



DESIGN AND ACCESS STATEMENT

New Dwelling on Infill Plot
1A New Road
Reading
RG1 5JD
May 2025

trace
ARCHITECTS

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1 INTRODUCTION

1.1 THE PROPOSAL

Trace Architects have been commissioned to submit a proposal for the design of a new dwelling at a site adjacent to 1 New Road, Reading, RG1 5JD.

1. Proposal was part of larger development of site adjacent to Upper Redlands Road, Redlands Road and New Road. The site of 396m² adjacent to New Road has been outlined in red. The proposed development consists of two storey 2 bedroom house with associated landscaping, access and bin storage.

2. The entrance and access element to the front has been limited and lines up exactly with the garage at 1 New Road.

3. The ground floor rear single storey element is limited to less than a metre in projection over the line of neighbouring building stock at 1 New Road at rear.

4. The materials used for the design have been reflective of existing street scene. Dominating red brick is reflected as the standard finish with grey brick course running at halfway of the elevation marking the vertical edge of single storey at ground floor level. C Arch flat arches are applied above white sash windows with thick cill design to match the detailing visible in the neighbouring properties, making the proposal cohesive and fitting with the existing street scene.

5. The height of the single storey element is 3.2m to the front and lower to the back, with 2.9m to the west flank and 2.2m to the east flank to reduce any impact to the neighbouring property at 1 New Road.

6. Positioning of the proposed development in respect of 19 Redlands Road property has low impact on amenity.

7. The access to the plot has been proposed towards the west boundary and immediately from the pavement of New Road.

7. The side and front elevations of the property incorporate brick patterns which reflect the local brickwork on the surrounding buildings.

8. Proposed flat roof is sedum green roof. Proposed hip roof with matching ridge tiles is sympathetic to roofscape on neighbouring buildings.

9. The design allows for safeguarding and maintenance of T12 Lime tree. It's RPZ area is avoided by cantilevered slab to the front of property.



AERIAL VIEW OF THE SITE

2 SITE

2.1 SITE AND CONTEXT

The site is located in south-east Reading, within the Redlands Conservation Area. The site is a vacant plot between 17/19 Redlands Road and 1 New Road. The site is surrounded by residential dwellings on both sides. These residential dwellings are between 2 and 3 storeys in height, and their design varies within traditional architecture with examples of two storey brick terraced dwellings and three storey rendered dwellings.

The site lies within Flood Zone 1, and so is at the lowest risk of flooding.

2.2 ACCESSIBILITY AND TRANSPORT

The site is within walking distance to the train station giving commuter access to Paddington. It is also walking distance to bus stops, schools, retail and amenities.

It has good road links to M4 junction 12, Wallingford and Reading.



NEW ROAD PLOT STREET FRONTAGE



1 & 3 NEW ROAD (IMMEDIATE NEIGHBOUR TO PLOT). HIP ROOF.



REAR OF THE SITE



VIEW TO 17/19 REDLANDS ROAD SHOWING IMMEDIATE NEIGHBOURING BUILDING AND SITE BOUNDARY.



VIEW TO PLOT AND ACCESS AT NEW ROAD.



VIEW TO NEW ROAD PROPERTIES SHOWING DOMINANCE OF RED BRICK, C- FLAT ARCH DETAILING AND FENESTRATION TREATMENT (WHITE SASH WINDOWS).

