arboriculture, August 2023)*.

Fig.2 Site Location and Context (from Google Maps)

According to the Environment Agency the site is located in Flood Zone 1, and is therefore at very low risk of flooding from watercourses and/or the sea. The EA's flood risk from surface water maps also show that the site is at low risk of flooding from surface water *(Refer to the Flood Risk, Surface Water, SuDS and Water Storage Assessments - Price & Myers, March 2023).*

Fig.3 Cambridge Park Court, a 3-storey mansion block opposite the site on Cambridge Park

The site is not located within a Conservation Area. However, due to its location adjacent to the Cambridge Park Conservation Area, and being opposite Cambridge Park Court, a building of townscape merit *(Refer to Fig. 3)*, it was advised in the Pre-application Report that a Heritage Statement be included in this planning application *(Refer to the Heritage Statement - Geoff Noble Heritage + Urban Design, July 2023).*

Fig.4 A typical 6-unit maisonette block east of the site on Cambridge Park

Fig.5 A typical 6-unit maisonette block and twin garage unit north of the site on Roseleigh Close

Fig.6 A 6-unit maisonette block with a 4-unit blocks beyond on the west side of Roseleigh Close

3.0 Site Context, Character and Design

The Cambridge Park Estate was laid out in the late 1950s around three cul-de-sac: Roseleigh Close, Beaulieu Close and Haversham Close The buildings are a mixture of discrete two - storey blocks in two sizes, each containing 4 or 6 maisonettes, located in a grassed landscaped setting with a scattering of established mature trees. Shared service areas with brick-built refuse and storage enclosures lie to the rear of the blocks.

The blocks are comprised of brown facing brickwork, hipped plain tiled roofs and double height splayed front window bays with green or reddish-brown hanging tiles between the ground and first floor window bands, culminating in hipped roofs with wide projecting eaves above the splayed windows. Some have loft conversions with rooflights to the front and dormers to the rear or sides.

The blocks are informally arranged with variable alignments and setbacks, resulting in a slightly 'higgledy-piggledy' layout which is characteristic of the Estate. Generous setbacks varying from about seven to nine metres from the back of pavement line allow for open grassed areas to their frontages. These areas are intermittently interrupted by concrete paths, driveways, parking forecourts and garage blocks located between the blocks *(Refer to Fig.12).*

Although there is no fixed 'building line' along street frontages, the blocks are carefully located with respect to one another in terms of privacy and overlooking. All habitable rooms have large windows facing either to the front or the rear of each block. The shorter side elevations have smaller obscure glazed windows which serve non-habitable rooms such as entrance lobbies, kitchens and bathrooms. This device enables adjacent blocks to be located relatively close to one another.

The design of the proposed building takes its cues from its local context, informed by surrounding typologies and architectural details. It responds to its context and streetscape in terms of its site location, density, spacing, layout, scale, form, massing and use of materials. The overall height, eaves level, and double pitched roof with hipped ends reflect and complement those of adjacent properties, as do the matching plain clay roof tiles, brickwork, and double-storey projecting bays.

Fig.7 Proposed street elevations along Cambridge Park (top) and Roseleigh Close (below)

3.1 Site Layout, Density and Spacing

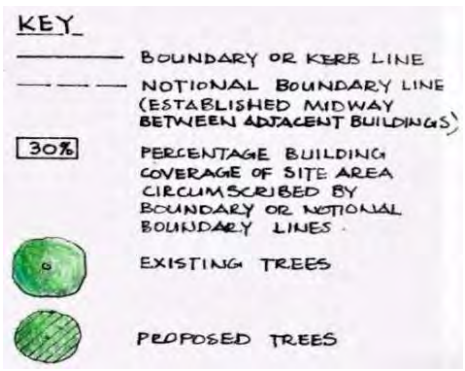
The building layouts and density across the Estate have been carefully considered in determining the location, size and massing of the proposed building with reference to its surroundings. The proposed building would provide for 3 maisonettes, having a footprint area of 170 sqm. on a site of 562 sqm. thus occupying 30% of the site.

Although there are no demarcated boundary lines other than those along street frontages and rear boundaries to the perimeter of the Estate, it is possible to plot notional boundary lines at midway

points between the blocks to establish notional site sizes, as can be seen on the site plan extract below. Densities range from about 25% to 30%, with the majority of the blocks occupying about 30% of their notional site area. The proposed building footprint covers some 30% of the site area, which is compatible with the overall site density of the Estate.

The spacing between the proposed block and its nearest neighbour to the east is 4.5 metres which accords with the established spacing arrangements elsewhere on the Estate. To the north it is separated from the nearest maisonette block by some 10 metres, with a twin garage unit located along the north site boundary between the two buildings.

Fig. 8 Notional site boundary lines and maisonette block site coverage densities



3.2 Comparative Building Alignments and Setbacks

The building is in alignment with the existing maisonette block to the east of the site (34 Cambridge Park), but is set back a further two metres to 9 metres from back of pavement line to take account of the row of horse chestnut trees along the (Cambridge Park) street boundary. This setback ensures that the building would be clear of the chestnut tree canopies and root protection areas. *(Refer to the Tree Survey and Arboricultural Impact Assessment – Rootcause Arboriculture, August 2023)*.

As the corner angle of the site at the intersection of Cambridge Park and Roseleigh Close is slightly greater than 90°, its west facade is not exactly in alignment with Roseleigh Close. This is in accordance with the blocks along Roseleigh Close, as none of their facades align with the street.

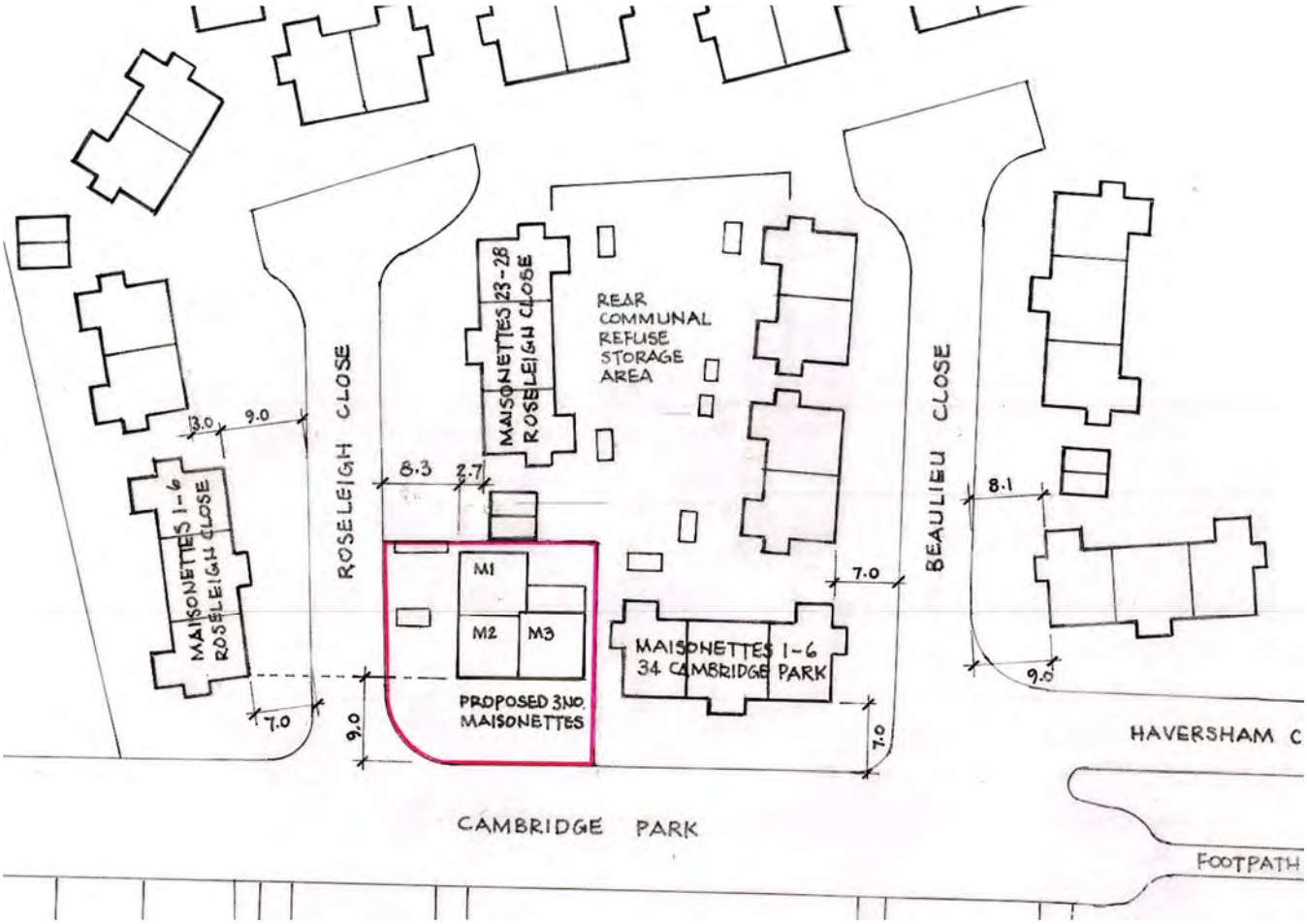


Fig.9 Comparative alignments and setbacks of existing and proposed blocks from street boundaries

The new frontages are set back from both street boundaries, which, together with the proposed removal of the fencing along the street frontages, would maintain the open grassed perimeters characteristic of the Estate.

Along Roseleigh Close the setback is some 8 metres, responding to the maisonette block (1-6 Roseleigh Close) on the opposite side to the west which varies from some 7 metres to 9 metres from south to north, thus an average of some 8 metres. The minimum distance between the existing and proposed blocks across Roseleigh Close would be about 23 metres, which is typical of the Estate. *(Refer to the 1:500 scale Site Block Plan).*

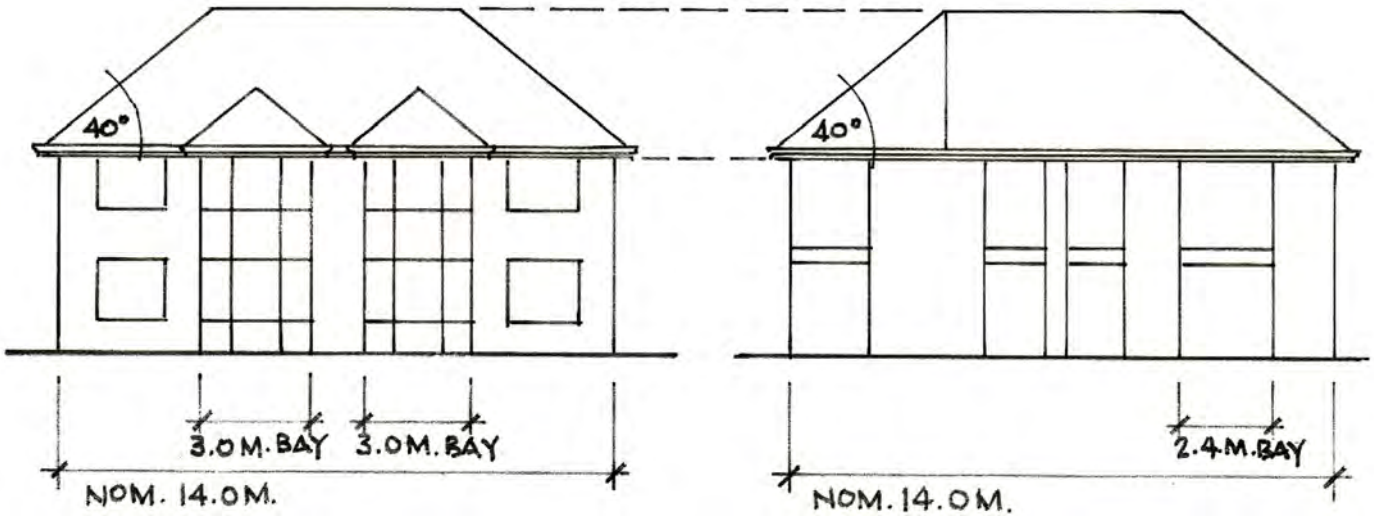
3.3 Comparative Building Sizes and Elevational Treatments

The proposed maisonette block is comparative in size to an existing 4no. maisonette block when viewed in elevation from the street. Both buildings would present a street elevation of a nominal 14 metres in length with matching eaves heights, hipped tiled roofs at angles of 40°and matching facing brickwork.

