Regeneration and Planning,
London Borough of Camden,
6th floor, Town Hall Extension (Development Control)
Argyle Street,
London.
WC1H 8ND.

24th May 2012

Dear Ms Litherland,

RE: 59 Maresfield Gardens: Planning applications 2011/4164/P and 2011/4360/C

I write following our telephone conversation regarding discrepancies which have arisen between the original planning application documents (prepared by 51% Studios) and information contained within *Revision P3* of the *Basement Impact Assessment* submitted by Elliot Wood Partnership on 14.05.12.

At the time of the original application, I understand submission a *Basement Impact Assessment* was not required by the Council. An outline technical approach was however described in the accompanying *Design & Access Statement*.

The *Basement Impact Assessment* now contains comprehensive technical information in support of the application, and therefore supersedes the information contained in *Section 10* of the *Design & Access Statement*. Please therefore find enclosed the original *D&A* Statement with *Section 10* (Ground engineering issues) omitted.

The original application drawings remain unaltered, as discussed, since they describe the design approach (which is unchanged). These should be read in conjunction with the *Basement Impact Assessment* which provides the necessary detail on all technical aspects of the proposal.

We trust this is all in order and will enable the application to be determined in the near future.
Yours sincerely,

Edd Rushton
For and on behalf of LOM Architecture & Design

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Planning, Access and Design report

PROJECT 59, Maresfield Gardens, NW3 5TE – revised development proposal

CLIENT S Drews / C Rowat

DATE **12 August 2008**

Approved Street Elevation

Revised Street Elevation

Approved Rear Garden Elevation

Revised Rear Garden Elevation

0.0 Contents

1.0 Introduction

This Planning, Access and Design report provides the relevant scheme information relating to the revised development proposals for the formation of a new two storey (with basement) house at the end of the terrace at the site at 59, Maresfield Gardens.

The report describes the planning and site background, the design approach for the development and the energy/sustainability aspects. Tree matters and engineering aspects are reviewed and Lifetime Homes standard matters covered.

The scheme is the revised approach to the previously approved redevelopment proposals (planning application reference no. 2007/2890/P, approved 22nd November 2007, together with the approved Conservation Area Consent of the same date.)

The proposals have been developed to provide for a new building which sits comfortably in the Conservation Area, whilst being of a fresh and contemporary design approach. Its design quality has been enhanced from the previous approval and care has been taken to maintain and enhance the existing tree situation relating to the site.

2.0 Relevant planning history

2.01 The site has been the subject of various application proposals in recent years. These have included an approval for major extensions at roof and ground floor, including basement (Ref 2006/3073/P), together with a further approval for a rear dormer/side and rear front extensions, north side terrace at second floor and altered front access (2006/0492/P)

2.02 Planning permission and Conservation Area Consent were granted on 22nd November 2007 for the full redevelopment of the site to provide a new building comprising two levels of basement, lower ground, upper ground and first floor level with lightwells to the front and rear (2007/2890/P and 2007/2892/C).

3.0 Planning policy compliance

In terms of compliance with the relevant LB Camden UDP (2006) policies, the following should be noted.

- **Policy SD1 – Sustainable communities** – the proposed new building replaces an earlier less sustainable building and will result in a substantial increase in energy efficiency beyond the existing property.

- **Policy SD6 – Amenity** for occupiers and neighbours - The new building will not result in any unacceptable loss of amenity to the adjoining properties via overlooking or overshadowing.

- **Policy SD8(b) – Disturbance from demolition and construction** – site construction approaches will comply with best practice and local planning authority guidance/Conditional restrictions, in terms of on-site contractors building activities.

- **Policy SD9 – Resources and energy** – Compliance with Lifetime Homes Standards will fully meet with this policy.

- **Policy H7 – Lifetime Homes and wheelchair housing** – The new building fully complies with the relevant requirements in this regard.

- **Policy B1 – General design principles** – The provision of the new building offers a substantially enhanced design approach relative to the existing. It is in keeping with the surrounding CA setting and respects the site's context and position.

- **Policy B7 – Conservation Areas** – As previously stated in this document, the scheme proposals comply with relevant policies in government guidance document PPG15 and LB Camden UDP Policy in this regard.

- **Ancient woodland and trees** – All important mature trees at the site are being maintained (see landscape drawings and Section 9.0).

4.0 Site location

4.01 The site is located at the northern end of Maresfield Gardens, on the western side close to the junction with Netherhall Gardens. The property is the northern end of a terrace of three houses, constructed in the mid 1950s. The site slopes down from east to west, with the rear garden a storey lower than the front entrance drive.

4.02 The property is not listed, but is within the Fitzjohn's/Netherhall Conservation Area.

The Fitzjohn's/Netherhall Conservation Area Statement describes nos. 55-59 Maresfield Gardens as being "mid 1950s two storey terrace on a sunken site that has little relationship with the surrounding area".

5.0 Conservation Area impact

This part of the Fitzjohn's/Netherhall Conservation Area is characterised by a variety of building styles and periods, generally set within mature garden situations. The existing local properties have gradually been developed over the years to include late Victorian/early Edwardian properties, together with some 1920s/30s properties, 1950s buildings and some more recent contemporary schemes.

The existing building at the site is considered to be of limited architectural merit. Its terrace contribution to the appearance of the Conservation Area is therefore considered to be "neutral", or even somewhat "negative". In terms of PPG15 and LB Camden UDP Policy B7, it is considered that the demolition of the existing building can be justified on the grounds that the existing building does not relate well to the original wider character of much of the surrounding Fitzjohn's/Netherhall Conservation Area. It does possess brick elevations and a pitched roof, but has limited design quality. Its replacement with a more contemporary building design form, with the use of better materials and form, is more appropriate for this site situation.

Further to the above, it should be noted that the existing property is of poor energy efficiency and its replacement building will be much more sustainable in construction, design and alternative energy power (see Energy Section 7 of this statement). In particular the use of more efficient construction areas and the use of efficient heating provision will achieve this for the future.

It is considered therefore, that the impact on the character of the Conservation Area will be positive via this redevelopment proposal. The removal of the existing building would not result in the loss of a building which "positively contributes" to the character of the Fitzjohn's/Netherhall CA and its replacement will provide for a new building which "preserves or enhances" the character of the CA, thus fully complying with the relevant policies in PPG15.

Following our Pre Application Planning Consultation meeting with Charles Rose on August 6th, we were advised that no Conservation Area Consent was required as the existing building already had demolition consent.

6.0 Design description

6.01 Introduction:

This revised proposal continues with the principles established for the site to integrate high quality contemporary design into this particular conservation area site.

Many of the improvements embodied in this Revised Proposal have been initiated by the intended owner-occupant family. The previous approved proposal acknowledged that it was a 'speculative' development, so the finishes specifications for this Revised Proposal have accordingly become even higher.

The revised proposal is the same as the approved proposal in that it is for the erection of a building comprising two basement levels, lower ground level, upper ground level, and first floor level with light wells to the front and rear for use as a bespoke single-family dwellinghouse (following demolition of existing single-family dwellinghouse).

It is smaller than the approved scheme and the gardens front and back are larger in order to better protect the tree roots. The Study has been replaced with a Terrace to the existing garden and courtyards are limited to a single story to enhance the amenity as otherwise they would in full shadow for most of the year.

The Revised Proposal is also more sustainable: even using a conventional gas fired boiler it will achieve Code Level 3, an improvement of 26% over current Building Regulations. With the addition of a heat pump and solar panels, it will reach Code Level 4. PV's could take it up to 69% over current regulations.

This application is supported by the following documents that have been prepared specially for it:

- Full set of 1:100 drawings prepared by 51% Studios Architecture
- Statements prepared by Sheppard Robson, Town Planning specialists, pertaining to Relevant Planning History; Planning Policy Compliance; and Conservation Area Impact
- Aboricultural Survey and Constraints report, prepared by Ben Larkham Associates
- Structural Report & Proposed Construction Methodology, prepared by Dewhurst Macfarlane and Partners
- Building Services and Sustainability Report addressing issues of energy consumption, daylighting and CO2, drainage, SUDS and ventilation, prepared by Peter Deer and Associates
- Practice brochure for 51% Studios Architecture

6.02 Design Concept:

The design intention of 51% Studios Architecture has been to sensitively integrate a high quality, sustainable contemporary building into the existing streetscape, through attention to traditional urban design values that support the experience of the street as a cohesive public space defined by individual buildings. The 59 Maresfield site is an unusual one, and this Revised Proposal aims to enhance the character of the street and the conservation area through the following strategies:

- Retain a dense grain of diverse frontages.
- To match the height of the existing adjacent terrace houses.
- Reduce the overall enclosed volume of the house as compared to the Approved Proposal (Appl Ref: 2007/2890/P) by removing the study to the rear and respecting the roots of the existing trees
- Provide a front garden that engages with and contributes to the existing streetscape.
- Provide meaningful outdoor space whilst avoiding overlooking.
- To work with challenging conditions inherent in the sloping site, to produce a special building that complements the richness of the Fitzjohns/Netherhall Conservation Area.
- Exceed the Council's sustainability targets.
- Provide direct outdoor access to as many rooms as possible.
- Provide 'soft spot' in structure on all levels for future installation of lift.
- Provide natural daylighting to all bedrooms.
- Provide generous fenestration to all rooms while exceeding the insulation targets set by Camden, and far exceeding those required by the Building Regulations. The windows will have slender mullions, to emphasize the pavilion qualities of the building.
- Provide dual aspect family rooms wherever possible to exploit both morning and evening daylight.
- Provide a Lifetime Home.
- Encourage the use of bicycles.
- Generate a discreet, interesting, flexible and urbane architectural language through intelligent use of building materials, including:
    - Highly insulated building which uses its mass as thermal flywheel
    - Thermally efficient insulated glazing throughout, with slender frames and mullions
    - Highly airtight ventilation panels to provide optimum ventilation;
    - External operable vertical solar shading louvres for 50% of the glazing on the east and west facades to achieve optimal solar performance and benefit, provided as an aesthetically integrated part of the facade;
    - Flat externally insulated roof to take solar panels, and to collect runoff for-on site reuse.
- Create an appropriate precedent for the possible long-term redevelopment of 55 and 57 Maresfield gardens at a fitting scale, quality, contemporary style and environmental performance.