3 EXISTING

3.1 SITE PLAN

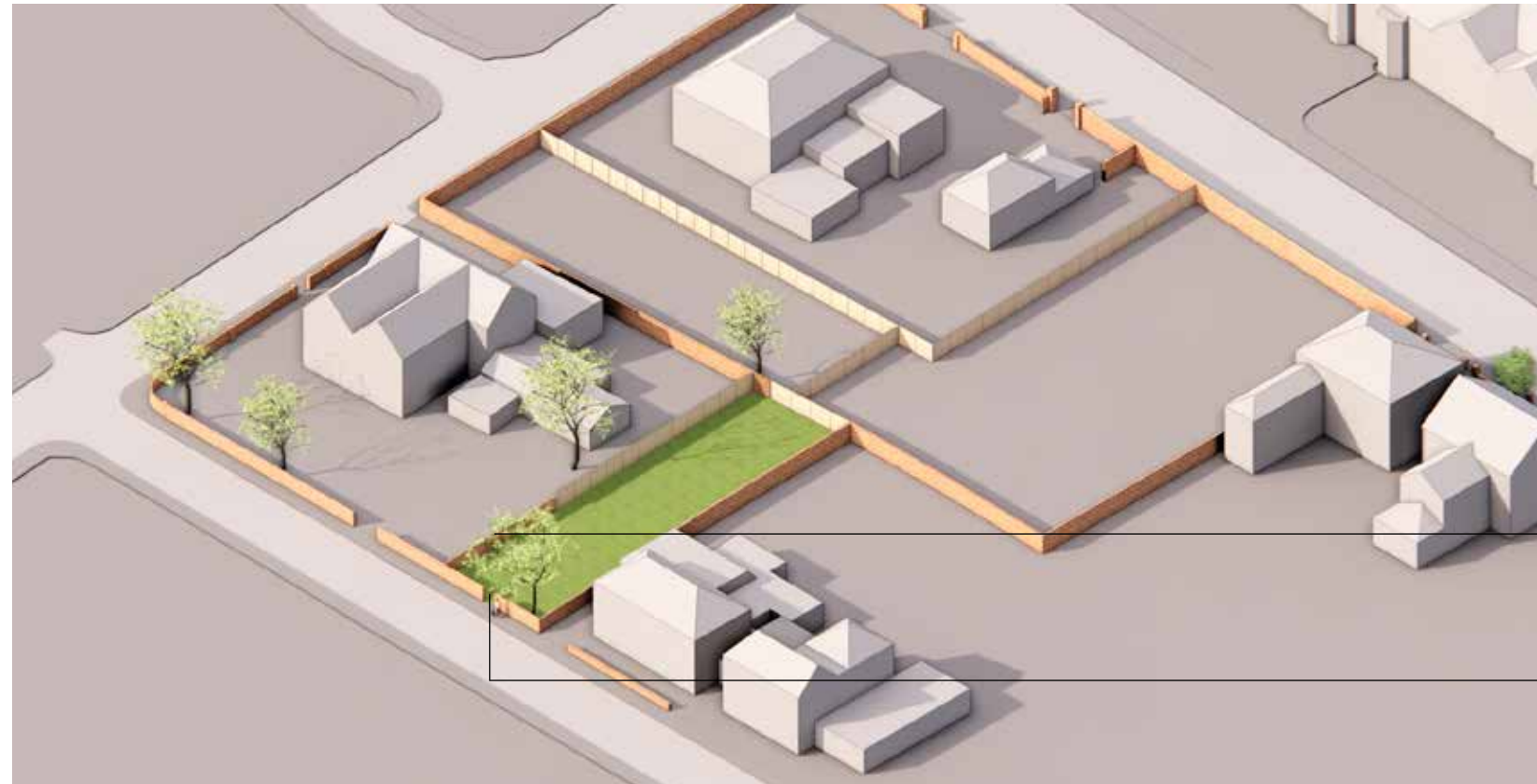
The site fronts adjacent plot to Upper Redlands Road to the north, Redlands Road to the west and New Road to the south.

The site which originally formed part of the gardens around the corner buildings which front onto Redlands Road and what reads as a vacant plot alongside New Road between properties at 17/19 Redlands Road and 1 New Road. This plot has a 1.6m brick wall running between it and 1 New Road boundary and a 1.6m closed boarded timber fence running on the edge of the site and boundary with 17/19 Redlands road property.

A T12 Lime tree is situated at the front part of the plot and has been classified **as either C or B quality**. A full schedule can be found in the Arboricultural Survey and Report. This tree is retained as part of the site and its root tree zone is protected by cantilevered slab design.



- 1.6m
Closed boarded fence
- 1.6m
Brick wall
- T12 Lime tree
- 1.35m
Brick wall front
boundary



- Proposed lower
brick fence
1.35m to match
front brick wall
boundary.
- Proposed
opening in
existing brick
wall access with
wrought iron
gate.

PROTECTED AND RETAINED LIME TREE ON THE EDGE OF PLOT PROPOSED FOR DEVELOPMENT



4 DESIGN

4.1 USE

The scheme will provide a single detached family home with associated landscaping and bin storage.

4.2 DESIGN RESPONSE

We have engaged with the local residents on the project and taken their suggestions on board, where possible. The approach limits the development to a single dwelling that is designed in a way that works with the established urban grain, and retains the maximum amount of green space and green backdrop to the street scene. Detailing, materiality is sympathetic with the immediate and neighbouring street scene.