The dominant elements on the facades of the existing maisonette blocks are the two-storey roofed window bays with splayed corners. These are some 3 metres wide when viewed in elevation, and project some 0.7 metres from the façade.

The proposed block references these bays as prominent features on its façade. Although both the existing and proposed bays have an external perimeter of some 3.4 metres, the proposed bays would have a width of some 2.4 metres when viewed in elevation with a projection of some 0.5 metres from the façade.

These principles are illustrated in the comparative outline street elevations below.



Existing Elevation of 4-unit maisonette block *Proposed Elevation of 3-unit maisonette block*

Fig.10 Comparative Street Elevations

3.4 Spatial Provision

In response to comments in the Pre-application Report, the habitable basement proposed for Maisonette 3 has been removed. Small basements for housing renewable energy equipment (allowing for possible future changes in the technologies) and general storage are proposed for each of the maisonettes. A Structural and Basement Impact Assessment is provided. *(Refer to the Structural and Civil Engineering Basement Impact Assessment - Price & Myers, March 2023).*

Together with further modifications the GIA for unit M3 has thus been reduced by 43 sq.m. and that of unit M2 increased by 2 sq.m. as follows:

Maisonette 1 (M1) 3-bed GIA = 118 sq.m.
Maisonette 2 (M2) 2-bed GIA = 80 sq.m.
Maisonette 3 (M3) 3-bed GIA = 158 sq.m.

Room sizes are generous, exceeding those sizes recommended in the Nationally Described Space Standards for dwellings. Together with flexible layouts and adequate storage, these measures meet the needs of modern lifestyles, including home working, and contributing to health and wellbeing.

The existing maisonettes do not have private amenity spaces allocated, thus preserving the open nature of the Estate as a shared community space. The grassed areas to the front of the existing blocks are regarded as shared amenity spaces for each block.

As is typical in the Estate, a grassed shared amenity space of some 160 sq.m. is provided to the front of the proposed building along Cambridge Park, equivalent to some 53 sq.m. for each of the three maisonettes. The existing fenced north-east corner of the site enables a private amenity space of 30 sq.m. to be provided for Unit M3, together with a roof terrace area of 13 sq.m. *(Refer to Appendix A: Residential Standards Compliance Statement and Areas Schedule).*

Fig.11 Roof plan view of the proposal within the existing context (Google Maps)

4.0 Site Connections, Access and Parking

The site is well located for local recreational opportunities and amenities. From the site it is about a 5 minute walk to the Thames Path, about a 15 minute walk to Cambridge Gardens, and about a 20 minute walk to Marble Hill Park. East Twickenham local centre and amenities are within a 15 minute walk at a distance of some 650 metres north of the site.

Richmond town centre is approximately a 1000 metre walk distance to the north-east, comfortably within the 20 minute cycle time / distance definition of Active Travel Zones (ATZ) as adopted by Transport for London. Frequent bus services to and from Richmond and Twickenham rail stations and town centres are within a 650 metre walk distance of the site *(Refer to the Transport Technical Note - Kronen Transport Planning, January 2023).*

Pedestrian access to the maisonettes would primarily be from Roseleigh Close, with secondary access from Cambridge Park. There are no significant level changes across the site so that access from the street to the front doors would be step-free. Door entrance thresholds would be level from outside to inside, thus allowing unimpeded wheelchair access to all ground floor locations.

Vehicular and cycle access would be from Roseleigh Close, an unclassified ‘local access road’ and lightly trafficked low-speed cul-de-sac. It is proposed to provide off street parking for each of the 3 maisonettes, with electric vehicle charging points provided to each of the bays. Two dropped kerb vehicle crossovers are proposed over an unobstructed footway section that allow for clear vehicle and pedestrian visibility in accordance with design guidance from LBRuT’s ‘Front Garden and Other

Off Street Parking Standards' *(Refer to the Transport Technical Note - Kronen Transport Planning, January 2023).*

There is precedent in the surrounding Estate for multiple off-street parking spaces located on or over the open verges of the cul-de-sac as can be seen in Roseleigh Close, Beaulieu Close and Haversham Close. The verges are intermittently interrupted by concrete paths, driveways, parking forecourts and garage blocks grouped in pairs or in larger groupings located between the maisonettes *(Refer to Fig.12 below).*

Secure cycle storage for at least 3 cycles and refuse/recycling containment would be provided for each maisonette with direct access from the street for secure refuse recycling/collection purposes. *(Refer to Appendix B: Refuse/Recycling and Cycle Storage Details).*

Fig.12 Multiple off-street parking spaces across the verge in front of garages in Haversham Close

5.0 Inclusive Access Statement

The maisonettes would be fully Building Regulations M4(2) compliant in accordance with Policy LP 35 (E) requirements for inclusive access. At ground floor level each of the maisonettes would have step-free access across the site, increased circulation space, and access to toilet facilities off the entrance halls, including for some wheelchair users.

A level hard paved parking bay would be provided for each of the maisonettes adjacent to the building. The approach routes from the point of alighting from a vehicle to access each of the maisonettes would be unobstructed, level, hard paved and at least 900mm wide, with ground floor step-free access at each of the entrances, throughout the ground floor areas and adjacent external areas. For Units M1 and M2 access would be by the principal front door entrances, whilst for Unit M3 inclusive access from the parking bay would be by the secondary rear entrance from the small courtyard.

All entrances, circulation areas and doorway clear opening widths would meet Approved Document M4(2) requirements, as would WC/cloakrooms immediately accessible from each ground floor level entrance hall. All the maisonettes have combined kitchen/living/dining room areas directly accessible from ground floor entrance halls, which together with associated outdoor spaces would be step-free and fully accessible.

6.0 Sustainable Design and Construction

6.1 A Fabric First, Low Energy, Low Carbon Approach

A sustainable passive 'fabric first' building envelope, low carbon and renewable low energy approach so as to minimise energy demand and carbon emissions, and maximise efficiencies is central to these design proposals. The development will commit to the Energy Hierarchy as set out in the London Plan policy 5.2, reducing carbon dioxide emissions through the energy efficient design of the site, building and services.

The proposals aim to meet net zero carbon targets. Building materials with low energy and low embodied carbon from sustainable sources will be used where possible. Further sustainability measures including higher levels of insulation and air tightness of the building envelope, as well as the use of energy efficient plant, appliances and light fittings than current Building Regulation requirements will also be implemented.

A total CO_2 emissions reduction target of some 77% improvement could be achieved, which is in excess of the 35% reduction requirements of Part L of the Building Regulations Part L 2021 volume 1 and the LBRuT *(Refer to the Energy Statement, May 2023 - Webb Yates Engineers).* Furthermore, an 'A Rating' for this proposal could be achieved according to the scoring matrix for Residential New-build, which would make a 'major contribution towards achieving sustainable development in Richmond' *(Refer to the LBRuT Sustainable Construction Checklist – 2020).*

There are a number of renewable energy options that would reduce the heating and hot water running costs, as well as a significant reduction in mains water usage. Space heating would be provided by low-heat waterborne underfloor heating to be used throughout. Solar photovoltaic roof panels and air source heat pump renewable technologies providing heating would also contribute significantly to the overall CO_2 reduction target.

Electric Vehicle (EV) Charging points are proposed for each of the maisonettes. An assessment of EV charging capacities is included in the *Energy Statement, May 2023 - Webb Yates Engineers.*

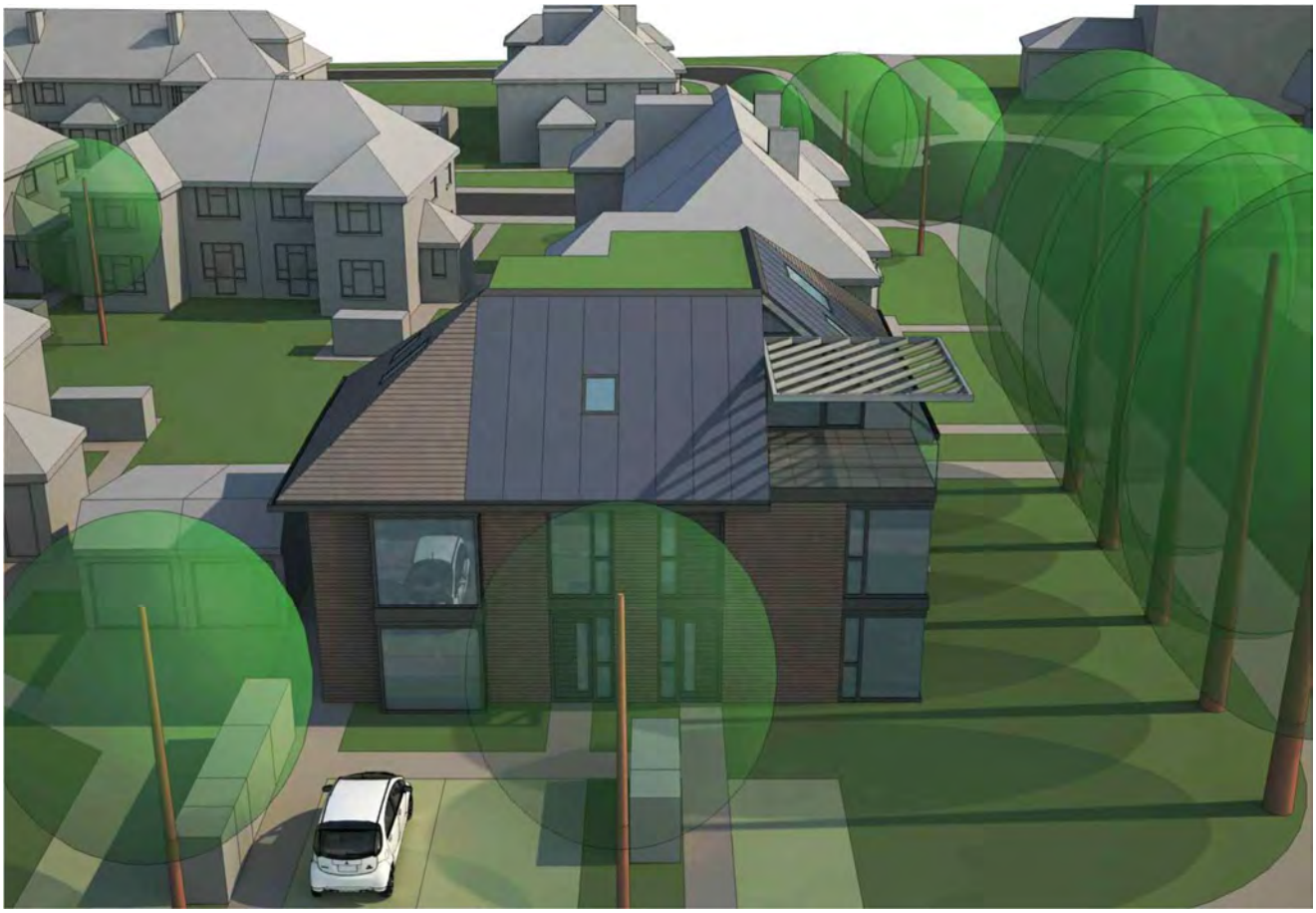


Fig.13 Elevated view from the west showing the integrated solar PV roof panels and intensive green roof

6.2 Natural Light, Ventilation and Overheating

Window openings are sized and located in response to the orientation and internal layout of the maisonettes. A balanced approach to the natural lighting, ventilation and potential overheating of habitable rooms has been carefully considered in the overall layout. Glazing, shading and framing would be specified to achieve the required thermal performance, optimise daylight levels, mitigate the risk of overheating and provide shading solutions as required.