Approved Entrance Courtyard Study

Revised Entrance Study

Revised Rear Façade Study

6.03 Urban Approach:

The intention to contribute positively to the streetscape has been addressed through the following strategies and elements:

- Enhanced protection of the large lime tree in the front garden and the large plane tree in the neighbour's front garden, situated almost on the boundary between the two sites, by limiting the extent of construction even further from the root systems, in response to recent, more-accurate surveys.
- Enhancing the scale and alignment of the street by vastly improving the driveway condition, through better finishes, reduced slope, better detailing.
- Providing a gently sloped parking area (1:20 pitch) with integrated cycle parking at the lower level. (The existing drive is steeply sloped, crudely constructed and badly weathered).
- A beautiful entry at the level of Maresfield Gardens. (The main entrance to the existing dwellinghouse is a storey and a half below Maresfield Gardens, and it is reached by a circuitous route in front of Nos. 55 and 57, resulting in a 'ditch' condition separating the property from Maresfield Gardens).
- Providing bin and cycle store as currently done screened into the shared entrance wall at the lower level.
- Providing a 'soft spot' in the structure on all levels for future lift access to serve all floors of the dwelling.
- Providing a high quality family home incorporating private outdoor space, and an on-site parking space using existing driveway access.
- Integrating high quality sustainable contemporary design, extending the tradition of this in this part of Hampstead.

Approved view from the south

Proposed view from the south

6.04 Proposed Massing:

The massing for the Revised Proposal has been very carefully studied in response to earlier submissions, the approved massing for the site, all in relation to this particular neighbourhood context. Many options have been tested in preparation of previous applications, and for the Revised Proposal.

The proposed massing towards the street is that of a small scale pavilion, visually independent of the 1950's pair of existing terrace houses that it will sits alongside. The Revised Proposal is to be carefully proportioned, a balanced mix of lightly detailed horizontal and vertical elements.

Approved Scheme Street Elevation

Revised Scheme Street Elevation

Approved Scheme Rear Garden Elevation

Revised Scheme Rear Garden Elevation

The massing of this Revised Proposal has been significantly reduced, by virtue of reducing the floor area as compared to the Approved Proposal 2007/2890/P.

- The Revised Proposal has further qualities of 'openness' and lightness appreciated in the previous Approved Proposal.
- The main entry to the new building will be linked directly to the Maresfield Gardens pavement, replacing the existing recessed 'ditch' condition that separates the property from Maresfield Gardens. The Approved and Revised Proposals provide bicycle and car parking at the Maresfield entry level.

- A south-facing courtyard is created west of the existing front garden, introducing direct daylight to lower levels. Clever soft landscaping will restrict views from the pavement not only into the lower rooms, but also to the neighbour's entrance area.
- A similar courtyard at the Bedroom Level in the rear garden brings light into the basement from that side, and provides an opportunity for high quality external landscaping to these roofless 'outdoor rooms'.
- The garden façade uses many of the same elements as the street façade, but is generally brighter and more transparent. Its composition is determined by the internal layout, and the area of the overall glazing has been kept to a sensible proportion of the overall envelope as in the Approved Proposal.
- The proposal fits within the spatial envelope already approved for this site, and it continues the rectilinear pavilion form established with the Approved Proposal.
- Roof Height aligns with ridge of neighbouring terrace houses. The Revised Proposal maintains the established principle of a physical separation between the new home and the existing terrace houses next door. The top two stories have been fully separated from the face of the party wall to the adjacent building by one metre, a principle established with the Approved Proposal 2007/2890/P. The face of the party wall will certainly warrant insulation, thus leaving a free gap closer to 850mm..
- The proposed building remains below the level of the extension that exists on the property along the north boundary.
- Rear massing is reduced relative to the Approved Proposal for the site.
- High quality shrubs in containers will be provided in the gap between the two buildings to increase apparent and real separation.
- The Revised Proposal forms an intimate, accessible, attractive building on the Maresfield Gardens, and it will be impressively and sensitively detailed. It achieves an intimate scale through variation of façade elements, like many of the older (Georgian) buildings in Hampstead, while extending the tradition of refined modern buildings in the area and improving this rather out-of-date section of the streetscape.

6.05 Contextual response:

This Revised Proposal continues the parameters established by the previously Approved Proposal, in terms of making the most of access to sunlight, fresh air and greenery in this beautiful Hampstead context. The principle of differentiating and separating the proposed building as a pavilion concept has been maintained. The spatial, programmatic, climatic and lighting issues present in designing a bespoke single-family home have been addressed as simply and elegantly as possible through:

- Large windows to gain maximum benefit of the leafy setting, and daylighting opportunities
- High-spec insulated glass units and solid walls throughout to achieve superlative overall performance
- Use of vertical louvers on half of east and west exposed glass, to enable both protection from the sun as well as taking advantage of solar warming in cold seasons
- Use of fair-faced concrete on the interior of the south facing interior surface of the main stair 'cut', to take advantage of thermal 'flywheel' effect for greater overall efficiency
- A flat roof and optimal floor to floor heights to reduce apparent bulk to an absolute minimum

- White coloured courtyards in order to maximize reflected light to the lower floors
- Maximizing cross ventilation in a controlled manner using vents and fixed glazing to ensure air tightness when necessary

58 Maresfield Gardens
H.Herry Zwiegenthal,1938-9

No.9 Frognal Way, Maxwell Fry, Grade: II*

66 Frognal
Connell Ward and Lucas
1937-8, Grade: II*

5 Upper Terrace
Rick Mather Architects,1997,
Stirling Award Runner Up

61/2 Reddington Road
John McAslan and Partners

6.06 Streetscape:

Careful attention has been given to the impact of the proposal on the immediate streetscape, in an ongoing effort to enhance this part of Maresfield Gardens.

- The roots of the large lime tree and plane tree will be protected by virtue of no below-grade work occurring beyond the east face of existing brick retaining wall.
- The existing steeply sloping concrete ramp will be replaced by a gently sloping (1:20) paved forecourt leading to a proper front door serving the street level
- In order to respect the tree roots of the two very important trees at Maresfield Gardens, as well as to conform to the condition at the property immediately to the south, no garden wall or gate is proposed at the street frontage.
- The parking bay will be relocated away from the boundary line toward the home
- The small scale of the building will retain the openness to the sky and lightness appropriate to the street.
- The façade has been designed as a finely detailed small-scale pavilion adding to the aesthetic variety and interest of the streetscape.

Approved Scheme

Revised Scheme Street View showing Detached Pavilion Building with improved streetscape via soft landscaping and views through to rear gardens

West side of Maresfield Gardens with 55, 57 and 59 highlighted. Streetscape is made up of a variety of scales and styles, with a number of buildings showing a variety of scales and styles within themselves

Scale relative to neighbours

The existing common entranceway to 55, 57 and 59 Maresfield Gardens AND 59 driveway

View from rear

Proposed view from Maresfield Gardens looking west

6.07 Façade:

Previous approved schemes have established the principle of differentiating the façade from the adjacent terrace as making a positive contribution to the street.

The following characteristics of the Approved and Revised Proposals support the reading of the new building as a separate small-scale ‘pavilion’:

- The design creates an individual house.
- A one metre slot separates the new façade from the neighbouring terrace house.
- The façade is articulated to an intimate scale with a balanced mix of horizontal and vertical elements.
- The materials of timber panelling and louvered glass areas have been carefully subdivided and detailed to further achieve a human scale in keeping with Maresfield Gardens.
- Fenestration is generously proportioned with minimal subdivision.

Photomontage of the proposal in context

Photomontage of the proposal in context

6.08 Accessibility and Transport:

The site is well served by several means of public transport, but car ownership is prevalent in the area due to its relative prosperity. There is space possible for two in-line parking bays suitable for disabled drivers. The proposed design allows disabled access from the parking bays into the single-family home.

- It is an 800 metre walk to Hampstead Underground Station, which is on the Edgware branch of the Northern Line, providing easy access to the City and the West End
- It is a similar distance to Finchley Road Underground Station on the Metropolitan and Jubilee Lines
- The PTAL (Public Transport Accessibility Level) score for the site is 5 on a scale of 6, which means that access to the site is moderate for 59 Maresfield Gardens. (Appendix 5 of the Planning and Conservation Statement includes a schedule of public transport accessibility criteria, including methodology (calculated by Transport for London)).
- We have provided off-street parking bays that can accommodate one family car and one visiting car.
- Currently on-street parking is controlled by permit.
- Provision for a future lift will be made by casting 'soft spots' into the structure at each level so that lift access can be provided quickly and with relatively little expense at any

point in the future. The soft spots in the structure will provide vertically coordinated areas of sufficient plan area to readily implement a lift if and when needed.
- The house will meet all Lifetime Homes standards.