4.3 MASSING AND SCALE

The proposed building comprises 2 elements.

The first is a two storey element which follows the massing established by 1 New Road. The second is secondary ground floor element massing found on multiple of properties in the vicinity. Use of hip roof and orientating the main two storey massing in a perpendicular line to the New Road will create a cohesive end plot within the street scene. Setback allows for gradual space release in context of pushed back 19 Redlands Road property.



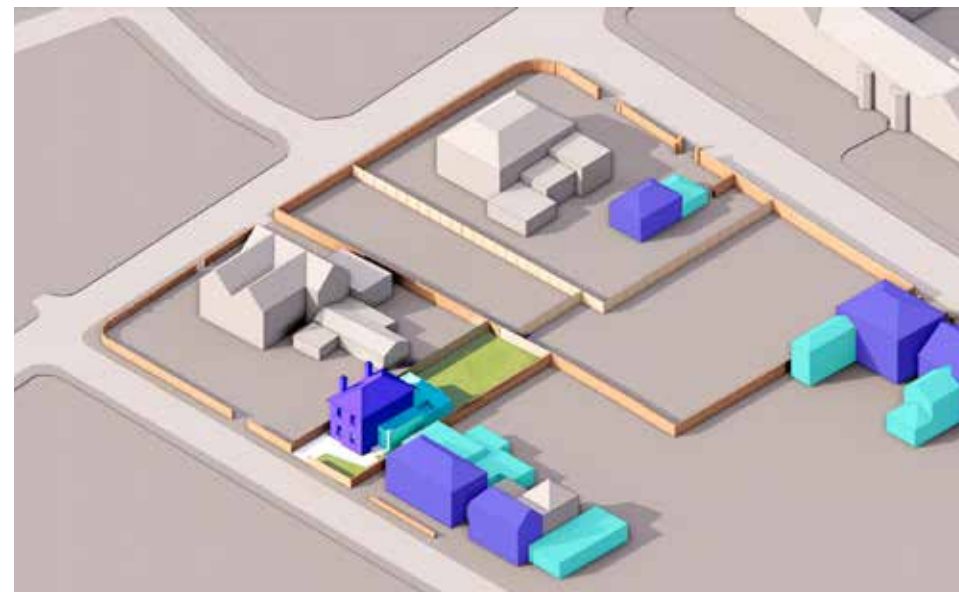
STEP 01: IDENTIFY MAIN MASSING OF EXISTING PROPERTIES



STEP 02: EXPLORE SIMILAR MAIN MASSING TO FORM NEW BUILDING



STEP 03: IDENTIFY SECONDARY MASSING OF EXISTING PROPERTIES



STEP 04: EXPLORE SIMILAR SECONDARY MASSING TO FORM NEW BUILDING

4 DESIGN

4.4 BOUNDARY TREATMENTS

The existing brick wall around the perimeter of the site is retained and a timber fence added to the front of the property is added where brick wall is capped at approximately 1.3m in height. An additional 1.6m brick wall at the rear of the site is added to separate and contain the plot.

Consideration of trees on site is taken into view in the development of the scheme. The identified lime tree and its root zone at front of the site is protected via a cantilevered slab design at the front of the scheme.



STEP 05: EXISTING BOUNDARY WALL IDENTIFIED AND ACCESS OPENING MADE IN THE BRICK WALL FACING NEW ROAD AND BRICK WALL CAPPED AT 1.35M MATCHING THE FRONT BRICK BOUNDARY + CONSIDERATION OF TREES.



STEP 06: T12 LIME TREE ROOT PROTECTED ZONE- DESIGN FOR CANTILEVERED SLAB SUPPORTING THE FRONT VOLUME OF THE PROPERTY. REFER TO DRAWINGS PL08&PL09 FOR DETAIL. (BLUE OUTLINE OF CANTILEVERED SLAB OVER THE RPZ ZONE)