On the west elevation, glazing with a maximum g-value performance of 0.4 would be required. This could be achieved with Pilkington Suncool™ 70/35 which has a g-value of 0.37 and minimum light transmittance of 0.7. On the south elevation glazing with a maximum g-value performance of 0.3 would be required to take into account the shading of the chestnut trees, whilst also limiting light spillage that could disturb nocturnal bat activity.

This could be achieved with Pilkington Suncool™ 50/25 with a g-value of 0.27 providing the required thermal performance, optimal daylight levels, and a reduction in night time light transmission to acceptable levels (*Refer to the Ecological, Biodiversity and Landscaping Assessment – Furesfen, October 2022).*

It is essential that internal thermal comfort and natural light levels be maintained throughout the year. External shading measures would be provided to west and south facing windows by external roller blinds mounted within cassettes contained within the window frames. These would be fully automated, running down directly in front of the windows to provide the required amount of solar control, reduce glare, prevent overheating and provide desired levels of natural lighting at different times of the day.

A mechanical ventilation and heat recovery (MVHR) system would be installed in each of the maisonettes to provide recommended minimum ventilation rates and improved air quality for each room type, whilst maintaining required levels of heating during colder months. During warmer periods, potential overheating problems would be addressed by ensuring that openable window areas in each of the maisonettes allow for adequate levels of purge, natural and cross ventilation to all habitable rooms.

A CIBSE TM59 assessment of overheating risk in homes has been carried out for the proposals. The findings conclude that none of the habitable spaces would be at risk of overheating.
(Refer to the Energy Statement, May 2023 - Webb Yates Engineers).

7.0 Water Efficiency, SuDS and Rainwater Storage Strategies

The development would make use water efficient appliances and fittings to achieve a mains water consumption rate that would not exceed 110 litres per head per day or less in accordance with London Plan policy LP22 *(Refer to the Water-Use Calculator: Appendix B in the Energy Statement).*

A reduction in mains water consumption is proposed as an integral part of a water management strategy that includes rainwater attenuation and storage.

In accordance with the London Plan and Environmental Agency guidelines, surface water run-off should be managed as close to the source as possible. Where porous soil conditions exist, SuDS using infiltration techniques is considered to be the most effective means of sustainable drainage as it mimics existing pre-development greenfield conditions and promotes groundwater recharge.

British Geological Survey Maps of the site and nearby borehole tests indicate that soil conditions are suitable for SuDS, such as permeable paving and attenuation ponds. Calculations show that the permeable areas of the site can comfortably accommodate the surface water volumes from the proposed development. Further attenuation would also be provided by a small intensive green roof, pond and bioretention areas.

Surface water from the roofs would be discharged into a 10,000 litre underground storage tank and used for rainwater harvesting purposes, particularly garden irrigation during dry periods and topping up the pond. Any overflow beyond these uses would be transferred to the infiltration area set away from the building *(Refer to the Flood Risk, Surface Water, SuDS and Water Storage Assessments - Price & Myers, March 2023, and the Strategy Plan below).*

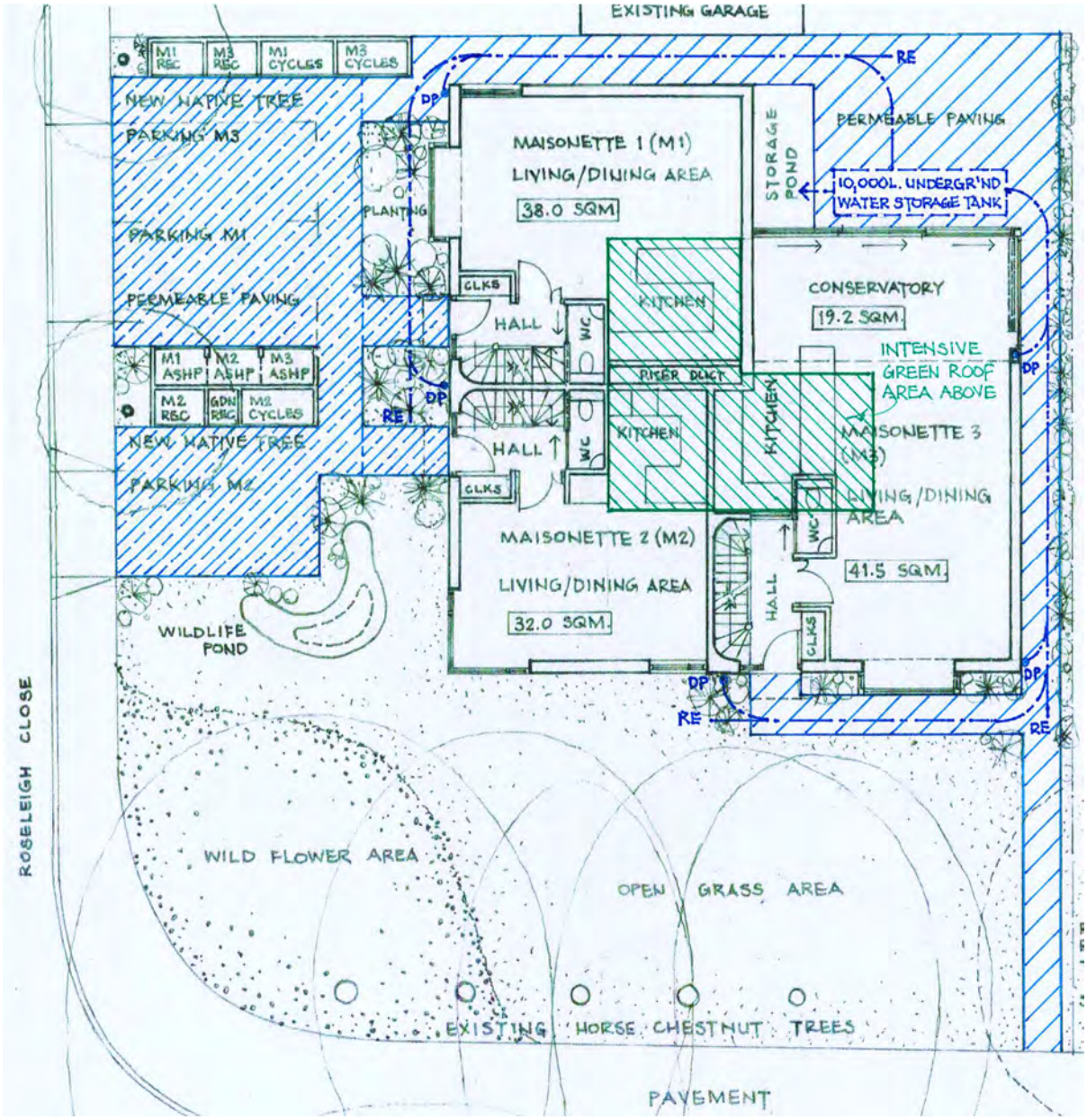
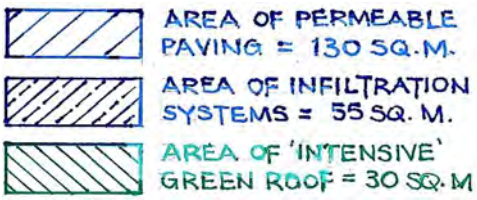


Fig.14 SuDS and Water Storage Strategy Plan



8.0 Landscaping, Ecology and Biodiversity

The landscaping would increase the ecological value of the area and soften the appearance of the site. Recommendations to enhance the biodiversity value of the site in accordance with national and local planning policies have been incorporated into the proposals *(Refer to the Ecological, Biodiversity and Landscaping Assessment – Furesfen, October 2022, and the Urban Greening Factor calculation at Appendix D).*

Ground water recharge that is equivalent to pre-development greenfield conditions, an attenuation pond, green roofs, a living wall, a small wildflower meadow and further native planting would together contribute to the overall biodiversity of the site *(Refer to Appendix C: Ecology and Landscape Plan, together with Appendices D – F).*

In terms of Policy LP 16 the Council will require the protection of existing trees and the provision of new trees, shrubs and other vegetation of landscape significance that complement existing areas, or

create new, high quality green areas, and which deliver amenity and biodiversity benefits. The five horse chestnut trees along the Cambridge Park street frontage have inherent ecological value and are the most valuable ecological assets on the site. The proposal has thus been informed by a Tree Survey to ensure that the horse chestnuts are protected *(Refer to the Tree Survey and Arboricultural Impact Assessment – Rootcause Arboriculture, August 2023)*. Two new native shade trees would also be planted along the Roseleigh Close street frontage in consultation with the Council

Unfenced grassed open perimeter areas along street frontages which are characteristic of the surrounding Estate would be reinstated. This modified grassland habitat is generally of low ecological value. However, the habitat distinctiveness and condition would enhance the biodiversity through a regular mowing and seeding regime, including the sowing of a wildflower lawn mixture to bring about a grassland wildflower meadow area in the south-west corner of the site.

In terms of Policy LP 17, the use of green / brown roofs and green walls is encouraged and supported in smaller developments. An intensive green roof area would be provided to the main roof, as well as a two-storey living wall on the east facing side of the building which would include species of value to pollinating insects. Extensive green roof planting would also be provided to the flat roof areas of the cycle storage, recycling and ASHP enclosures which would be carefully integrated into the landscaping *(Refer to Appendices B, E and F: Extensive and Intensive Green Roof and Living Wall Details).*

A 'natural' wildlife attenuation pond would be introduced in the south-west area of the site *(Refer to Appendix G: Wildlife Pond Details and Notes).* Dedicated areas of native wildlife and 'bee friendly' planting would be created near the entrance areas and to peripheral margins of the site. Bat, bird box and insect habitats would be provided in accordance with Council recommendations.

Care would taken to avoid light spillage into the tree canopies and vegetation which could cause disturbance to nocturnal wildlife, in particular bats. At night potential light spillage onto the horse chestnuts from south-facing windows would be controlled by blinds which would be automatically activated when external light levels drop to a pre-determined level. Protection would also be enhanced by the selected glazing, providing a reduction in night time light transmission to the outside, whilst maintaining optimal daylight levels *(Refer to Section 7.1)*

The location and design of external lighting would be limited to a LED light fitting at the front door entrance to each of the three maisonettes. The discrete low-level lighting would be in a downward direction only to illuminate door threshold and key access/door handle locations, without causing disturbance to nocturnal wildlife *(Refer to Appendix J: External Lighting Details).* The occupiers will be supplied with information on Ecology and Biodiversity to inform them of the value of local ecological features and biodiversity on and near the site, and how these could be enhanced.