6.09 Accommodation:

The proposal is for the erection of a building comprising two basement levels, lower ground level, upper ground level, and first floor level with light wells to the front and rear for use as a bespoke single-family dwellinghouse (following demolition of existing single-family dwellinghouse).

The proposed single family dwelling will have front and rear gardens, and internal courtyards cut from the building will maximize the relationship of internal to external spaces. It has a gym and swimming pool in the skylit basement along with a media room. This building type conforms with the general character of the street.

6.10 Construction:

As befits a purpose-built residence in Maresfield Gardens, Hampstead, the construction methodology has been developed for sustainable performance over time. A Construction Methodology statement has been prepared by engineers Dewhurst Macfarlane & Partners providing detail of the strategy and wall build-up ("Structural Report and Proposed Construction Methodology").

- Although detailed construction documentation has not yet been undertaken, a strategy has emerged that aims for the least possible impact on neighbours during construction of a home of this size, complexity and quality.
- The principle of the proposed excavation has been established as acceptable by virtue of planning permission 2006/3073/P.
- The foundations will be formed by a combination of augered piling and sheet piling. Both methods have been chosen because they do not impose vibrations on the neighbours. Additionally, contemporary sheet piling methods are essentially silent.
- The structure of the home will have reinforced concrete frame, floors and soffits in order to achieve a thermal flywheel effect for efficiency and comfort of the interior.
- The concrete to be used throughout will have at least 50% 'GGBS cement replacement' (replacement of the ordinary cement with 'ground granulated blastfurnace slag'). As compared to construction using concrete made from ordinary cement, this will achieve a reduction of approximately 40% in terms of CO_2 output, and a reduction of approximately 30% in the primary energy required for production.
- Because of the very significant slope of the existing site, roughly 50% of the building volume is cut into the ground, with the attendant advantages in terms of thermal stability.
- Exterior perimeter walls will variously be:
    - Render on insulation on concrete (through-coloured render) (Storend or equal)
    - Insulated glass units
    - Concrete panels as rainscreen cladding, white in colour.
    - Vertical operable metal solar shading louvers, self-coloured stainless steel or painted with translucent thin film PV panels.

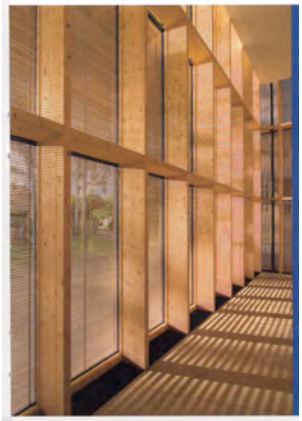
- The rendered external finishes and concrete cladding are intended to relate to the crisp rendered finishes common to both Victorian and modernist buildings in Hampstead.
- Interior partitions will be of lightweight framed construction. The use of concrete slabs with minimum penetration will limit vertical noise transmission.

6.11 Materials

A clear and simple contemporary materials palette is proposed, one that articulates the form of the house while relating it to other modernist precedents in the Fitzjohn's/Neterhall Conservation Areas

- Front Garden Fencing and Balustrades – 'Invisible green' painted metal handrails with frameless glass infill
- Footpaths and Driveway - Stone flags, grasscrete or similar to allow maximum drainage and runoff to garden
- Front door - sustainably sourced hardwood
- Circulation core, single layer frameless skylights on internal steel sub frame painted mid grey.
- Pavilion Walls: Okawood - a combination of rich timber veneers and louvres behind glass, echoing the neighbourhood language of timber and glass fenestration. Window panels will remain large and minimally framed. To the rear, a light precast Fibre C rainscreen contemporizes the traditional white protruding bay.
- Retaining Walls and escape Stair to Courtyards – fair-faced GGBS concrete [architectural quality] and precast Fibre C 'Ivory Matt' panelling.
- Although not an 'exterior material' the fair-faced concrete to be used for the north surface of the stairway 'cut' will be visible obliquely through the glazed entrance window. The use of GGBS concrete will result in an enhanced, relatively bright and warm coloured concrete.
- Windows - Window panels large and minimally framed sliding or pivoting double glazed units, Vitrocsa, Skyframe or similar, aluminium powder coated mid grey
- Flat Roof –Sandstone chip on insulation on waterproofing membrane, to take inclined integrated photovoltaic array and solar thermal panels.
- Upper decks - Accessible sustainably sourced horizontally slatted hardwood
- Rear Balustrading and Fencing - 'Invisible green' painted metal handrails with frameless glass infill
- Rear Garden Walls – New wall to 57 Maresfield Garden and around courtyards: high quality fair-face GGBS concrete to match interiors with hardwood trellis on which to train climbers and shrubs. Wall to 40 Netherhall Gardens: Existing fair face concrete wall with new hardwood trellis on which to train climbers and shrubs. Rear wall: Existing brick.



Okalux and Okawood [www.okalux.com]



Fibre C precast panelling [http://www.rieder.cc/at/en/]

6.12 Conclusion:

This Revised Proposal for 59 Maresfield Gardens, Hampstead, embodies all of the main parameters established by the scheme Approved for the site in 2007 (London Borough of Camden, Application Ref: 2007/2890/P). The current application is significantly improved in many respects stemming from the fact that it is now a proposal for a purpose-built home (rather than the speculative residential development that characterized the Approved Proposal).

51% Studios Architecture has focused consistently for ten years on producing work of the highest standard. 51% Studios has recently been recognized by an RIBA Award for their project 'Vicco's Tower', a residential extension in a Conservation Area in east London.

The partners of 51% Studios have lived in Hampstead for twenty years, and have previously created homes in this neighbourhood. We have attached Brochures of the practice work to illustrate several award winning projects and extensive and sensitive work with historic buildings, including the creative reuse of listed buildings, in the design of contemporary projects within established contexts.

We are committed to producing contemporary architecture of the highest possible quality. The clients are intent on building an exemplary project that will help to continue a tradition for sensitive high quality residential development within the Borough of Camden.

6.13 Responses to LBC Officer Delegated Report of 2007:

The following notes are extracts from the LB Camden Officers Report covering the previously approved [2007] scheme. They have been taken into account during the preparation of the current revised proposals.

Overview:	This 'Revised' application follows on from the 'Approved' building proposal embodied by Planning Application Ref: 2007/2890/P. Extensive reference has been made to: the approval DECISION Notice dated 22 November 2007 and its nine attendant Conditions, and the Officer Delegated Report-2147050.pdf (ODR) prepared by Officer Matthew Durling, dated 12/06/2007 (?sic?). Whereas the previous approved scheme was acknowledged as a proposal for a 'speculative' development, the current Application herewith is distinguished by being client-specific. It articulates the approved previous scheme to realize an owner-occupied home that will meet the new owner's personal and practical needs, as well as aesthetic preferences. The Revised Proposal conforms very closely to the previous Approved Proposal. A more personal, more specific, and less generic design has emerged.

Key parameters that have been maintained:	
ODR 6.3.2	A physical separation between the proposed top two storeys of the application building and the adjacent terrace houses at 57 and 59 Maresfield Gardens. In comparison to the approved plan, it is proposed that good practice would suggest that the party wall which will remain for 57 Maresfield Gardens should receive insulation and sheathing to a thickness of 150mm, so the gap between would be 850mm.
ODR 6.3.2	The current proposal continues to be a "simply detailed form designed to read as a single dwellinghouse, thus defining it as an independent 'pavilion' building" as noted for the Approved scheme.
ODR 6.3.3	The height of the application building matches the height of the adjacent terrace houses.
ODR 6.3.3	Generously proportioned fenestration, now greater, with fewer subdivisions….
ODR 6.3.3	The Revised Proposal continues the previously established parameters:

	"The proposed building fits within established parameters for development of the site in that it respects overall building height, recessing of building mass at the rear whilst maintaining established building lines on the front elevation…. Maintains flat roof…. Generous fenestration with minimal subdivision….
ODR 6.3.4	The Revised Proposal continues the previously established parameters: "openness to the sky which is welcomed…" "principle of deep basements established…"
ODR 6.3.5	Drawing No.12 'Ground Floor Plan' and No.16 'Section BB' of the Approved scheme show the proposal for a driveway from Maresfield Gardens sloping toward the main entry to the house at an incline of "7.25%" (slightly less than a slope of 1 in 14). This would replace the unsightly existing concrete drive ramp of even greater slope. The Revised scheme maintains the proposal for the new main entrance to be accessible from Maresfield Gardens by a gently-sloping drive of only 5% (a slope of 1 in 20) Just as in the Approved plan, the current plan makes provision for vehicular at the Maresfield entrance level. Most daily access to the residence will be from the Maresfield Gardens level, rather than the current common entry arrangement passing in front of the adjacent terrace houses at the suppressed level.
ODR 6.8.1	The Approved Proposal provided for the retention of the Purple 'Cherry' Plum tree at the rear of the property. The Arboriculture report for the Revised Proposal has recommended that this tree be removed for a couple of reasons (see listing for tree T4 in the report from Ben Larkham Associates). The trunk of which leans awkwardly at 40º, and the removal of this tree would introduce more daylight to the site, and it would enable an opportunity to appreciate the beautiful hawthorn tree 5 metres to the south in the neighbours yard. The neighbour to the west has also asked that the tree be removed.
Discussion of elements that have been modified:	
ODR 6.3.2 re: 'bamboo garden'	The 'bamboo garden' shown in the Approved scheme in the slot between the adjacent terrace house and the proposed structure were not realistic or achievable with the depths shown for structure and soil in that proposal. The current