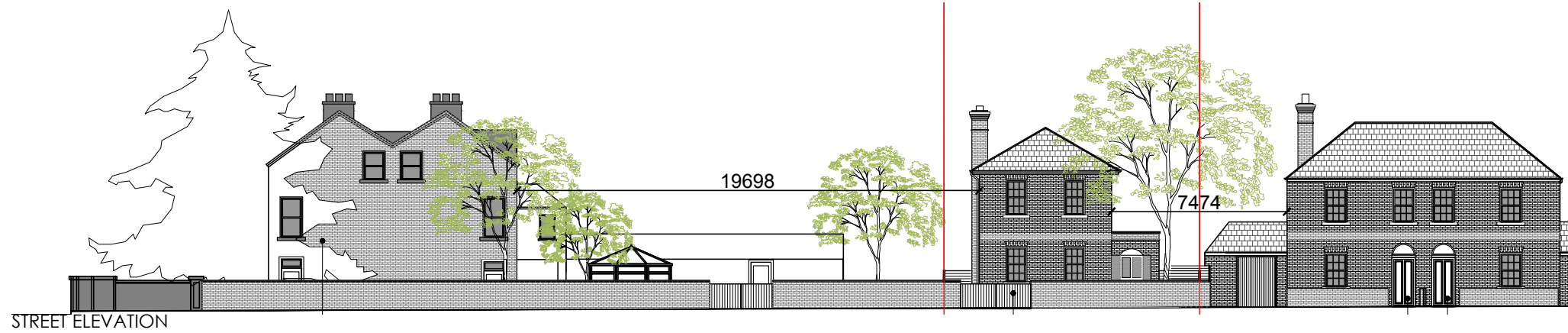


STEP 07: T12 LIME TREE ROOT PROTECTED ZONE- DESIGN FOR CANTILEVERED SLAB SUPPORTING THE FRONT VOLUME OF THE PROPERTY IN PLACE. REFER TO DRAWINGS PL08&PL09 FOR DETAIL.



OVERVIEW OF SCHEME

4 DESIGN



4.5 STREET ELEVATION

The site plan illustrates how the development is situated in respect of both of the neighbouring properties. Blue line indicates stepped access to properties.

The positioning of the new development creates an appropriate termination of New Road and consideration has been given to the detailing of the flank elevation as suggested by the planner at pre app stage.

The building broadly follows the building line of New Road with a slight setback to acknowledge the corner building on Upper Redlands Road.

The proposed hip roof echoes that of the neighbouring properties whilst acknowledging its end of terrace position.

The flat roof features a sedum green roof which, along with the proposed additional landscaping and planting, helps to soften the visual impact of the building when viewed from higher vantage points.

The single-storey volume steps down in height towards the rear, and even more so on the east side, to minimize its impact on the neighbouring property at N1 New Road.

The new gate to the property will be timber to match the neighbouring gate and would be used for both vehicular and pedestrian traffic.

The gap between the buildings on Redlands Road will maintain a suitable visual gap in the street scene and is similar to the approved scheme in Upper Redlands road.

4 DESIGN

4.6 Plot Ratios

The proposed new plot would have an area that is broadly similar to both the immediate neighbours on New Road and those opposite.

This also illustrates that the new scheme would have an acceptable plot ratio and be in line with neighbouring properties.



PLOT RATIOS NTS HIGHER PLOT RATIO = DENSER DEVELOPMENT

4 DESIGN



EXISTING STREET VIEW



PROPOSED STREET VIEW

4.6 STREET VIEW

When viewed from the street the proportions of the building are in keeping with its Victorian neighbours and the new building makes a modest flanking element to the existing ensemble, and street urban edge, which is subservient to the 17/19 Redlands Road.

Proposed building is sympathetic to it's context. Matching red brick with blue grey brick band and other detailing such as C flat archs above the sash windows, thick white cills and slate tiles to match the adjacent property and the form of this element, with a simple hip roof that matches 1 New Road creates an understandable array of buildings forming a continuous logical street elevation.



EXISTING STREET VIEW



PROPOSED STREET VIEW

4 DESIGN



ORIGINAL DESIGN AT PRE APP STAGE.



REVISED DESIGN FOR PLANNING APPLICATION.

4.7 DESIGN EVOLUTION.

We consulted with the neighbours at 1 New Road who raised a number of points of concern.

These included concerns that the rear extension would impact the blue cedar tree to the rear of the site and that the rear extension would reduce the amount of light to the rear garden of their property.

To that end we redesigned the rear extension to address these concerns. This has include removing the rear canopy so effectively reducing the length and bringing the extension away from the tree in question and reducing the height of the extension on the boundary wall. The was achieved by lowering the rear extension by two steps overall and introducing a sloped roof to the extension nearest Number 1.

We believe these changes result in a more modest extension overall which has a significantly lower impact on the boundary.