9.0 Residential Amenity of Neighbouring Properties

Issues of privacy, overlooking, loss of daylight/sunlight and overshadowing have been carefully considered in the design proposals with respect to the amenity, privacy and living conditions of neighbouring properties in accordance with Local Plan Policy LP 8.

Non-habitable rooms and staircases are located to the sides of the adjacent maisonette blocks. All the windows to these side elevations have obscure glazing. This arrangement permits the side elevations to be located relatively close to one another as is evident throughout the Estate. This factor, together with the internal layout, location, and design of all new windows and vantage points of the proposed building minimises overlooking and loss of privacy to any of the surrounding properties.

The proposed first floor windows to the east side elevation of the proposed building do not overlook space to the rear of the adjacent block. They do have an oblique view of the front shared amenity space which the street facing windows of all the blocks directly overlook. There is thus no loss of privacy with respect to the neighbouring properties.

Daylight and sunlight levels would not adversely impact the adjacent buildings (34 Cambridge Park and 23 - 28 Roseleigh Close) as is evident from the layout, relationship, orientation and spacing between adjacent buildings. There would thus at most be a negligible impact on the existing daylight and sunlight levels of habitable rooms in adjacent properties. The proposed scheme meets the criteria for overlooking, daylight, sunlight and overshadowing in accordance with the *"BRE 209 Digest: Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice".*

10.0 Fire Safety Strategy

The Planning Fire Safety Strategy (PFSS) for the proposed building has been developed in accordance with the Adopted London Plan Policy D12 part A which requires 'non-major development' proposals to achieve the highest standards of fire safety, and embedding these at the earliest possible stage of the design. Criteria for a residential development of this size and complexity are stipulated as follows:

A1. Identify suitably positioned unobstructed external space to the property
a. For fire appliances to be positioned on;
b. Appropriate for use as an evacuation assembly point;

A2. Be designed to incorporate appropriate features which reduce the risk to life and the risk of serious injury in the event of a fire, including appropriate fire alarm systems and passive and active fire safety measures;

A3. Be constructed in an appropriate way to minimise the risk of fire spread;

A4. Provide a suitable and convenient means of escape, and associated evacuation strategy for all building users;

A5. Develop a robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence in;

A6. Provide suitable access and equipment for firefighting which is appropriate for the size and use of the development.

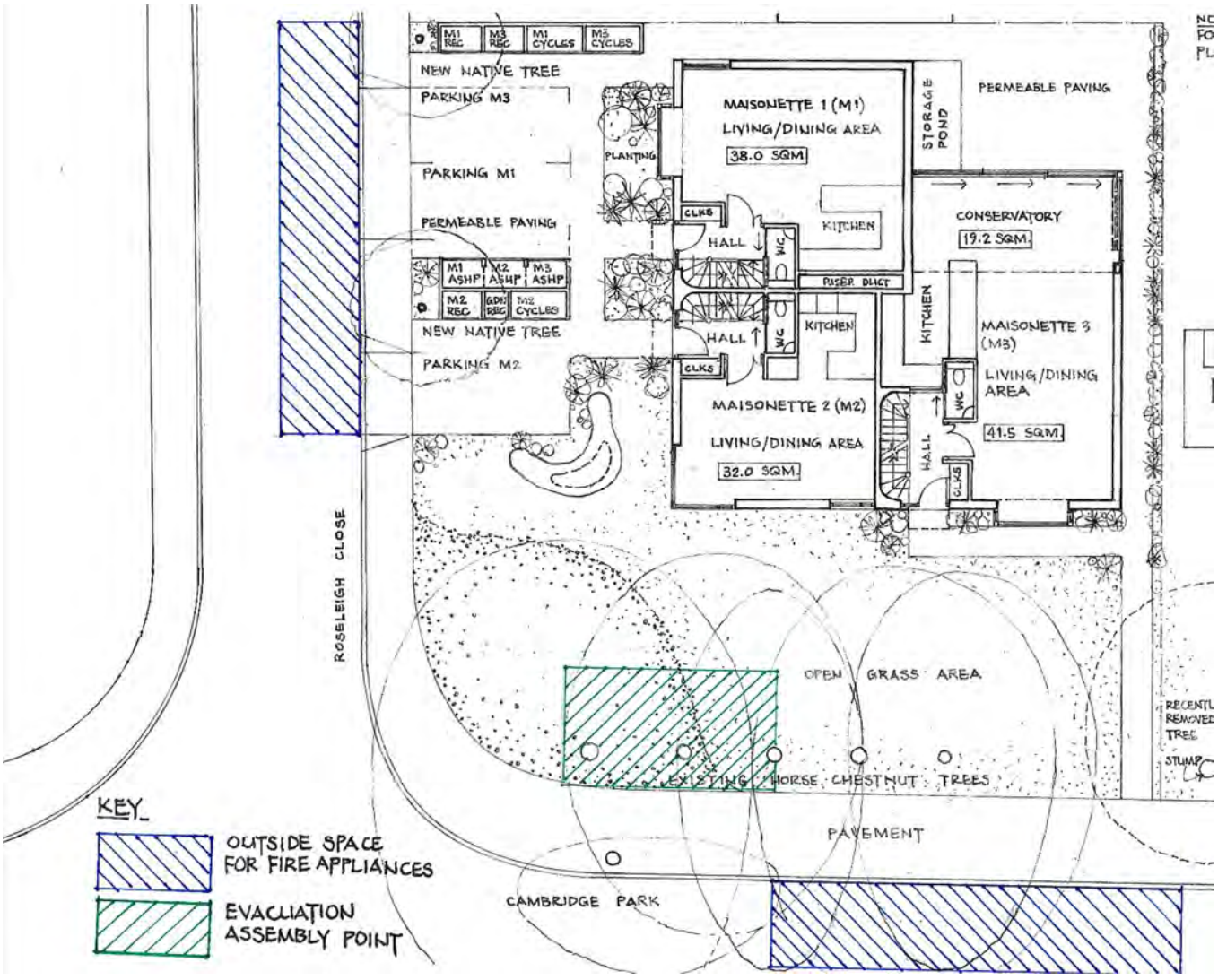


Fig. 15.0 Location Plan showing possible locations for Fire Appliances, Emergency Vehicles and Evacuation Assembly Point

10.1 Unobstructed External Space

In the event of a fire, emergency vehicles could park near the proposed building. Being an open corner site with no fencing, unobstructed access would be possible from the street on two sides of the building: along Roseleigh Close within a distance of some 10 metres, and along Cambridge Park within a distance of some 12 metres from the street.

There would also be ample space at the front of the property on Cambridge Park to provide for an Evacuation Assembly Point, both during the construction and occupation stages of the project *(Refer to Fig. 15.0 Location Plan showing possible locations for Fire Appliances, Emergency Vehicles and Evacuation Assembly Point).*

10.2 Reduce the Risk to Life

The development is designed to incorporate safety features which would reduce the risk to life and serious injury in the event of a fire. Each of the maisonettes would have a fire detection and alarm system, minimum Grade D2, Category LD2 standard in accordance with the relevant recommendations of BS 5839-6 in providing an active fire protection system as follows:

- Smoke detectors would be installed in all rooms except the toilets, bathrooms, or shower rooms;
- Smoke detectors would be installed in plant areas and utility cupboards housing equipment and services;
- Smoke alarms would be mains operated, battery backed and conform to BS EN 14604;
- Heat detectors within all kitchen areas would be mains operated, battery backed and conform to BS 5446-2;
- Carbon monoxide detectors would be installed in any location where fuel burning appliances would be installed, and would be mains operated, battery backed and conform to BS EN 50292:2013 (although no gas burning appliances are proposed for any part of the building);
- Detection sounders would be capable of delivering 85dB(A) through the open doorway to each habitable room;
- All detectors would be interlinked so that should any one detector be triggered, all wouldl sound;
- Detectors would be placed in the circulation spaces/ protected stairways within 7.5m of every habitable room door;
- Detectors would be maintained in line with manufacturer guidelines.

For each maisonette a Buildings Package of fire safety information would to be handed over by the Principal Contractor to a Responsible Person (defined as somebody who has control of the premises), and would include:

1. A Full Fire Safety Strategy Report;
2. Specifications for passive construction and proprietary building systems;
3. Design, installation, commissioning, and handover certificates for all active fire protection systems;
4. Operations manuals;
5. Maintenance and inspection schedules;
6. Test certificates;
7. Final Construction (as-built) plans.

10.3 Minimise the Risk of Fire Spread

The building would be constructed in an appropriate way to minimise the risk of fire spread in accordance with to the design principles in BS9991: 2005 – 'Fire safety in the design, management and use of residential buildings – Code of Practice' and Approved Document B Vol 1 for the residential areas. The materials used would comply with the requirements of the amendments to Regulation 7 of the Building Regulations.

- All new electrical wiring would meet current IET National Wiring Regulations to BS 7671;
- Consumer units/ meters located within the stairway would be enclosed in a secure cupboard which would be separated from the escape route with fire resisting construction and intumescent strips where appropriate;

- The use of non-combustible materials: External walls would be comprised of an external brick skin, structural insulated panels (non-combustible insulation), internal lining of non-combustible cementitious board (Fermacell), with 150mm solid blockwork separation between maisonette units;
- The living green wall would be secured against a non-combustible brick facing wall with an automated irrigation/sprinkler system fed from the on-site water storage tank below; the eaves soffit above would be comprised of non-combustible cement fibre board.

10.4 Means of Escape

A secure means of escape would be provided for each maisonette via a protected route along staircases, landings and lobbies, safely connecting all floors to a ground floor exit lobby with escape door to an outside Evacuation Assembly Point. Habitable rooms would connect to the secure escape route by means of a fire door at each level, all in accordance with *Approved Document B (fire safety) vol. 1: Dwellings, 2019 edition incorporating 2020 and 2022 amendments.)*

10.5 Strategy for Evacuation

An evacuation is the process whereby people leave the building in case of an incident (e.g. fire) and reach a place of safety such as an Evacuation Assembly Point. The strategy for evacuation would be formulated according to the needs of those who are unable to self-evacuate, such as the disabled, elderly persons and children. The Fire Safety (England) Regulations 2022 for residential buildings above 18 metres or 7 storeys in height are currently being developed in terms of the Fire Safety Act 2021, and the Building Safety Act 2022.

Although individual maisonettes such as those proposed do not currently fall within the scope of the Fire Safety Order (article 2 of the Fire Safety Order), some of the guidance provided would be relevant to an evacuation strategy in terms of the London Plan Policy D12 part A requirement, namely that such a strategy would set out how the occupiers of the maisonettes 'will exit a building to a safe location in the event of an emergency relevant to the use, size, anticipated occupancy and associated risk to the building and its occupants with contingency measures'.

As such up to date information about the occupiers of each maisonette who would have difficulties self-evacuating in the event of a fire, known as Personal Emergency Evacuation Plans (PEEPS) would be provided in a standard information box immediately adjacent to the ground floor front entrance door, to assist effective evacuation during a rescue by the Fire and Rescue Service.

It would be the remit of a Responsible Person (defined as somebody who has control of the premises) to keep such PFSS information up to date. The PFSS should include a timeframe for the periodic review and update of the evacuation strategy over the lifetime of the development.

10.6 Suitable Access and Equipment for Firefighting

The building would be in an urban environment, and there would be no restriction to access either temporarily during the construction phase of the development and permanently during the occupation phase. Alternative emergency access routes exist along Roseleigh Close or Cambridge Park with open accessible street frontages along two sides of the building. No obstacles or potential obstacles and delays that would impede access to the site are evident or proposed.