	scheme proposes high-quality tree specimens in planter tubs. In addition, bamboo is a non-indigenous plant that does not survive easily in containers as it is very susceptible to over and under watering.
ODR 6.3.2 re: Massing & Elevations	The 'vertical' banding of timber in the Approved Proposal has been altered as a part of development of the design into a bespoke single-family residence. It has been felt that the vertical timber panels in the Approved Proposal increased the apparent height of the house, as well as introduced a somewhat anonymous or even corporate feel to the main elevations. Perhaps the vertical timber banding was more appropriate in the previous 'speculative' context of the Approved Proposal (see description on page 21 of the previous "Design and Access Statement-2123277.pdf" in the case file). The Revised Proposal has a greater degree of 'composition', and is in a sense more 'organic' through variation. A stronger relationship to human scale has been achieved by giving three-dimensional relief in places to elements of the facade (which is a traditional strategy achieved by such things as 'bays'; e.g. the timber cladding panels at the First Floor level). There is now a balanced mixture of horizontal and vertical elements that echo in a contemporary manner the various elements of bays, entries, facades, roofs, etc. that articulate facades throughout the area.
0DR 6.3.4 re: massing	The massing to the rear has been even further reduced in the Revised Proposal, as compared to the Approved Proposal. Significantly contributing to this, the volume that was shown as the 'Study' at the Garden Level (elev. -2.72) has been removed and is now an open Terrace in the current proposal.
ODR 6.5 re: bulk and area	The Approved scheme stated that the accommodation provided would be 456sqm. It appears that this was measured to interior surfaces and also did not take account of void areas in floor levels. It is thought for the purposes of the Planning application that the measurements should have been to the exterior face of the envelope and should have included void areas. Measured in this manner the Approved scheme totalled 521sqm The Revised scheme is 5% smaller than the Approved scheme. (This has been achieved in large part by eliminating what was designated as 'Study', as described in the preceding item). Furthermore, the Approved scheme did not make adequate provision for protection of the roots of the mature trees existing at Maresfield Gardens. The Revised scheme makes accurate provision for fully

	protecting the root systems per recent surveys and conversations with LBC Tree Preservation Officer, losing accommodation area as a result.
ODR 6.5 re: lift provision	As a client-specific home, it was felt that the lift was not applicable. In respect of the Lifetime Homes guidelines, the installation of a lift has been planned and accommodated as a future possibility. The floor slabs at all levels will have a 'soft spot' cast in that is dimensionally positioned and coordinated to enable the easy installation of a lift and shaft enclosure in the future. It is also thought that a lift could present some hazard to the four children of the applicant owners' family. See Plans for location of 'soft spot' (similar location to lift shown in Approved Proposal).
ODR 6.5.1 re: daylighting to lower levels	The Revised Proposal has as its main Bedroom Level the same floor as in the Approved Proposal (what has been designated as elevation -5.4 approx. in both schemes). Daylighting to the several bedrooms is very similar between the two schemes. As the Glass Walkway (connecting the house to the garden in the Approved Proposal) is no longer required, the Bedroom 1 of the Revised Proposal will get comparatively more light.
ODR 6.5.2 re: daylighting to lower levels	The Approved Proposal showed a Guest Suite in the lowest level of the house, and some reservations were expressed in the ODR about the suitability of that use in terms of available daylight. The Revised Proposal has removed uses similar to the 'guest suite'. The uses in the Basement Level of the Revised Proposal are: Swimming Pool; Steam Room; Sauna; Play Room & Cinema Room and Utility.
ODR 6.8.2 re: low brick wall at Maresfield Gardens	The photomontages for the Approved Proposal showed a brick wall and timber gate along the front boundary. The Revised Proposal contains no fence at the front boundary due to the threat posed to the tree roots in that area by related foundations. Other railings necessary around the front courtyard have been further detailed in the current proposal in the material language of glass and steel consistent with the architectural/material language of both the Approved Proposal and Revised Proposal.
ODR 6.8.3 & Decision Condition #5 re: planted roofs	The Approved scheme showed two other small areas of 'planted roof', in addition to the 'bamboo garden' mentioned above (ODR 6.3.2). Condition #5 of the Decision requested further details substantiating that "adequate depth is available in terms of the construction and long-term viability of the green roof". Our research has indicated that these planted roof areas were not realistic or sustainable long-term at their very small scale, and would not make a significant contribution to the sustainability profile of the project. These have therefore been replaced with traditional roof treatments.

	However, it should be noted that there were inaccuracies in the Approved Proposal tree locations and intended basement wall location at the front of the house. Comparatively, the Revised Proposal will provide an additional 2.5 metres of landscaped /grassed area at the front to ensure that construction does not encroach on the tree roots of the very large London Plane. See landscape proposal.
Discussion of newly introduced elements/aspects:	
0DR 6.3.4 re: the 'cut'	The Revised scheme has introduced a new transparent 'cut' element that passes through the accommodation along the north property line. This further enhances the pavilion-like quality of the scheme, whilst offering passers-by views of the magnificent lime trees at the rear of the property. In the Approved scheme, the occupants entered into a comparatively cramped Entrance stair hall, with no significant view to the exterior. This more family-oriented configuration offers direct access from the front entrance down to the garden at the rear. The 'cut' provides substantially more natural light into the main circulation stair, and will considerably enhance opportunities for natural ventilation.
ODR 6.4.1 & Decision Condition #4 re: visual privacy screen	A visual privacy screen has been added at the Entry Level terrace at the rear, complying with Condition #4 of the Approved Planning Decision.

7.0 Energy Statement

7.01 Introduction

Current assessment criteria for sustainability in the Building Regulations and in the Code for Sustainable Homes focus on CO_2 output and energy consumption after a building is in-use. Also important to the overall sustainability profile of a building is the 'embodied energy', the energy required to manufacture the building materials and the CO_2 produced during their manufacture.

The concrete to be used throughout will have at least 50% 'GGBS cement replacement', meaning that at least half of the ordinary cement that might have gone into making the concrete will be replaced with a cementitious by-product of the smelting industry called 'ground granulated blastfurnace slag' (GGBS).

As compared to concrete construction using just ordinary cement, 50% GGBS replacement can achieve:

- 40% reduction in CO2 output during manufacture, and
- 30% reduction in primary energy required for production.

Peter Deer and Associates (PD&A) have provided a detailed Building Services and Sustainability Report which is attached at the end of this section.

7.02 Camden targets

- We will meet or better Camden's targets for reduction of Greenhouse gases by installation of renewable energy resources. The principal heat generation device for space heating and generation of domestic hot water is a ground source heat pump connected to the earth via heat exchange piles or sheet piles – this is considered as a renewable source. Back up is provided by a fully condensing gas boiler.
- A combination of solar thermal or photovoltaic panels or a combination of both will further offset the use of grid connected electricity and fossil fuels.
- The ground source heat pump will be the lead device in the thermal systems and will generate approximately 65% of the heating and HWS demand.
- Not less than 10% of the total energy used in the house will be generated by solar thermal and solar PV collection.
- Overall the ground source heat pump, solar PV and solar thermal systems will generate in excess of the 50% of the energy demand via sustainable systems.

7.03 Insulation and air tightness

- The intention is to provide an envelope that is as airtight as possible, and optimally insulated. In winter the use of heat recovery ventilation will ensure that fresh air enters the building in a controlled fashion, from outside and is distributed through the home in order to ensure a balance between fresh air and extract.
- Insulation to levels significantly better than required by the current part L regulations will be provided
- Air-tightness will exceed that required by Part L.

7.04 Daylighting

- Basement rooms all fall within minimum requirements.
- Preference has been given to living rooms as they are used during the day.
- The building receives very significant shading from the mature trees at front and rear. The sustainability profile of the property is significantly enhanced by being able to limit solar gain through the windows, and at other times being able to permit the solar gain. Because the house has significant east and west exposures, solar control is achieved by vertical louvres on 50% of the windows on the upper two floors. These will be designed into the façade as a part of the integrated aesthetic solution of a sustainable home.

7.05 Lighting

- High levels of daylighting through large windows will be provided to reduce lighting load and provide passive solar gain. Low e glass and high quality glazing units make it easy to exceed the required U value of 2.0
- Energy efficient fixed lighting will be installed to reduce electrical loading.

7.06 Rainwater harvesting

- Rainwater harvesting utilizing storage tanks linked to main roof, terraces and green roof.
- This will be used for toilet flushing, irrigation and general non potable use.
- Water usage will be reduced to meet the Code for sustainable homes code level 4.

7.07 SUDS

Soils tests have indicated that the use of soakaways is unlikely to be successful. Additionally the requirement to protect tree roots does not permit the introduction of surface water disposal by the introduction of herringbone drains. A SUDS assessment has indicated a solution as follows:-

- Reuse of existing combined drain with direct connection to sewer
- Introduction of attenuation tank to reduce the peak surface water run off to 50% of previous levels
- Local discharge of decks and paving at garden/entrance level
- Controlled discharge of over 50% of foul water by controlled pumping

7.08 Ventilation

- Natural ventilation by openable windows and stack effect via the main stair in summer.
- Controlled mechanical ventilation in winter.
- Solar and other thermal gains minimised in summer utilising the external insulation of the building to keep the heat out, whist relying on cross ventilation to provide fresh air.
- The façade provides a combination of thermally strong, fixed glazing concentrated for maximum depth of light penetration and air-tightness, allied with ventilation panels clad in timber positioned for optimum cross ventilation, offering security and providing an expression on the façade of the ventilation system of the building.
- In addition to natural ventilation, the kitchen will have “mechanical ventilation rated as

capable of extracting at a rate of not less than 60 l/sec (or incorporated within a cooker hood and capable of extracting at a rate of 30 l/sec) through 120 minute fire rated ducting. Background ventilation will be by “mechanical ventilation being in addition capable of operating continuously at nominally one air change per hour.”