4 DESIGN

4.8 LAYOUT

The property is organised in a traditional town house form with bedrooms arranged on first floor and living areas & home office on the ground floor which allows for flexible living and working.

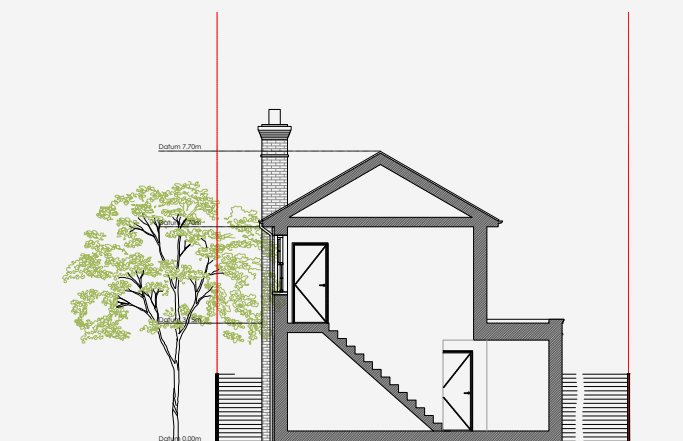
It would suit a small family who need some outside space or could equally be suitable for an older couple downsizing - potentially freeing up a larger family property.

The building has been designed with accessibility in mind and to be adaptable for future residents needs.

The ground floor layout features raised front living room (as a consequence of design of cantilevered slab in the area to provide root tree protection zone to T12 Lime tree at the front of the site. A secondary smaller living area is proposed room area as part of the open plan dining and kitchen at the rear.

An external patio area is access directly via large sliding door opening at the rear.