In London, fire hydrants are normally installed in footways immediately adjoining carriageways or surfaces that will take the load of a pumping appliance. A fire hydrant is located along Cambridge Park on the pavement west of the site at a distance of some 30 metres from the proposed building. All locations within the building would be accessible within 45m of the rescue services. Fire blankets and extinguishers would be used in line with requirements for self-contained houses or maisonettes.

Fig.16 Fire hydrant locations along Cambridge Park near the proposed site (Source: London Fire Brigade)

11.0 Construction Management

11.1 Construction Ecology Management Plan (CEMP)

A CEMP prescribes the means by which ecological issues in relation to a development would be managed throughout the construction phase of the works by providing clear information for contractors to follow when undertaking construction works in accordance with BS 42020:2013: Biodiversity – Code of Practice for Planning and Development (BSI, 2013).

The site's ecological value has been evaluated following guidance issued by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) *(Refer to the Ecological, Biodiversity and Landscaping Assessment – Furesfen, October 2022, and the Urban Greening Factor calculation at Appendix D),* and tree protection measures as described in the *Tree Survey and Arboricultural Impact Assessment – Rootcause Arboriculture, August 2023)*.

On the basis of the above reports, outline requirements for a CEMP for these proposals are provided below. A detailed CEMP would be prepared with input by an Ecologist and Arboriculturist following the appointment of a Principal Contractor in accordance with LBRuT requirements.

An Ecological / Arboricultural Clerk of Works (ECoW) would be appointed to oversee the ecological management of the site during the works in accordance with guidance issued by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) and BS 5837:2012 (tree management), to satisfy the following requirement:

> *'An Ecological Clerk of Works should be able to demonstrate a level of experience and competence commensurate with the complexity of the role needed on site to deal with the wide range of ecological issues likely to be encountered and to adapt to new and unforeseen challenges raised by development activities.'*

The ECoW would liaise with the Construction Project Manager and LBRuT to ensure that all recommended ecological / arboricultural protection measures are fit for purpose and in place before any works commence on the site. During the works the ECoW would monitor compliance with planning conditions and advise on any problems or modifications.

To ensure that the retained horse chestnut trees along Cambridge Park would not be affected during the development, the following arboricultural protection measures would be implemented: tree protection fencing (TPF), use of existing hard standing, temporary ground protection and arboricultural supervision. All Root Protection Areas (RPAs) in and around the site would be fully protected, and no excavation would take place within them unless sanctioned by the arboriculturist.

The protective fencing would be erected to create a Construction Exclusion Zone (CEZ) across the full frontage of the site along Cambridge Park. The protective fencing would only be removed following completion of all construction works. The above measures are described in the *Tree Survey and Arboricultural Impact Assessment – Rootcause Arboriculture, August 2023)*.

The CEZ would include a 'biodiversity protection zone' for the site. As recommended in the *Ecological, Biodiversity and Landscaping Assessment,* existing dead wood, stag beetles and other invertebrates which may be present together with yellow meadow ant mounds found on the site would be translocated to the CEZ. These would aid the natural re-colonisation of invertebrates and seeds of local provenance into the area.

The scope of works would involve some site clearance north of the CEZ to facilitate construction activities. To mitigate potential impacts on any fauna, this area of the site would be sensitively cleared under the supervision of the ECoW in accordance with the recommendations in the *Ecological, Biodiversity and Landscaping Assessment* and any further surveys and recommendations which may be required by LBRuT.

11.2 Construction Traffic Management Plan

A Construction Traffic Management Plan (CTMP) would be developed in accordance with LBRuT requirements with the selected Principal Contractor and specialist advisors following their appointment. The site is located in close proximity to residential properties. It is not considered that the construction works would require a restriction on the standard permitted working hours (8am to 6pm on weekdays and 8am to 1pm on Saturdays). A minimum 1.2 metre wide pedestrian route would be maintained along Cambridge Park and Roseleigh Close. Qualified banksmen would

manage all vehicle arrivals and departures, and also manage any surrounding activity where necessary.

All construction vehicles would arrive via the A305 Richmond Road, and travel eastwards along Cambridge Park before accessing the site from Roseleigh Close (as the line of trees along Cambridge Park would preclude site access). Vehicles would reverse into the site and exit in forward gear. There are no parking bays or any obstructions along the Roseleigh Close edge of the site. Existing parking availability along the side of the close opposite the site would require a suspension so as to permit turning areas for construction vehicles into the site. These would be evaluated according to the construction vehicle tracking drawings showing safe access to and egress from the site which would be provided.

All vehicles would depart the site to the west along Cambridge Park before entering the A305 Richmond Road. No more than one vehicle would attend the site at any time. Vehicles would not be permitted to block any of the roads, or stack outside the site or on local roads; a proper call-up procedure would be used. Qualified Traffic Marshalls would be provided to oversee vehicle movements on public highways if required. A breakdown of vehicle types, sizes, numbers, scheduling and planned exceptional loads (if any) would be provided following the appointment of a Principal Contractor. Any signage or barriers would conform to Chapter 8 of the 'Traffic Signs Regulations and General Directions 2019' and the 'New Roads and Street Works Act' (NRSWA) requirements.

11.3 Construction Method Statement

A Construction Method Statement (CMS) would be developed together with the Principal Contractor and Civil/Structural Engineer to the approval of LBRuT. A construction methodology is set out in the *Structural and Civil Engineering Basement Impact Assessment*, and guidelines provided that would inform the CMS.

The Principal Contractor would be responsible for working in accordance with the environmental controls documented in the CEMP. The use of prefabricated components such as structural insulated panels (SIPS) and lattice floor beams will reduce the impact of onsite construction works and storage of on-site materials.

All plant and equipment being used for the works would be properly maintained, silenced where appropriate, operated to prevent excessive noise and switched off when not in use. Details of dust mitigation measures proposed for operations/activities at the site would be provided.

The Principal Contractor would prepare and implement a Site Waste Management Plan (SWMP). As part of the SWMP, the contractor would segregate waste to be reduced, re-used and recycled where possible. Burning of waste or unwanted materials would not be permitted on site.

Spoil from the site works would be re-used as far as possible. The remaining spoil would be removed from the site via wait and load with material stockpiled on site and transferred via on-site plant into a waiting vehicle. For concrete works, standard ready-mix vehicles would be used for large pours, with bagged materials delivered and mixed on site for smaller batches. Site set-up drawings showing the site in the context of its surroundings would be provided.

12.0 Conclusion

The building has been carefully designed to a high standard on what is a prominent corner site, respecting the avenue of trees, increasing the biodiversity value of the site and minimising impacts on the adjacent residential properties. The design responds to and takes cues from a wider local context in expressing a clear identity as a contemporary building that nevertheless remains sympathetic to its surroundings.

The form, layout, scale, proportions and materials create a contextual response that respects and enhances the streetscape. The prominent corner location is expressed in full height corner windows and terrace setback at roof level. The proposal will create 3 high quality, energy efficient dwellings in a sustainable location. It is fully compliant with all relevant policies and will make a contribution towards borough housing targets and sustainable development in Richmond upon Thames.

Fig.17 Elevated view of the proposal from the south-west

APPENDIX A

Residential Standards Compliance Statement

Schedule of external amenity space and room/unit sizes

Proposed 3 No. Maisonettes located on the Site at the Junction of Roseleigh Close and Cambridge Park, East Twickenham, Middlesex, TW1 2JT

External Amenity Space	Areas (Sq. M.)
Shared open grassed area	160
Terrace (M3)	13
Rear courtyard (M3)	30

Room/Unit Sizes		
Maisonette 1 (M1)		
Room No.	**Floor Level and Room Designation**	**Room Areas (Sq. M.)**
	Basement	
1	Services and Storage	10.0
	Basement NIA	**10.0**
	Basement GIA	**12.5**
	Ground Floor	
2	Entrance Hall and Staircase	5.5
3	WC	1.5
4	Kitchen/Living/Dining Room	38.0
	Ground Floor NIA	**45.0**
	Ground Floor GIA	**45.5**
	First Floor	
5	Hall Landing and Staircase	9.0
6	Bathroom	5.4
7	Bedroom 1/1	15.5
8	Bedroom 2/1	14.0
	First Floor NIA	**43.9**
	First Floor GIA	**45.5**
	Loft	
9	Landing and Staircase	2.4
10	Bedroom 3/1	14.0
11	En-suite Bathroom	4.8
12	Study	5.0
	Loft NIA	**26.2**
	Loft GIA	**27.0**
	M1 Total NIA (Excluding Basement Plant/Storage Area)	**115.0**
	M1 Total GIA (Excluding Basement Plant/Storage Area)	**118.0**

Maisonette 2 (M2)		
Room No.	**Floor Level and Room Designation**	**Room Areas (Sq. M.)**
	Basement	
1	Services and Storage	8.0
	Basement NIA	**8.0**
	Basement GIA	**10.5**
	Ground Floor	
2	Entrance Hall and Staircase	5.5
3	WC	1.5
4	Kitchen/Living/Dining Room	32.0
	Ground Floor NIA	**39.0**
	Ground Floor GIA	**40.0**
	First Floor	
5	Landing and Staircase	4.6
6	Store-room	1.8
7	Bathroom	4.5
8	Bedroom 1/2	14.0
9	Bedroom 2/2	13.5
	First Floor NIA	**38.4**
	First Floor GIA	**40.0**
	M2 Total NIA (Excluding Basement Plant/Storage Area)	**77.4**
	M2 Total GIA (Excluding Basement Plant/Storage Area)	**80.0**

Maisonette 3 (M3)		
Room No.	**Floor Level and Room Designation**	**Room Areas (Sq. M.)**
	Basement	
1	Services and Storage	16.0
	Basement NIA	**16.0**
	Basement GIA	**18.5**
	Ground Floor	
2	Entrance Hall and Staircase	6.8
3	WC	1.5
4	Kitchen/Living/Dining Room	41.5
5	Conservatory	19.2
	Ground Floor NIA	**69.0**
	Ground Floor GIA	**70.0**
	First Floor	
6	Hall Landing and Staircase	9.0
7	Bathroom	5.7
8	Bedroom 1/3	16.5
9	Bedroom 2/3	15.0
	First Floor NIA	**46.2**
	First Floor GIA	**48.0**