- Bathrooms will have Mechanical extract ventilation capable of extracting air at a rate not less than 6 l/sec, which may be operated intermittently with 15 minutes overrun.
- During winter heat will be recovered from ventilation air.
- The flat roof houses photovoltaic and solar thermal panels over the south facing area where the level is above the adjacent trees.

7.09 Code for Sustainable Homes

Not all parts of the code are applicable to a single private dwelling of this size; however the intention is to meet the thermal, water usage, drainage and SUDS targets applicable to Code level 4.

59 Maresfield Gardens, Hampstead **PDA Ref 3085/1**

Building Services and Sustainability Report – Planning

This report describes proposals for the scheme incorporating design development and the impact of further information gained from geotechnical studies and structural analysis.

The principles utilised are broadly those described in the previously approved planning application 2007/2809/P. Where there is no significant difference between the approved proposals this scheme this is noted.

1. Introduction and Strategy

The building comprises a concrete frame and retaining structure set into the ground on a sloping site. The principal orientation of exposed façade with windows is East (front) West (back). The North and South site boundary form party structures are highly insulated and generally solid. Within the site the elevations are articulated to provide natural ventilation and allow daylight to penetrate the lower levels.

The most important element in the control of environment and sustainability is the introduction of a high quality, well insulated well sealed fabric. This thermally strong enclosure minimises the requirements for plant. Fabric performance is described in the next section but is should be noted that the facades is designed to operate in different modes:-

- Winter Fabric closed with heat recovery ventilation
- Summer Fabric opened for natural ventilation

2. Fabric and structure

Details of the concrete structure are described elsewhere in this report. The aggregate used in the structure is a waste product reducing embodied energy.

The fabric listed below has been used in calculation under Part L1A (SAP) and has been used for our assessment of the building thermal loads and for selection of plant. During design development individual elements may be altered but the overall performance of the fabric will not be less than stated. Note that the fabric performance is significantly better the minimum required under Part L.

Exposed external walls

12mm plasterboard
Aluminium foil Vapour Barrier
250mm insulation (thermal conductivity of 0.039W/m.K) – can be improved for reduced thickness
225mm External Brickwork
The resulting U-Value = **0.144 W/m^2.K** with zero risk of interstitial condensation.

Underground external walls

12mm plasterboard
Aluminium foil Vapour Barrier
100 mm insulation (thermal conductivity of 0.039W/m.K) – can be improved for reduced thickness
250mm concrete blocks
Earth
The resulting U-Value = **0.130 W/m^2.K** with zero risk of interstitial condensation.

Exposed roof

6mm plasterboard
220 concrete
Aluminium foil Vapour Barrier
200mm insulation (thermal conductivity of 0.039W/m.K) – can be improved for reduced thickness
6mm bitumen
The resulting U-Value = **0.092 W/m^2.K** with zero risk of interstitial condensation.

Glazing U-Value = **1.1 W/m^2.K** with a shading coefficient of 42% and Light transmittance of 59%

All elements in contact with the earth such as basement slabs and store room walls etc will be insulated to an appropriate level to comply with Part L.

The fabric is designed to incorporate mass and insulation in optimum locations to provide low heat loss and a flywheel effect stabilising the heating load I n winter and providing passive temperature control in summer.

3. Systems

The thermal systems will be as follows:-

- Principal heat source – ground source heat pump
- Secondary and back up heat source - air source heat pump and/or fully condensing gas boiler

Calculations confirm that because of the excellent thermal performance of the fabric compliance with Part L and achievement of the thermal performance targets under the Code for Sustainable Homes (CSH) Code level 3 will be achieved using a back up gas boiler. The system utilising the ground source heat pump will meet the thermal performance targets of CSH Code Level 5.

The heat pump installation incorporates 2 heat pumps, each sized at 50% of the total heat out requirement of 12kW, one ground connected for the base load and one air to water heat pump for the peak load. This will provide more reliability in both heat generation and ground connection capacity. The heat and hot water cylinders are contained within internal plant rooms and there is no external plant.

Heat emission will principally be by underfloor heating enabling the use of minimum internal air temperatures.

4. Ventilation

The scheme design includes the following:-

- Ventilation via whole house supply and extract heat recovery system
- Kitchen extract ventilation

The whole house ventilation system will be used in conjunction with controlled heating to minimise the winter energy use. Air is extracted from the WC, bathrooms and internal spaces and warmed fresh air is introduced into living and sleeping spaces.

In summer the building is naturally ventilated by controlled openings in the façade (windows and shutters) utilising natural stack effect from the main stairway to a roof top ventilator. In the event of fire the normally open doors/screens will be released to provide appropriate compartmentation. During the day in summer the whole house ventilation will operate in extract only.

5. Renewables

The main heating system is a ground connected heat pump and this is considered as a renewable technology under the Low Carbon Toolkit. As a result the basic installation exceeds the minimum threshold for renewables.

The approved planning application indicates extensive PV and Solar thermal collection at roof level comprising in excess of 25m^2 of photovoltaic and solar thermal panel. Calculations indicate that this is provision is unlikely to be economic in a single domestic house.

Or proposals incorporate a minimum of:-

- 6m2 Solar Thermal collection
- 10m2 Photovoltaic collection

Once detailed design is completed the quantity of solar collection panel will be confirmed but this will be between 16-25m^2. i.e. not exceeding the extent shown in the approved scheme.

6. Energy and reduction of CO_2

Winter peak heat losses for the scheme equate to 19W/m^2 (heat output); with coefficient of performance (COP) of 3.2 for the heat pump installation, energy input is less than 6 W/m^2 for winter external design steady state heating or less than 12 w/m^2 for preheating output when a full design allowance for intermittent heating during the dwelling pre-occupancy heat up period is included.

The results of the Part L1A calculations are as below.

TER is 'target emission rate (for compliance with Part L) and DER is 'dwelling emission rate' which is the calculated emission rate for the building with the specific services equipment as indicated. Each DER CO_2 emission rate % improvement over the TER shows the contribution towards the Code for Sustainable Homes (CSH) level as noted below.

Operating mode 1 – Back up condition with gas fired back up boiler/air source heat pump

- Target Emission Rate (TER): 25.89 kg CO_2/m^2/annum
- Building Emission Rate (DER): 15.74 kg CO_2/m^2/annum
- % improvement of DER/TER 39% (CSH level 3)

Operating mode 2 – ground source heat pump as lead device

- Target Emission Rate (TER): 25.89 kg CO_2/m^2/annum
- Building Emission Rate (DER): 10.28 kg CO_2/m^2/annum
- % improvement of DER/TER 60% (CSH level 4)

Operating mode 3 – addition of Solar Preheat to HWS and PV (maximum)

- Target Emission Rate (TER): 25.89 kg CO_2/m^2/annum
- Building Emission Rate (DER): 8.10 kg CO_2/m^2/annum
- % improvement of DER/TER 69% (CSH level 4)

7. Drainage and SUDS

All of the foul and surface water from three adjacent houses 55, 57 and 59 is collected by a common combined drain and discharges to the sewer in the street via an interceptor.

The arrangement is conventional for a small development.

There is no visible evidence that this drain has ever suffered from back flow or surcharge.

At present a significant amount of the site to the front and the rear is soft earth and surface water appears to drain away to ground. It is likely that the trees absorb a significant amount of ground water. There is no attenuation on the existing storm water drainage.

A geotechnical survey has indicated that the ground is stiff clay with perched water layers. Tree roots cover both the front and rear gardens and arborlogical advice is that there are limited areas where pits and manholes can be constructed outside of the basement excavation.

As a result of these constraints it is not possible to dispose of the main roof and hard surface drainage into an on site soakaway.

Site

At present the site has approximately 106m2 of hard surface discharging to the sewer. After the new house is constructed this will increase to approximately 130m2. It is assumed that the rear garden and the front garden will retain soft or porous surfaces allowing rain to soak away and that the ramps to the front and rear will drain away locally (as at present).

Drainage design for outside Central London is given in Diagram 2 – Building regulations Part H: as 0.016l/s per m2 (58mm per hour)

The Environment Agency does not list the area as an area of floor risk (less than 1%), but the sloping nature of the area does mean an increased risk of surcharge in the street.

Drainage Design
The existing surface water run off rate from the site is 1.6l/s and this would increase to 2.08l/s without attenuation measures. It is proposed to reduce the rainwater run off to 0.8l/s

Overall surface water pickup from all three properties is around 4.46 l/s surface water and would probably have been designed on around 6l/s of combined outfall (surface and foul) with foul at approx 2-2.5l/s for the single dwelling and around 3 l/s for all 3 dwellings.

For a new design it is usual to design for an excess run off of 10 minutes and for new development the CSH gives 2 credits if the rainfall attenuation is reduced to 50% of its previous maximum

It is therefore proposed to retain the existing combined drainage but reduce the peak attenuation to 50% of the present discharge.

The attenuation is required is [2.08 – (0.5x1.6)] x10x60 = 780 litres

The attenuation can be in a combination of storage, roof attenuation but for now it is proposed that the drainage will be by a holding in a storage attenuation tank with a minimum capacity of 780 litre capacity.