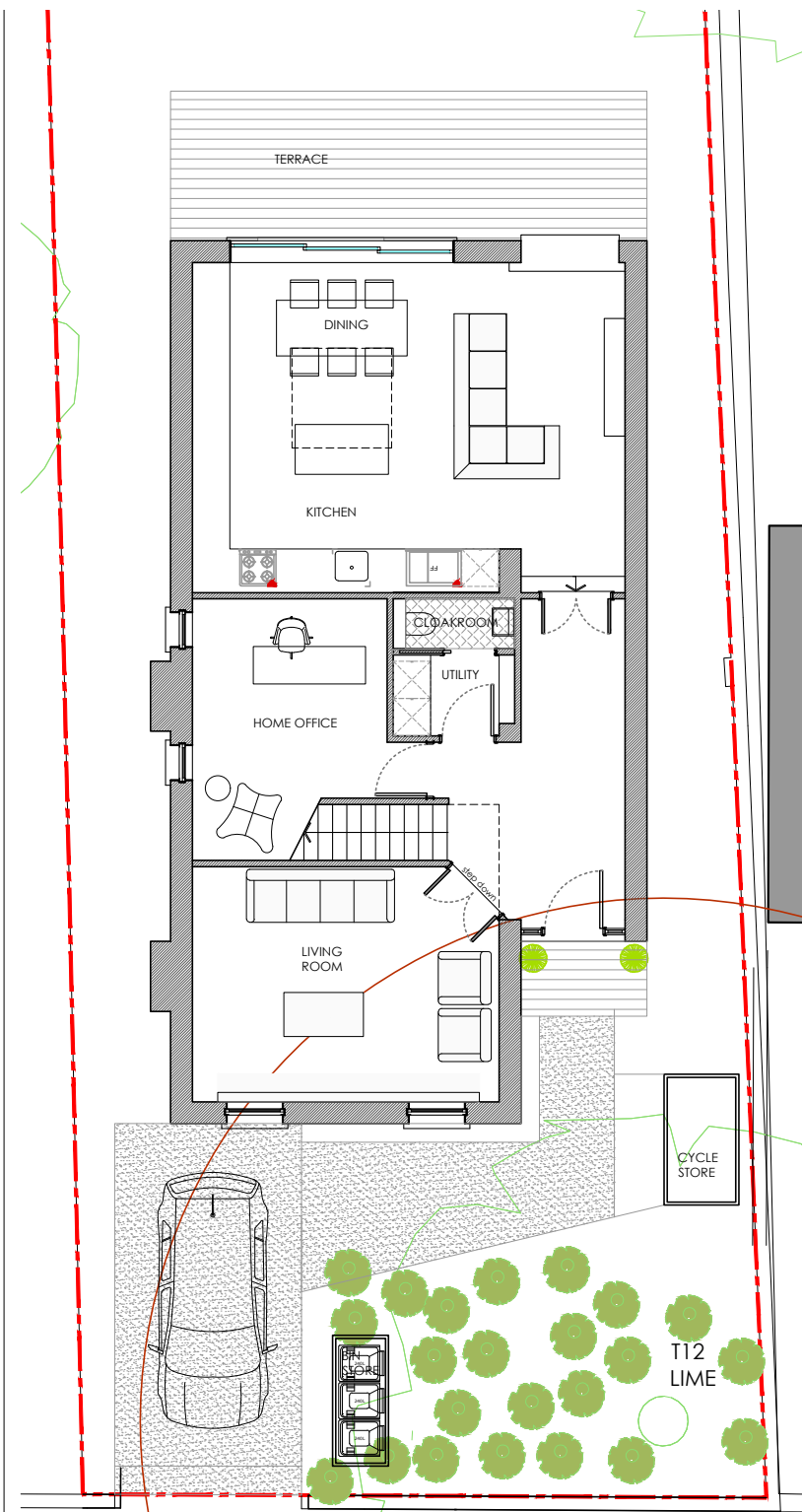
PROPOSED SECTIONS



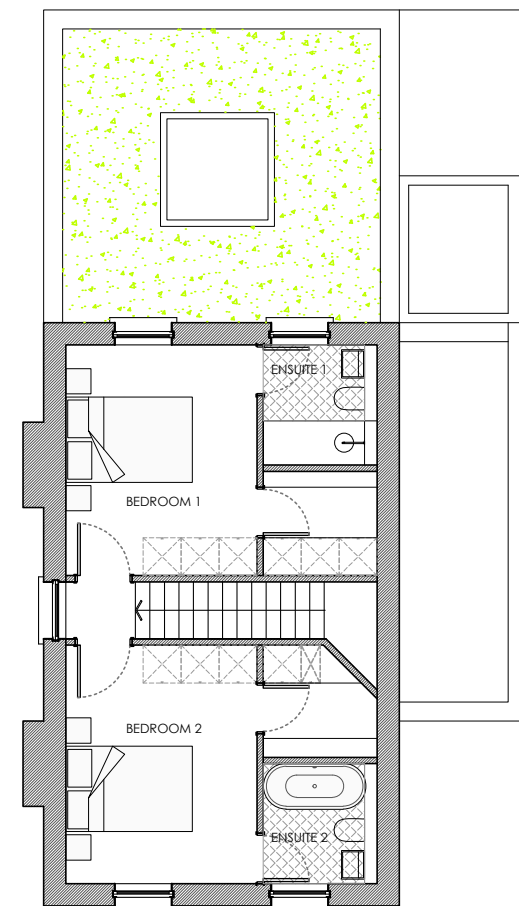
SECTION AA



SECTION BB



GROUND FLOOR PLAN



FIRST FLOOR PLAN

4 DESIGN

4.9 ACCESS

Access into the site will be via one entrance/ wrought iron gate:

-Pedestrians and cars will use the new formed opening in the existing brick boundary wall - providing site entrance that provides level access directly to the front door.

-Level access is provided to the entire Ground floor which includes a downstairs bathroom. All doorways and stairs have been designed to meet building regulations standards and provide level access.

TREES AND HEDGES

To allow the new proposal, it is proposed that cantilevered slab to the front of the property is designed, allowing for root protection zone for retention of T12 Lime tree located at the front of the site. (Please refer to PL08&PL09 of the planning drawing set for more details.

It is proposed to plant new shrubs and plants as an addition to the overall planting of the site. This will achieve a net increase in green landscape on site.

The boundary on both sides to neighbouring properties will be mostly retained as existing (1.6m closed boarded timber fence & 1.6brick wall-to 17/19 Redlands Road and 1 New road respectively) with a brick wall achieving 1.35m at the front portion of the site.

4.10 RECYCLING, REFUSE AND LANDSCAPE

The proposals allocate a dedicated area for:

- 240 litre recycling bin
- 180 litre refuse bin and
- 23 litre food bin

The maximum amount of soft landscaping will be used; where this is not possible permeable surfacing materials will be used to reduce surface water run off.

A SuDS compliant design will be designed by an specialist as a part of full scheme drawings



5.1 SUSTAINABILITY

Buildings are responsible for more than 40 % the UK's total carbon footprint, and as much as one-third of global greenhouse gas (GHG) emissions. Heating alone results in 10% of the nation's carbon footprint and homes are more significant than all other building types put together. However, the building sector also has the largest potential for significantly reducing GHGs compared to other major emitters.