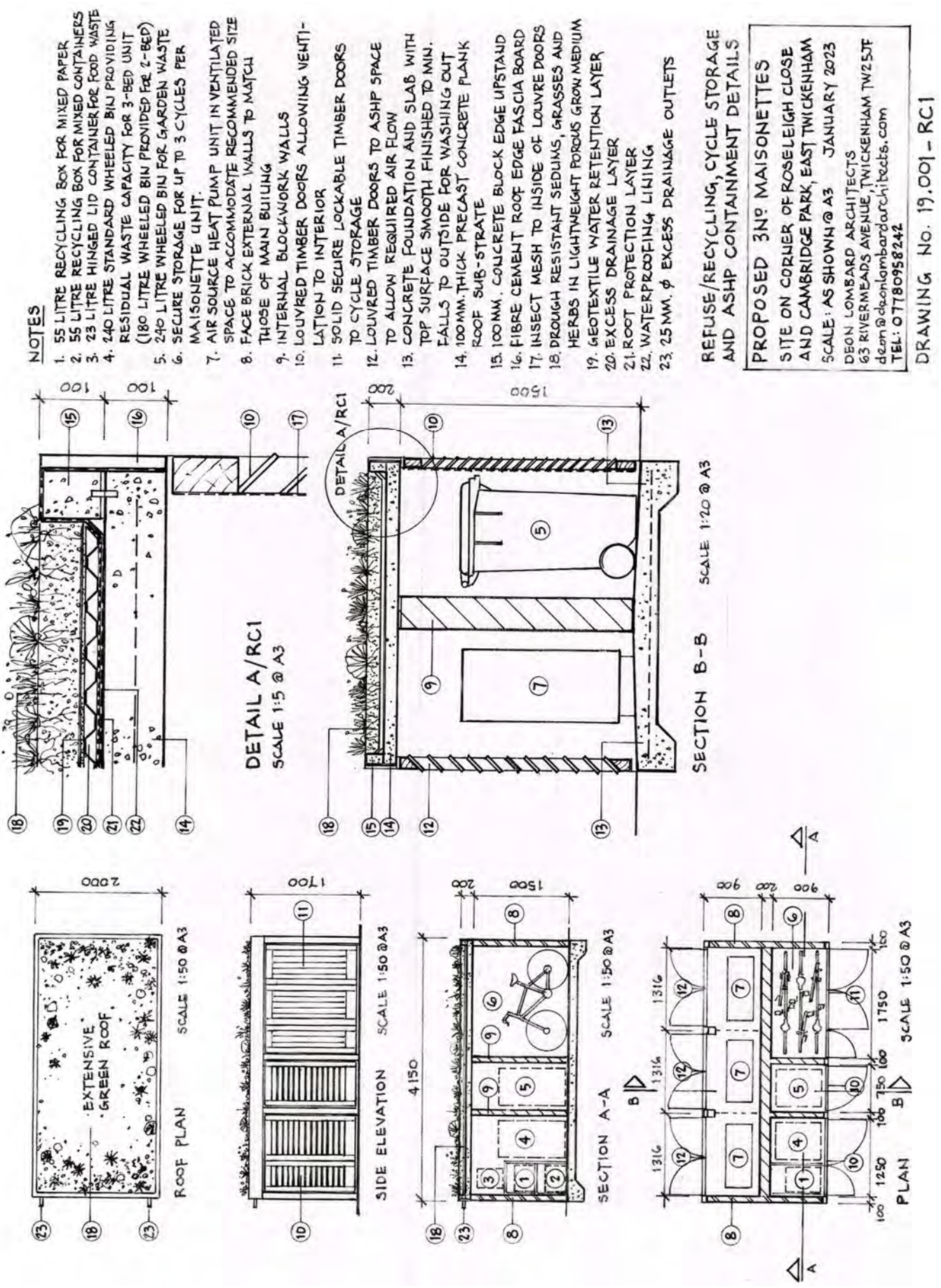
	Loft	
10	Landing and Staircase	2.4
11	Bedroom 3/3	18.0
12	En-suite Bathroom	7.5
13	Study	4.8
14	Studio	6.0
	Loft NIA	**38.7**
	Loft GIA	**40.0**
	M3 Total NIA (Excluding Basement Plant/Storage Area)	**153.9**
	M3 Total GIA (Excluding Basement Plant/Storage Area)	**158.0**

Floor to Ceiling Heights:

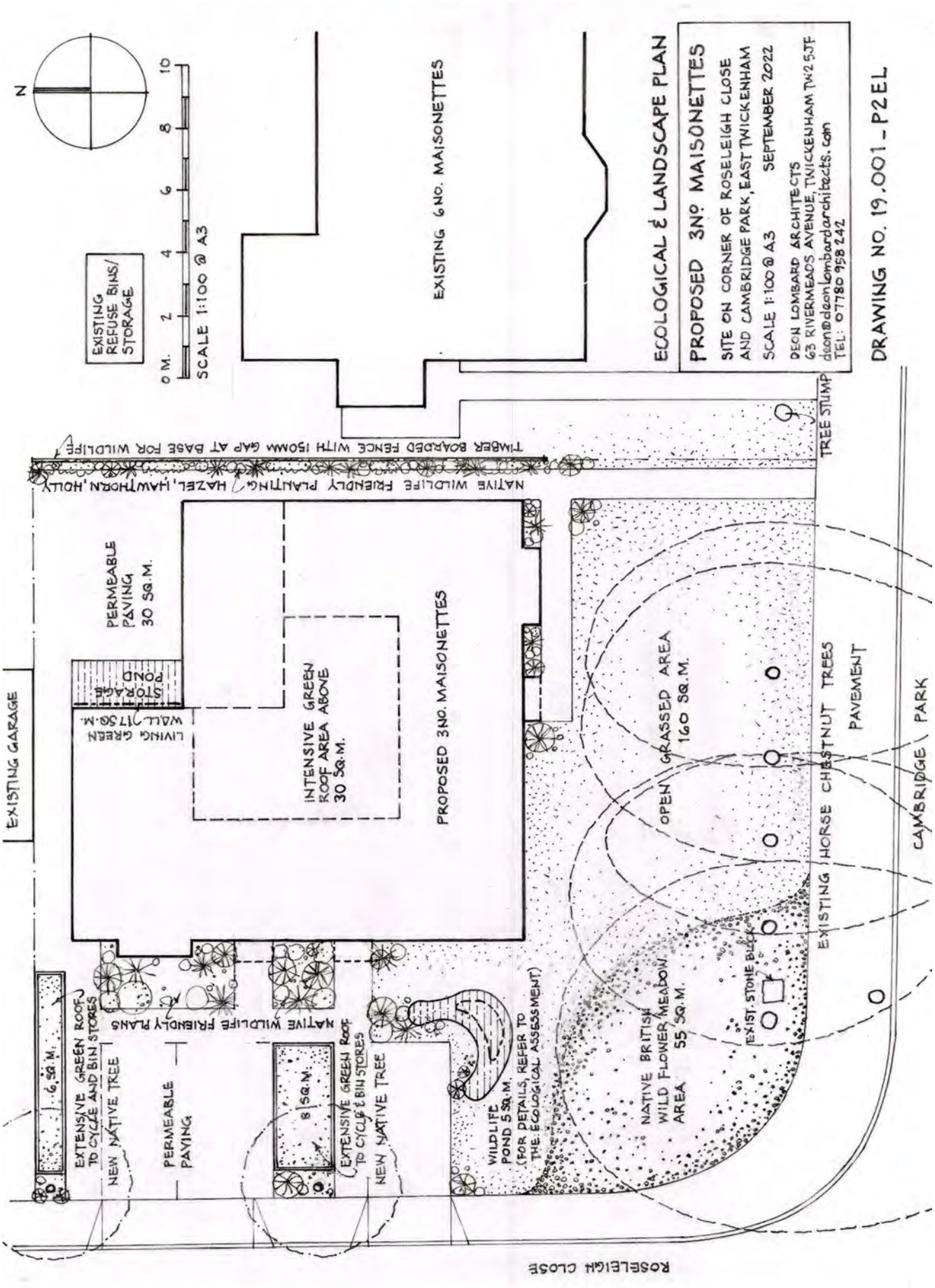
Finished floor to ceiling heights will be 2.5 metres to basement, ground and first floor rooms. In loft spaces, the finished floor to ceiling heights will start at a nominal 1.2 metres and rise to a nominal 2.9 metres at a 40° angle ceiling incline.

APPENDIX B:

Refuse/Recycling, Cycle Storage and ASHP Containment Details



APPENDIX C: Ecological and Landscaping Detail Plan



APPENDIX D: Urban Greening Factor

The result of the Urban Greening Factor calculations is **0.57** which exceeds the London Plan 2021 residential minimal target factor of 0.4 as per the following calculation:

RESIDENTIAL SITE

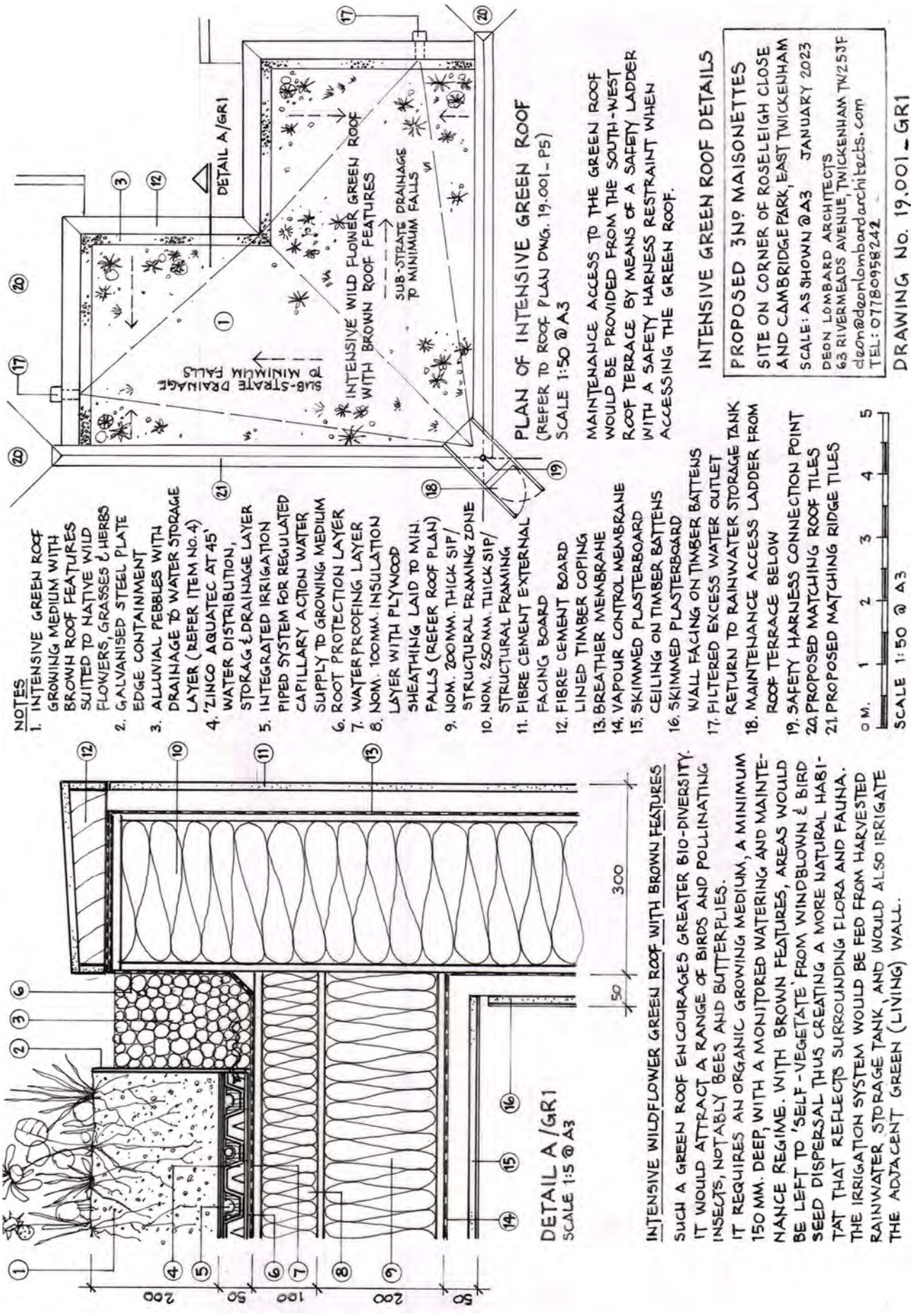
Surface Cover Type	Factor	x	Area		Total
Semi-natural vegetation (e.g. trees, woodland, species-rich grassland, maintained or established on site).	1.0	x	30 sq.m	=	30.0
Wetland or open (semi-natural, not chlorinated) maintained or stablished on site.	1.0	x	5 sq.m	=	5.0
Intensive green roof or vegetation over structure. Substrate Minimum settled depth of 150mm.	0.8	x	30 sq.m	=	24.0
Standard trees planted in connected tree pits with minimum soil volume equivalent to at least two thirds of the projected canopy area of the mature tree.	0.8	x	130 sq.m	=	104.0
Extensive green roof with substrate of minimum settled Depth of 80mm (or 60mm beneath vegetation blanket) – meets the requirements of GRO Code 2014.	0.7	x	14 sq.m	=	9.8
Flower-rich perennial planting.	0.7	x	25 sq.m	=	17.5
Rain gardens and other vegetated sustainable drainage elements.	0.7	x	0 sq.m	=	0.0
Hedges (line of mature shrubs one or two shrubs wide).	0.6	x	20 sq.m	=	12.0
Standard trees planted in pits with soil volumes less than two thirds of the projected canopy area of the mature tree.	0.6	x	38 sq.m	=	22.8
Green wall – modular system or climbers rooted in soil.	0.6	x	16 sq.m	=	9.6
Groundcover planting	0.5	x	20 sq.m	=	10.0
Amenity grassland (species-poor, regularly mown lawn).	0.4	x	160 sq.m	=	64.0
Extensive green roof of sedum mat or other lightweight Systems that do not meet GRO Code 2014	0.3	x	0 sq.m	=	0.0
Water features (chlorinated) or unplanted detention basins.	0.2	x	5 sq.m	=	1.0
Permeable paving	0.1	x	120 sq.m	=	12.0
Sealed surfaces (e.g. concrete, asphalt, waterproofing, stone and buildings / outbuildings.	0.0	x	180 sq.m	=	0.0
Total				=	321.7
Site Area			/ 562 sq.m		
Urban Greening Factor				=	0.57