Foul drainage in the new house will not exceed 100 dia and the existing drainage is adequate. Most of the foul drainage is below the sewer line and will be pumped. The pumping chamber and discharge will be arranged to provide storage suitable for 24 hours (as required by the building regulations) with inverter pumps to provide a controlled discharge with a reduced peak flow to that from conventional gravity drainage.

8. Noise
The scheme does not incorporate any external noise generating plant. Both the ground source and air-source heat pumps are located internally. Fans and boilers are conventional domestic plant.

9. Water
Rainwater harvesting will be introduced to deduce the use of potable mains water. A separate storage tank with filtration scheme will be utilised for:-

- WC flush
- Irrigation
- Non potable external applications

Domestic HWS and drinking water will be from the mains.

The water use for domestic purposes will not exceed 105 l/person/day (CSH Code level 4)

10. Lighting and Daylight
The approved application included a comprehensive daylighting report. The general principles of daylight penetration to the lower levels within the first level of basement have been retained. i.e vertical glazed windows opening into courtyards.

The lowest level of basement has been re-arranged with daylight penetration via horizontal Luxcrete panels and walk on glazing. Glazing element will provide a minimum of 4% daylight factor over the study area and 2% over the pool area.

Front and rear elevations are heavily shaded by trees. However in periods of low angle sun there is a risk of short duration solar gain in the morning and evening. This risk has been eliminated by the introduction of solar shading shutters to the upper windows to the front and rear elevations.

Artificial lighting comprises low energy fitting with PIR detection in transient rooms to minimise waste.

Code for sustainable homes
Overall the building has a design target of Code Level 4.

8.0 Lifetime Homes standards

1. Car Parking Width Where car parking is adjacent to the home, it should be capable of enlargement to attain 3.3m width. • The general parking space width of 2400mm must have a grass verge or path 900mm wide running beside to enable the hard landscaping to have an overall width of 3300mm at a later date.	We provide a car space onsite which conforms; the on street parking has a pavement well in excess of 900mm.

2. Access From Car Parking
The distance from the car parking space to the home should be kept to a minimum and should be level or gently sloping.
• A level approach is preferable.
• Where topography prevents this, a maximum gradient on an individual slope is permissible as follows:
  • 1:12 if the slope is less than 5m;
  • 1:15 if it is between 5m – 10m;
  • 1:20 where the slope is more than 10m.
• There must be top, bottom and intermediate 1200mm clear landings. Paths should be a minimum 900mm wide.
	One onsite space provided.
	
	Controlled on street residents parking is immediately adjacent.
	
	Level access provided all the way from the street, slopes are all well within parameters.

3. Approach Gradients The specification for Criteria 2 gives the definition of gently sloping.	Proposal conforms fully.
4. External Entrances All entrances should be illuminated, have level access over the threshold and have a covered main entrance. • The threshold upstand should not exceed 15mm	Proposal conforms fully.
5. Communal Stairs & Lifts Communal stairs should provide easy access and, where homes are reached by a lift, it should be fully accessible. • <u>Communal stairs:</u> Uniform rise not more than 170mm, uniform going not less than 250mm. Handrails extend 300mm beyond top and bottom step, handrail height 900mm from each nosing. • <u>Lifts:</u> Clear landing entrances minimum 1500mm x 1500mm. Minimum internal dimensions 1100mm x 1400mm. Controls between 900 – 1200mm from floor and 400mm from the lift's internal front wall.	Proposal conforms fully.

6. Doorways & Hallways The width of internal doorways and hallways should conform to Part M, except that when the approach is not head on and the hallway width is 900mm, the clear opening width should be 900mm rather than 800mm. There should be a 300mm nib or wall space to the side of the leading edge of the doors on entrance level. • <u>Front door:</u> Clear opening width of 800mm, with a 300 nib to the side of the leading edge. • <u>Internal + Back doors:</u> Clear opening width of 750mm / corridor or passageway width 900mm if the approach is head-on or 1200mm when the approach in not head-on, clear opening width 775mm / corridor 1050mm when the approach is not head on, 900mm / 900mm corridor when the approach is not head on. Doors on the entrance level should have a 300mm nib to the leading edge.	Proposal conforms fully.
7. Wheelchair Accessibility There should be space for turning a wheelchair in dining areas and living rooms and adequate circulation space for wheelchairs elsewhere. • A turning circle of 1500mm or a turning ellipse of 1700mm x 1400mm is required in living rooms and dining areas.	Proposal conforms fully.
8. Living Room The living room should be at entrance level. • Living room at entrance level.	Proposal conforms fully.
9. Entrance Level Bedspace In houses of two or more storeys, there should be space on the entrance level that could be used as a convenient bed space. • A space on the entrance level that could conveniently be used as a bed-space.	Proposal conforms fully.

10. Entrance Level WC & Shower Drainage In houses with three or more bedrooms, and all dwellings on one level, there should be a wheelchair accessible toilet at entrance level with drainage provision enabling a shower to be fitted in the future. In houses with two bedrooms the downstairs toilet should conform at least to Part M. • The drainage for the future shower should be provided in all dwellings. For dwellings with 3 or more bedrooms or on one level, the WC must be fully accessible. • A wheelchair user should be able to close the door from within and achieve side transfer from a wheelchair to one side of the WC. • There must be 1100mm clear space to the front of the bowl. • The shower provision must be within the closet or adjacent to the WC. • A Part M WC is adequate for dwellings on 2 or more storeys with 1 or 2 bedrooms.	Proposal conforms fully.
11. Bathroom & WC Walls Walls in the bathroom and WC should be capable of taking adaptations such as handrails. • Wall reinforcements (if required) should be located between 300 and 1500mm from the floor.	Proposal conforms fully.
12. Stair Lift/Through-Floor Lift The design should incorporate provision for a future stair lift and a suitably identified space for a through the floor lift from the ground floor to the first floor, for example to a bedroom next to the bathroom. • There must be a minimum of 900mm clear distance between the stair wall (on which the stair lift would normally be fixed) and the edge of the opposite handrail/balustrade. Unobstructed 'landings' are needed at the top and bottom of the stairs.	Proposal conforms fully.
13. Tracking Hoist Route The design and specification should provide a reasonable route for a potential hoist from a main bedroom to the bathroom. • Technological advances in hoist design mean that a straight run is no longer required.	Proposal conforms fully.
14. Bathroom Layout The bathroom should be designed for ease of access to the bath, WC and wash basin. • Although there is not a requirement for a turning circle in bathrooms, sufficient space should be provided so that a wheelchair user can conveniently use the bathroom and gain side access to the WC.	Proposal conforms fully.

15. Window Specification Living room window glazing should begin no higher than 800mm from the floor level and windows should be easy to open/operate. • People should be able to see out of the window whilst seated. Wheelchair users should be able to operate at least one window in each room.	Proposal conforms fully.
16. Controls, Fixtures & Fittings Switches, sockets, ventilation and service controls should be at a height usable by all (i.e. between 450mm and 1200mm from the floor). • This applies to all rooms, including the kitchen and bathroom.	Proposal conforms fully.

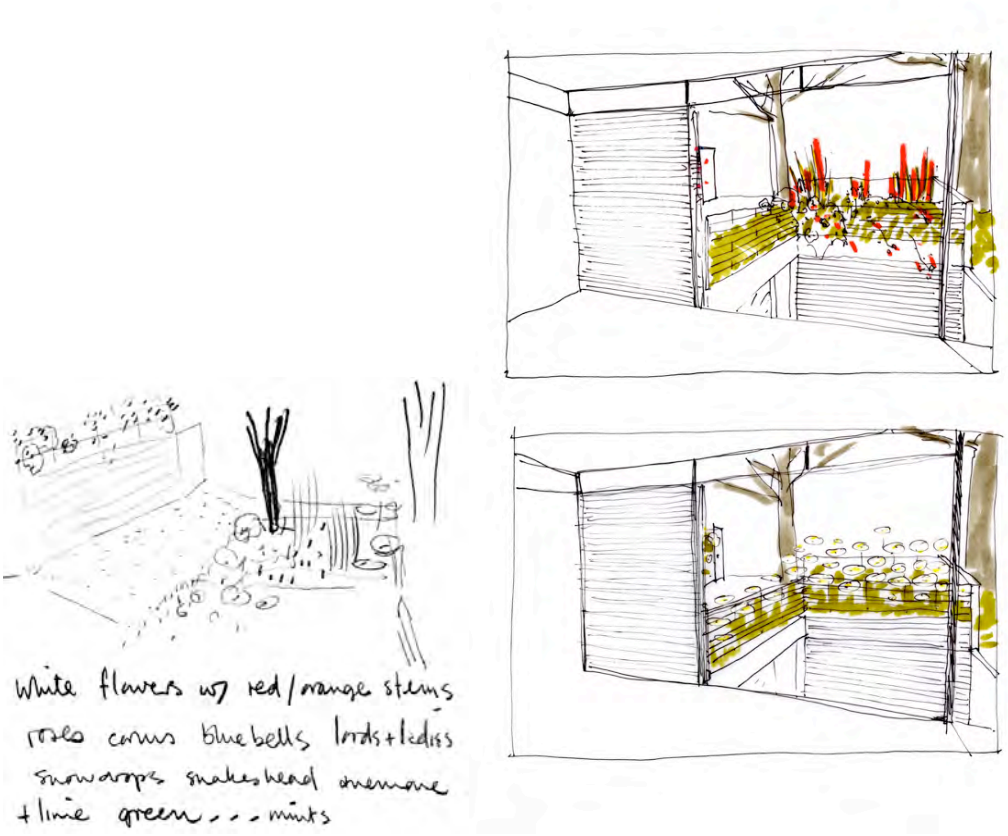
9.0 Landscape and tree issues

The following is a detailed description of the landscape design approach to be adopted with the scheme proposals.