To put that in context:

- In 2017, UK net emissions of GHG were 460 million tonnes (Mt). 373 Mt of these were CO2 emissions.
- A typical masonry house in the UK takes between 50 and 80 tonnes of CO2 to build.
- The average household in the UK emits 2.7 tonnes of CO2 every year from heating their home.
- The average person in the UK has a carbon footprint of 5 tonnes of CO2 per year

Great effort has been taken to achieve the best possible sustainable approach for this development, for example:

USE OF RENEWABLE NATURAL RESOURCES:

-WATER:

To reduce the environmental impact of mains water consumption we propose using a GREY WATER RECYCLING SYSTEM and a RAIN WATER HARVESTING SYSTEM.

Just by re-using water for flushing toilets we will be cutting a third of household water consumption. In addition, it will be also connected to the irrigation system for the green walls and green roofs. It will also be used to water the garden and will aid in surface water attenuation.

-SUN:

The design of the building makes the most of SOLAR IRRADIANCE in winter while introducing SOLAR CONTROL in summer. (refer to passive design)

Solar energy is also used to provide on site energy generation through the installation of SOLAR PANELS and BATTERY STORAGE. A 12kWp system will be installed. It can generate up to 10.000 kWh of electricity a year and save around 5 tonnes of carbon per year. Batteries will make available the energy generated for use during non-production hours to maximize use of the energy generated.

-WIND:

To reduce the heating and cooling demands of the building we propose a HEAT RECOVERY SYSTEM which recycles the energy in stale air and transfers it to the new fresh air. A MVHR system in a domestic property can save from 25% to 50% of heating demand.

The design of the building considers as well the importance of a PASSIVE AIRFLOW to allow efficient HEAT DISSIPATION in summer through CROSS VENTILATION. (refer to passive design)

-AIR SOURCE HEAT AND COLD:

To provide heating, cooling and hot domestic water it is proposed to install a AIR SOURCE HEAT PUMP which will take advantage of the electricity from the solar panels

-INSULATION:

The choice of insulation has considered the thermal performance, climatic requirements, breath-ability, moisture resistance and embodied carbon footprints.

It is proposed to use MINERAL'S WOOL INSULATION which is an effective thermal and acoustic insulation. It is highly breathable, beneficial for humidity control with an hydrophobic exterior and a hydrophilic interior, not support the growth of mould and is self-extinguishing.

PASSIVE DESIGN:

The building introduces heat gain control and heat dissipation elements to the design in order to improve the indoor thermal comfort with low or no energy consumption:

-WINDOW DESIGN AND POSITION:

Enables cross ventilation to allow heat dissipation during summer.

-TIMBER OVERHANGING rear canopy provides shading from direct light and the planting contributes to thermal regulation.

Chosen materials for each element of the construction also contribute to cut down the necessities of energy to achieve the thermal comfort:

-WALLS:

A composed envelope build of BRICK WALL and MINERAL WOOL INSULATION will provide a solution that incorporates low thermal conductivity and high thermal mass. A traditional cavity wall section provides great thermal insulation, air tightness, indoor air quality, moisture control & durability

-GREEN SEDUM ROOF:

It will be highly insulated, and it will reduce the impact of the built form when viewed from higher vantage points. It will add to efficient improved water surface run off and reduce the risk of overloading drainage system.

Green roofs contribute to thermal regulation and energy conservation but also serve several other purposes: reduce stormwater runoff, create an habitat for wildlife, provide a more aesthetically pleasing landscape, help to sequester carbon and it can also be a source of food.

-GLAZING:

All glazing will be high performance.

-LIGHTING:

All light fittings will be 100% low energy.

6 CONCLUSION

Conclusion 6.1

The proposed design aims to provide a high quality piece of architecture that responds both to the street scene and its garden setting. It further aims to achieve this with an environmentally friendly approach through the use of materials, technologies and detailing that is sympathetic and reflects its immediate architectural context.

The proposed design provides a high quality piece of architecture which provides an attractively detailed town house to the street.

The proposal and the associated planting works with the urban grain and local features to provide a new dwelling which will enhance the Conservation Area and provide attractive and sustainable accommodation to future residents.



REAR VIEW OF THE PROPOSED DEVELOPMENT