RESULTS:

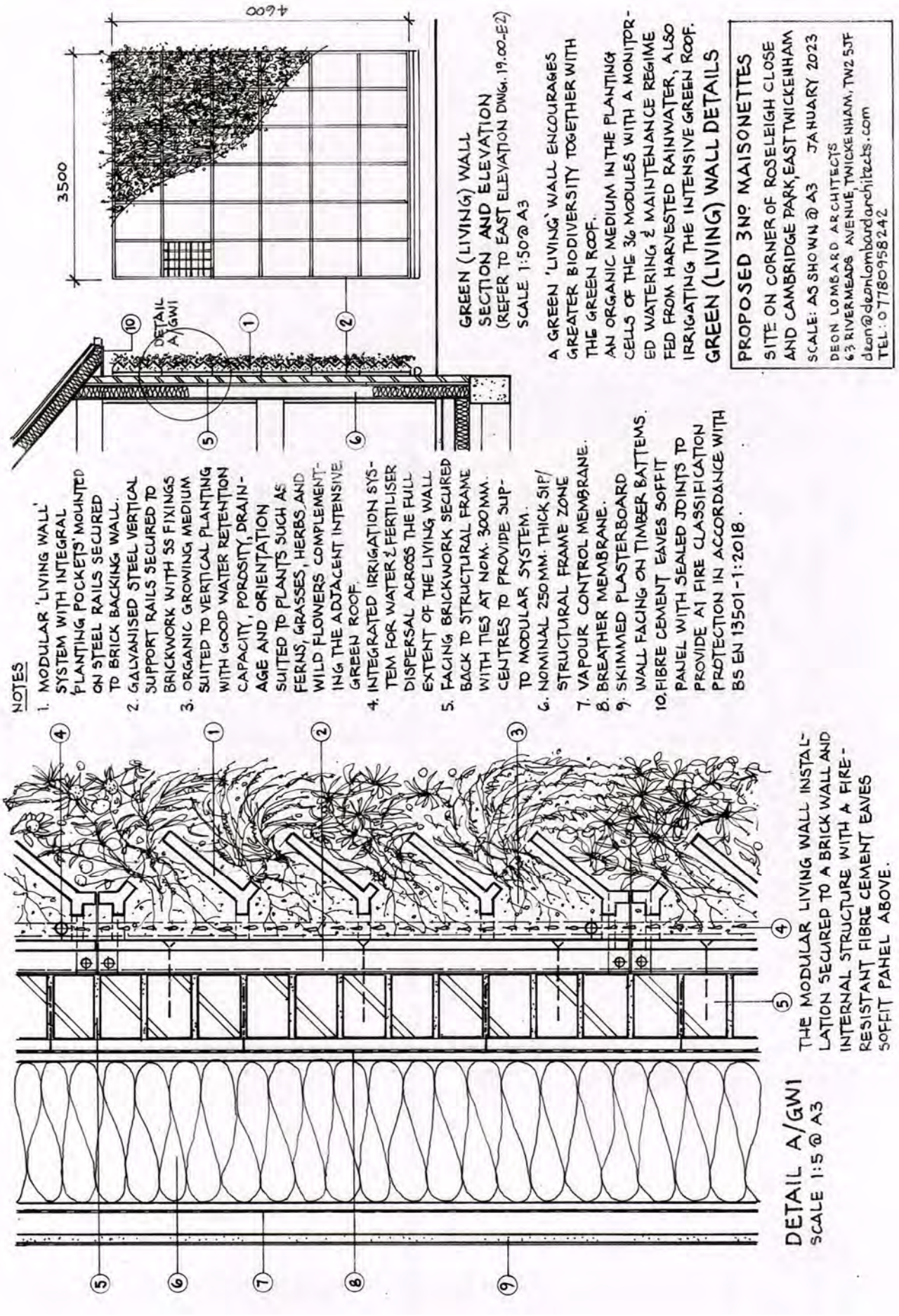
Residential Urban Greening Factor = 0.57

LONDON PLAN 2021 Residential Target Factor = 0.40

APPENDIX E: Intensive Green Roof Details



APPENDIX F: Green Living Wall Details



APPENDIX G: Wildlife Attenuation Pond Details

Size and Shape

The proposed wildlife pond would be roughly kidney shaped, extending some 3.2 metres by 3.6 metres providing a water coverage area of some 5 square metres with wide margins for native wildlife and flora. The water depth across the pond ranges from 150 – 600mm, which would suit the majority of pond flora and fauna to encourage a well-rounded ecosystem.

A deeper 'well' with a depth of about 600mm would be located towards the centre of the pond. Shallower perimeter areas having gradually sloping sides at about 20 degrees along the longest curve and the two 'arms' of the pond would allow safe access and egress for wildlife such as hedgehogs.

Siting

The pond would be sited in the south-west corner of the site adjacent to the proposed wildflower area, and outside the root protection zone and the overhanging horse chestnut trees to avoid excessive shade and leaves fouling the water. Shade over part of the pond would help to reduce problems with algae and is tolerated by most pond flora and fauna.

However, it is also important that the pond enjoys full sunlight from time to time. An open westerly aspect would ensure that this would be the case, with the water warming in spring making it more attractive to spawning frogs and toads.

The pond would be located some 1.5 metres from the building. Foundation and waterproofing design would take account of the pond and ensure that no problems arise. Rainwater from the adjacent roof terrace area would be diverted directly through a pipe to the pond. It is preferable to use rainwater than tap water; it will naturally flush through every time there's heavy rain, contributing to the rainwater attenuation.

Construction

Excavate a hole to the correct shape and size, some 200 – 300mm deeper than the finished water depths to allow for the installation of the pond lining and subsoil base layer. Install a waterproof butyl sheet with underfelt layers below and above, allowing for a 150 - 300mm depth for a tamped subsoil pond base layer over the full extent of the pond.

Trim the exposed lining edge to the shape of the pond, conceal with soil and edging stones/boulders well bedded in to form perches for insects, birds and concealed spaces for pondlife below. Distribute cobbles and pebbles in the shallow water areas, making it easier for wildlife to enter and exit the pond.

Gradually fill the pond, preferably with rainwater. If tap water is used, it should be left to naturalise for at least a week before adding any plants. No fish are to be added to the pond. Native wildlife would naturally populate the pond.

Pond Plants

Adding plants to a pond is essential as they help to keep the water clean, clear, oxygen-rich and prevent algae from taking over. There are four categories of native pond plants for locating in and around ponds.

The following pond plants are proposed:

Submerged (oxygenating) plants

Rigid hornwort (*Ceratophyllum demersum*) - an excellent native oxygenator for small ponds.

Water violet (*Hottonia palustris*).

Floating plants

Fringe lily (*Nymphoides peltata*) - roots under water providing a dense cover and algae control.

Frogbit (*Hydrocharis morsus-ranae*) - floats on the surface of the water.

Marginal plants

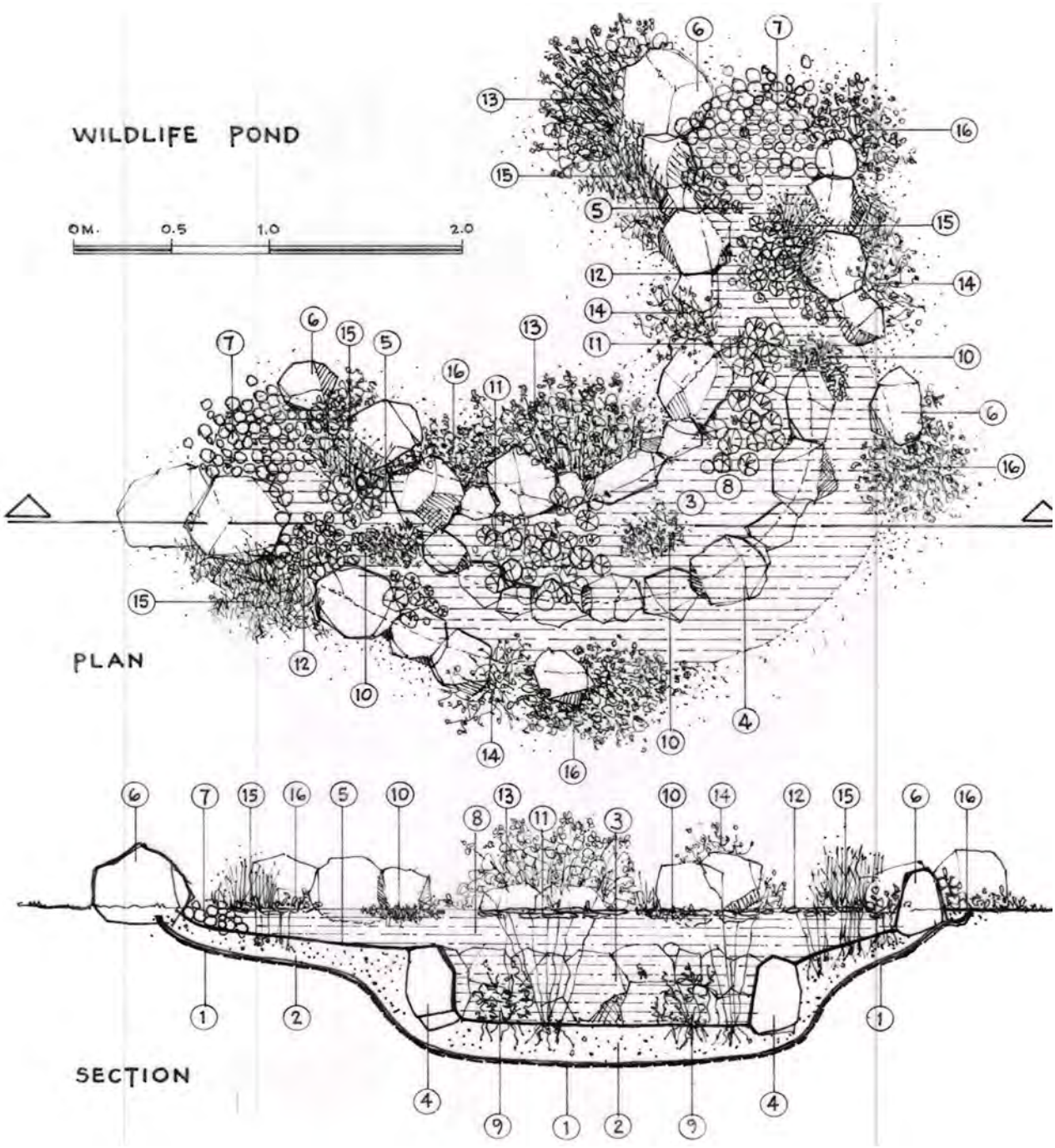
Marsh marigold (*Caltha palustris*) - provides an early source of pollen for bees and hover flies.