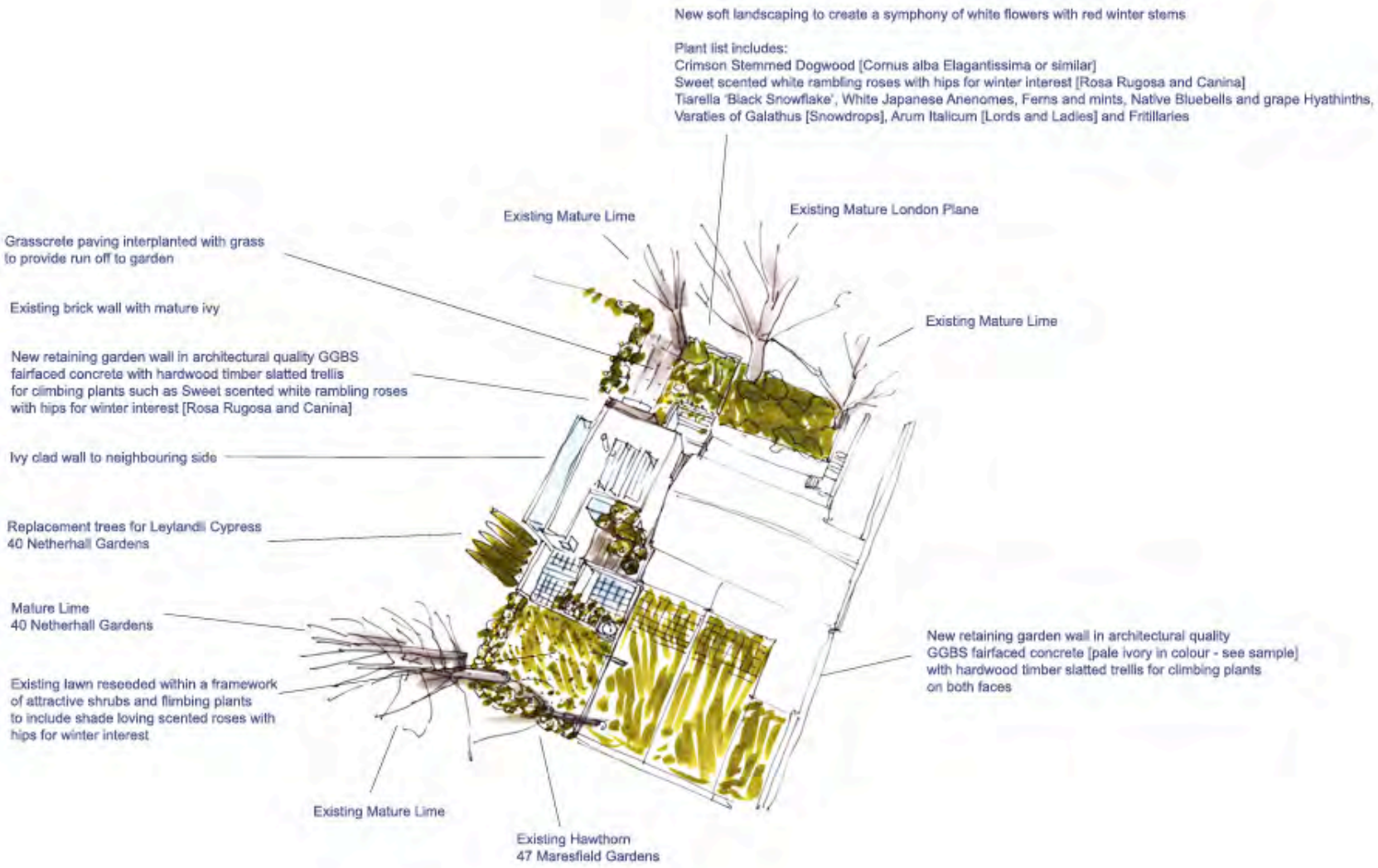
Also included is a tree report describing the tree situation and the issue of tree retention where relevant. The scheme proposals will not impact adversely on the key major trees at the site.

The front garden is to be a simple, handsome arrival area. The mature lime and plane trees will predominate, with soft landscaping provided on all other surfaces around the drive and courtyard. A year round 'symphony' or sequence of white flowering plants will be complemented by striking winter colour, rosehips and crimson dogwood stems. In late winter and spring native bulbs will add colour and interest.

The lower courtyards will incorporate glazed floor inserts with high quality architectural fair-faced GGBS concrete retaining walls with selective planting of shade-loving species in planters. They will be designed as individual outdoor rooms, each providing private outdoor amenity to a different part of the building. They will be landscaped quite simply, with specimen planting to offset the walls. They are linked together by a series of paths and stairwells, forming a rich landscape experience within a small area. The rear of the garden will utilize the retained trees as the main feature, and will supplement these with attractive shrubs and groundcovers. For details and a list of proposed plants please see the attached landscape plan.



Front garden studies


New soft landscaping to create a symphony of white flowers with red winter stems
Plant list includes:
Crimson Stemmed Dogwood [Cornus alba Elagantissima or similar]
Sweet scented white rambling roses with hips for winter interest [Rosa Rugosa and Canina]
Tiarella 'Black Snowflake', White Japanese Anenomes, Ferns and mints, Native Bluebells and grape Hyathinths,
Varaties of Galathus [Snowdrops], Arum Italicum [Lords and Ladies] and Fritillaries
Existing Mature Lime
Existing Mature London Plane
Grasscrete paving interplanted with grass
to provide run off to garden
Existing brick wall with mature ivy
Existing Mature Lime
New retaining garden wall in architectural quality GGBS
fairfaced concrete with hardwood timber slatted trellis
for climbing plants such as Sweet scented white rambling roses
with hips for winter interest [Rosa Rugosa and Canina]
Ivy clad wall to neighbouring side
Replacement trees for Leylandii Cypress
40 Netherhall Gardens
Mature Lime
40 Netherhall Gardens
New retaining garden wall in architectural quality
GGBS fairfaced concrete [pale ivory in colour - see sample]
with hardwood timber slatted trellis for climbing plants
on both faces
Existing lawn reseeded within a framework
of attractive shrubs and flimbing plants
to include shade loving scented roses with
hips for winter interest
Existing Mature Lime
Existing Hawthorn
47 Maresfield Gardens

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Arboricultural Survey and Constraints

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Inspector:	B.Larkham, Dip.Arb.(RFS), Tech.Cert.(Arbor.A), F.Arbor.A.
Date of Inspection:	18th June 2008
Date of Report:	20th June 2008
Reference no.:	tr-655-08

Key and general comments

Hgt	Height (estimated)
Stem Ø	Trunk diameter in centimetres measured at 1.5 metres above ground level.
Spread	Crown radii in metres to compass points or crown diameter suffixed Ø
Crown c/rance	Height in meters of crown clearance above adjacent ground level
Age	Age class (Y – young, Mid Age – middle aged, Mat – mature, OM – over mature, V – veteran)
Phys cond	Physiological condition – Good, Fair, Poor, Dead
Condition and Recommendations	Structural condition and record of defects together with any preliminary management recommendations as underlined.
RPA (rad)	Recommended protection area. Dimension in metre = radius of circle from the centre of stem.
Erc	Estimated remaining contribution in years (less than 10, 10-20, 20-40, more than 40)
BS grade	**R**–Remove, **A1-A3**:Category A High quality, **B1-B3**:Category B Moderate quality, **C1-C3**:Category C Low quality
Bifurcated	Main stem divides into two stems
Asy	Asymmetric canopy to compass direction
N S E W	Compass point direction, may also appear as NE
Vig	Vigour (N-normal, L-Low)
Mat	Maturity (OM-Over Mature, M-Mature, Med-Medium, Y-Young)
e.	Estimated dimension
Remove deadwood	Remove deadwood, significantly diseased or decayed growth, crossing or torn branches. Branch stubs and tears to be cut clean. All work to be carried out in accordance with BS3998 and current best practice.

Key and comments continued.

Only those trees identified within or adjacent to the site boundaries have been included within the survey. The survey uses as its base the site survey drawing reference 6098 prepared by M.J.Zara, Land, Aerial and Building Surveyors,139 High Street, Lewes, East Sussex. Tree positions have not been verified on site. Any additional trees surveyed which were absent from the topographic drawing have been indicated in cyan colour on the plan. Crown dimensions on the plan are indicative and should be taken from the schedule for the purposes of scaling. Where a tree falls between two survey grades then the higher grade has been shown on the constraints plan.

Where recommendation is made to consider long term future this is suggested where the general condition, form or setting of the tree may bring into question the useful contribution the tree will give to the future use of the site. Its removal and possible replacement may be considered more appropriate.

No internal investigation of any trees was undertaken.

It is understood that the site is the subject of Tree Preservation Order. The consent of the Local Authority should therefore be sought prior to undertaking any of the works recommended within this schedule.

Birds and bats are protected by law and any works to trees recommended within this schedule should be undertaken with due consideration to current legislation. The assessment for the presence of bats should be undertaken by a certified bat worker.

A person professionally competent in Arboriculture should undertake all future tree inspections recommended within this schedule.

All tree surgery work is to be undertaken in accordance with BS3998 and current best practice.
This survey was undertaken on the 18th June 2008.

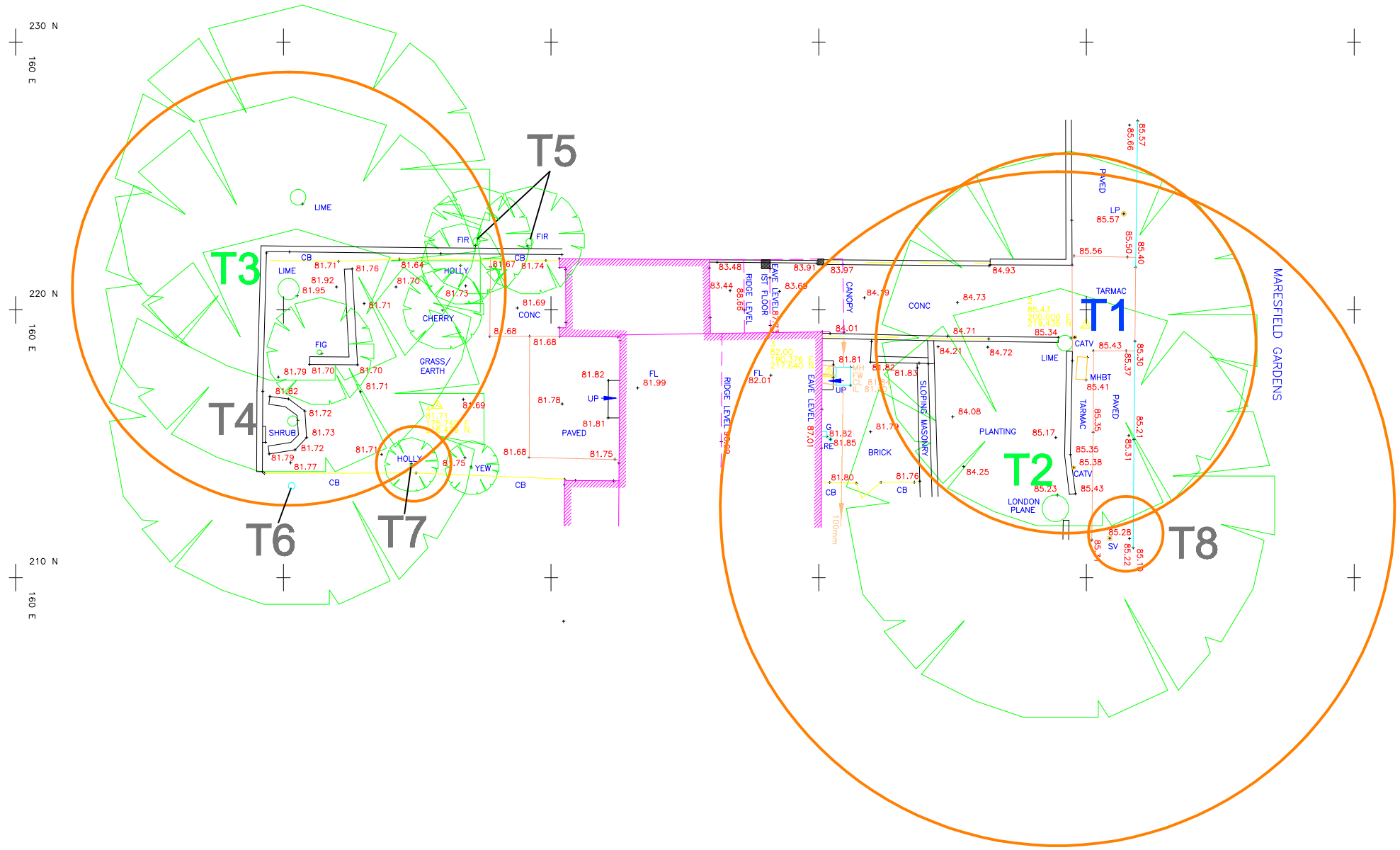
The details of this survey are based upon the condition of the subject tree/s present on the date of the inspection. Responsibility cannot be held for the subsequent effects of extremes of weather, vandalism or damaging acts either negligent or wilful. Liability cannot be held for any subsequent physical undertaking to the canopy, stem or roots of the tree/s. This survey is valid for a period of two years from the date of the site inspection unless the site conditions change or works unspecified in this report are undertaken.

Arboricultural survey – 59 Maresfield Gardens, London

No	Species	Hgt	Ø at 1.5m	Spread NSEW	Crown c/rance	Age	Phys cond	Condition and **Recommendations**	Erc	BS grade	RPA (rad)
T1	Lime	19.0	59	6.5,3.5, 8.0,6.0	4.0 over road	Mat	Good	Tight to telephone inspection chamber and cable TV duct point. Digital cable has been left exposed over buttress roots. Adjacent tarmacadam drive footpath crossover has been replaced. Triple branched from 2.5 metres. Pollarded at 3.0 metres. Asymmetric to north east. Horse Chestnut Scale insect present. Nominal lower epicormic growth 2.5-4.0 metres. Front low brick boundary wall displaced. 3.0 metres crown clearance over driveway.	40+	B1	7.1
T2	London Plane	25.0	105	Ø18.5	4.5 over road	Mat	Good	Bifurcated at 3.0 metres. Historically pollarded at 4.0 metres. Six principal branches. Significant movement to front low brick boundary wall and disruption to tarmacadam pathway. Low branching over front garden area. Weighted lateral to southwest over adjoining property. **Reduce lateral to southwest by 30%.**	40+	A1	12.6
Lime tree to south of T2 of similar proportions to T1.											
T3	Lime	e.22	67	Ø11.0	8.0	Mat	Good	Significant epicormic growth. Bifurcated at 3.0 metres and again at 4.0 metres to south side. Tight to boundary wall to west side. Historical deviation to boundary retaining wall. Road access to west is estimated 2.0 metres lower than garden level. Epicormic growth spreading to south.	40+	A1	8.1
Lime tree in adjacent garden of similar proportions to T3. Asymmetric to northeast. Appears bifurcated at 2.5 metres and multi-branched from 3.5 metres.											

No	Species	Hgt	Ø at 1.5m	Spread NSEW	Crown c/rance	Age	Phys cond	Condition and **Recommendations**	Erc	BS grade	RPA (rad)
T4	Purple Plum	9.0	42	3,3,9,4	2.0	Mat	Poor	Significant stem lean to east at estimated 40°. Stem cavity to northwest side from ground level – 1.0 metre. Triple branched from 1.7 metres. **Recommend removal.**	<10	C2/R	-
T5	Leyland Cypress	e.9.0	e.25	1,3,2,2	4.0 over site	Mat	Poor	Pair of Leyland Cypress on elevated ground in adjacent garden. Ground level 1.6 metres higher than subject site. Levels retained by concrete garden wall approximately 300 mm thick. Crowns pruned hard to north side to clear from adjacent gardens. **Recommend removal with owners consent.**	20-40	C2	-
T6	Hawthorn	e.10.0	e.45 at g/l	2,5,3,5	4.0	Mat	Fair	Offsite tree - full inspection not possible. Asymmetric to southwest. Triple stemmed by 1.6 metres. Stem scarring to east side at ground level.	20-40	C2	4.5
T7	Holly	9.0	11	Ø3.0	6.5	Y	Fair	Bifurcated at 3.5 metres. Limited future value. **Recommend removal.**	20-40	C2	1.4
T8	Mountain Ash	7.0	11	Ø4.0	2.5	Y	Fair	Street tree. Asymmetric to east. Suppressed by T2. Significant tem scar to east side at ground level. Limited future value.	10-20	C2	1.4

For key and comments see over



NOTES

- Do not scale from this drawing
- Report any discrepancies to the Archite
- Check dimensions on site prior to starti work

Key

A grade trees - high quality and value

B grade trees - moderate quality and value

C grade trees - low quality and value

R grade trees - recommended for removal

BS5837:2005 recommended root protection area

Additional trees not on topographic drawing

Rev.	Date	Description

Job Title:

59 Maresfield Gardens
London
NW3

Ben Larkham Associates, 3 Princes Street, Tunbridge Wells, TN2 4SL
TEL: 01892 684066 Email: office@benlarkham.co.u

Drawing Title:

Arboricultural Survey and Constraints

Scale:	Drawn By:	Date:
1:200 at A3	BL	June

Drawing Number:

tr-655-08

11.0 Conclusions

"It is considered that the scheme proposals fully meet with relevant UDP and government planning policies. They will provide for a new house at the site which will:

- Sit comfortably within its site context and not impact adversely on the character of the Conservation Area setting.
- Offer a fresh and contemporary design that is also well mannered and respectful of its two storey context, adjoining an existing terraced situation.
- Provide for a well considered environmentally friendly home, complying with and exceeding current sustainable design standards of energy efficiency.
- Not impact adversely on the neighbouring properties in terms of light loss, engineering/ground condition, consequences or detriment to amenity .
- Maintain and enhance the existing tree and planting context of the site.

The new residential scheme is smaller in extent and less deep in basement terms than the approved 2007 version. It is designed for a particular home occupier and will become a positive architectural asset for this part of south Hampstead and the Conservation Area itself."

12.0 Scheme drawings

- site plan
- existing plans and elevations
- proposed plans, elevations, sections
- 3D images
- landscape plan/information