Lesser spearwort (*Ranunculus flammula*).

Marsh plants

Pillwort (*Pilularia globulifera*) - the UK's only aquatic fern, currently in decline.

Brooklime (*Veronica beccabunga*).



Pond waterproof lining comprised of triple layer: butyl rubber waterproofing sheet sandwiched between underfelt layers
Subsoil base layer to pond varying in thickness from 150 – 300mm
Nominal 600mm deep 'well' with level bottom towards centre of pond
Rocks to 'well' perimeter retaining soil
Shallower water depth from about 250 – 150mm to pond margins with sloping sides at about 20 degrees
Selected rocks/boulders arranged and bedded around pond perimeter
Cobbles and pebbles on shallower water shelf
Pond filled with rainwater
Water violet (*Hottonia palustris*)
Rigid hornwort (*Ceratophyllum demersum*)
Fringe lily (*Nymphoides peltata*)
Frogbit (*Hydrocharis morsus-ranae*)
Marsh marigold (*Caltha palustris*)
Lesser spearwort (*Ranunculus flammula*)
Pillwort (*Pilularia globulifera*)
Brooklime (*Veronica beccabunga*)

References

Royal Horticultural Society, *RHS Encyclopedia of Gardening* Chapter 10 Water Gardening, Christopher Brickell (ed), Dorling Kindersley, ISBN 9781409383949 (2012)

World Wildlife Trust, www.org.uk

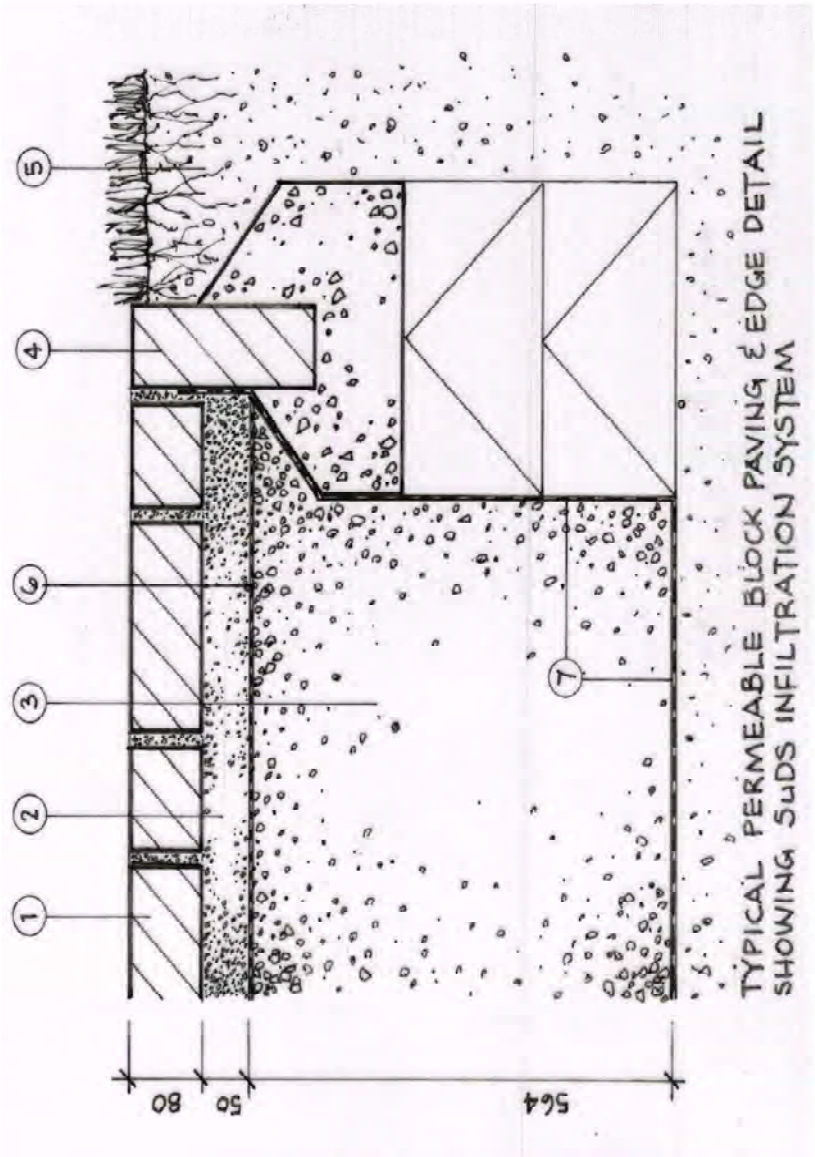
Royal Society for the Protection of Birds, www.rspb.org.uk

Joel Ashton: How to Make the Ultimate Wildlife Pond, u-tube video

APPENDIX H: Hard Landscaping Details

NOTES

1. FORMPAVE ACQUASETT 'PURBECK' COMBINED PERMEABLE BLOCK PAVING LAID IN STAGGERED STRETCHER BOND PATTERN WITH 2-6.3MM. GRANITE GRIT INFILL TO NOM. 12MM. WIDE DRAINED JOINTS
2. 50 MM. BLOCK LAYING COURSE TO BE 2-6.3 MM. GRANITE GRIT AGGREGATE TO BS EN 13242 : 2002
3. SUB-BASE TO BE COMPRISED OF CLEAN 4-20MM. COARSE GRADED AGGREGATE TO BS EN 1342 : 2002 COMPACTED IN 150 MM LAYERS TO STRUCTURAL AND WATER INFILTRATION/STORAGE DEPTH REQUIREMENTS (REFER SuDS ASSESSMENT PP. 9-11)
4. MATCHING EDGING BLOCK SET IN CONCRETE HAUNCHING, MIN. 100MM. THICKNESS TO BASE AND SIDES WITH SLOPING TOP EDGES ON WELL COMPACTED HARDCORE AGGREGATE.
5. LANDSCAPING : GRASS/VEGETATION IN TOPSOIL, LEVEL NOM. 25MM. BELOW TOP OF EDGING BLOCK
6. GEOTEXTILE FILTRATION MEMBRANE SUCH AS MT120 INSTALLED OVER SUB-BASE TO PREVENT GRIT AGGREGATE MIGRATION.
7. NEEDLE-POINT POLYPROPYLENE LINING PROVIDING FULL CONTAINMENT TO BASE AND SIDES.



TYPICAL PERMEABLE BLOCK PAVING & EDGE DETAIL SHOWING SuDS INFILTRATION SYSTEM

HARD LANDSCAPING DETAILS

PROPOSED 3No MAISONETTES

SITE ON CORNER OF ROSELEIGH CLOSE AND CAMBRIDGE PARK, EAST TWICKENHAM

SCALE: 1:50 @ A3 FEBRUARY 2023

DEON LOMBARD ARCHITECTS
63 RIVERMEADS AVENUE, TWICKENHAM TW2 5JF
deon@deonlombardarchitects.com
TEL: 07780958242

DRAWING NO. 19.001 - HL1

APPENDIX J: External Lighting Details

A small (98mm H x 170mm W x 134mm D) wall mounted 8.6 Watt LED light fitting such as that shown above (the Darina manufactured by Lucande) would be located adjacent to each of the front doors to the three maisonettes.

The fitting has an integrated movement detector which would activate the light when the door is approached. Low-level lighting (689 lm) would be provided for up to 30 seconds at a time in a channelled downward direction only to illuminate the door threshold and key access/door handle locations.

There would be no upward or sideways light spillage such as could illuminate nearby foliage or trees. Potential disturbance to nocturnal wildlife such as bats or roosting birds would thus be avoided.

APPENDIX K

Index of Specialist Consultant Reports and Documents

Proposed 3 No. Maisonettes located on the Site at the Junction of Roseleigh Close and Cambridge Park, East Twickenham, Middlesex, TW1 2JT

Report Title	Specialist Consultant	Date
Design and Access Statement	Deon Lombard Architects	August 2023
Planning Statement	The Boisot Waters Cohen Partnership	August 2023
Heritage Statement	Geoff Noble Heritage + Urban Design	July 2023
Ecological, Biodiversity and Landscaping Assessment	Furesfen	October 2022
Tree Survey and Arboricultural Impact Assessment	Rootcause Arboriculture	August 2023
Transport Technical Note	Kronen Transport Planning	January 2023
Energy Statement	Webb Yates Engineers Ltd	April 2023
Flood Risk, Surface Water, SuDS and Water Storage Assessment	Price & Myers	March 2023
Structural and Civil Engineering Basement Impact Assessment	Price & Myers	March 2023
LBRuT Sustainable Construction Checklist	Deon Lombard Architects Webb Yates Engineers Ltd	June 2023
Affordable Housing Commuted Sum Calculation	Andrew Golland Associates	August 2023
Affordable Housing Statement	The Boisot Waters Cohen Partnership	August 2023
Affordable Housing Contribution Legal Agreement	The Boisot Waters Cohen Partnership	August 2023
Community Infrastructure Levy form	Deon Lombard Architects	August 2023

APPENDIX L

Index of Drawings and Images

Proposed 3 No. Maisonettes located on the Site at the Junction of Roseleigh Close and Cambridge Park, East Twickenham, Middlesex, TW1 2JT

Number	Title	Scale
19.001_L1	Site Location Plan	1:1250 @ A4
19.001_L2	Site Block Plan	1:500 @ A3
19.001_P1	Basement Plan	1:100 @ A3
19.001_P2	Ground Floor and Site Layout Plan	1:100 @ A3
19.001_P3	First Floor Plan	1:100 @ A3
19.001_P4	Loft Level Plan	1:100 @ A3
19.001_P5	Roof Plan	1:100 @ A3
19.001_S1	Typical Cross Section	1:50 @ A3
19.001_P6	Plan View of Building within Existing Context	Photo image
19.001_P2RS	SuDS and Water Storage Strategy Plan	1:100 @ A3
19.001_P2EL	Ecological and Landscape Detail Plan	1:100 @ A3
19.001_HL1	Hard Landscaping Details	1:50 @ A3
19.001_RC1	Refuse/recycling, Cycle Storage and ASHP Details	Various @ A3
19.001_GR1	Intensive Green Roof Details	Various @ A3
19.001_GW1	Green Living Wall Details	Various @ A3
19.001_E1	West and South Elevations	1:100 @ A3
19.001_E2	East and North Elevations	1:100 @ A3
19.001_E3	Street Elevations	1:200 @ A3
19.001_3D1	Elevated View from the South-west	3D Image
19.001_3D2	Elevated View from the South-east	3D Image
19.001_3D3	Elevated View from the North-east	3D Image
19.001_3D4	Elevated View from the West	3D Image
19.001_3D5	Elevated View from the North-west	3D Image