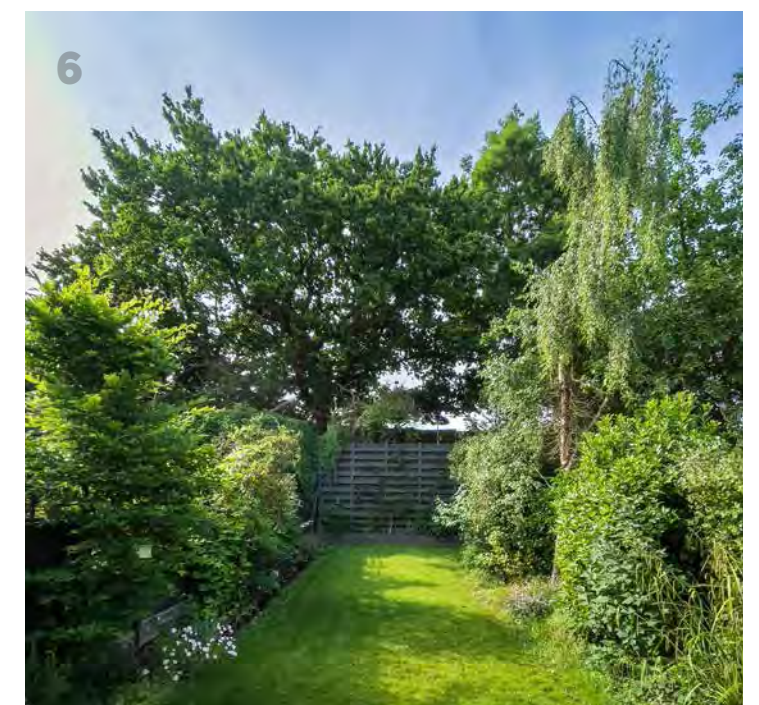


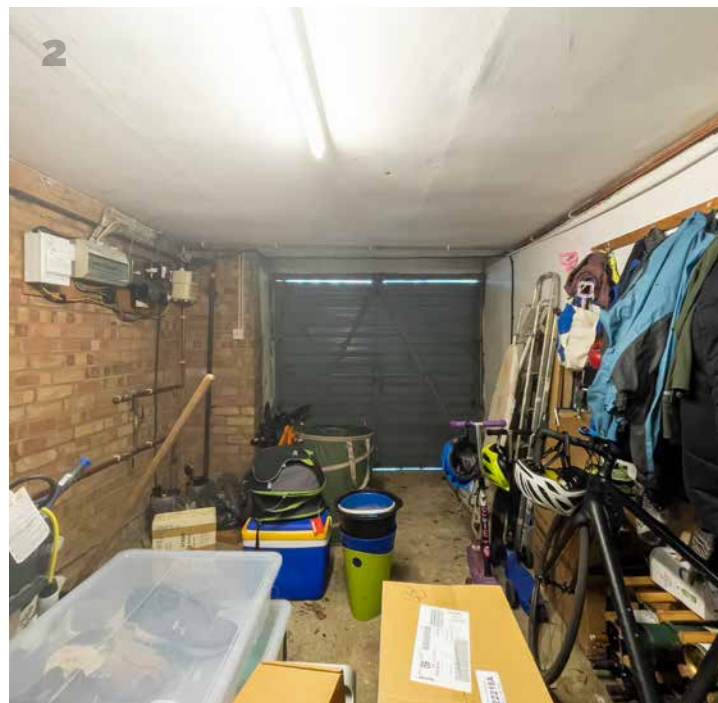
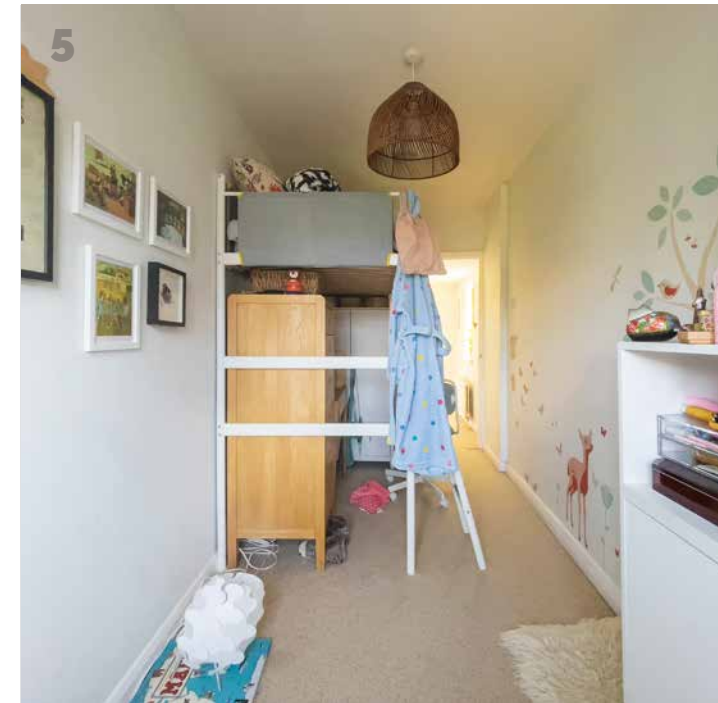
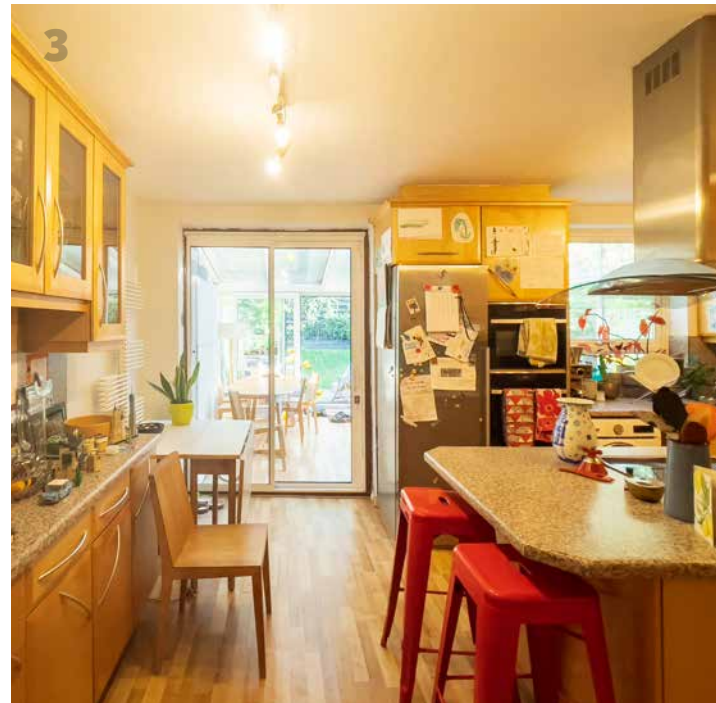
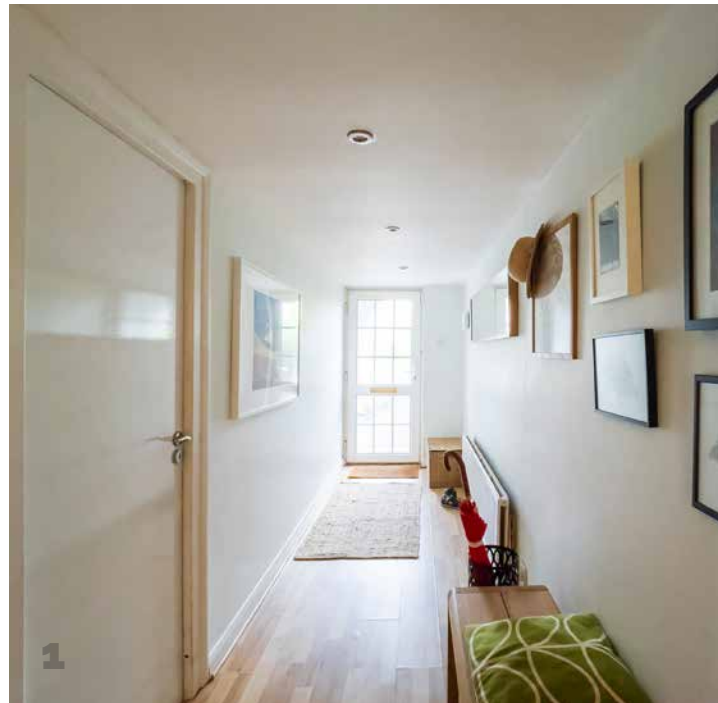
29 Lanchester Road



The above photographs show the exterior of number 29 Lanchester Road. As shown the front of the house is dominated by the long driveway and garage door with the entrance partially obscured by the arched porch opening (1). The area of flat roof is out of keeping with the pitched roof of the garage projection to number 29a (and the rest of Lanchester Road), and is also a security concern providing a convenient point of access to first floor bedroom windows (2). Number 29 was built as a subdivision of what is now 29a and does not enjoy the benefit of the splayed bay windows that the other properties in this run have (3). At first floors the windows are composed as a continuation of those in number 29a with render running at the mid point of the windows. The front dormer is linked to that of number 29a and is asymmetrically positioned. To the west Hildridge Court has a first floor window positioned above the garage, both of which extend in front of number 29 (4).

To the rear the a conservatory leaves an area of difficult to access space along the boundary with Hildridge Court (5). The conservatory is south facing and as such is prone to overheating in the summer. At the first floor a living room extends for the full width of the property over the ground floor of number 29a and as a result the eastern window looking directly across the kitchen extension of number 29a into their garden, the same is true of the top floor bedroom which is located within a dormer window. The garden enjoys views to a large mature oak tree which sits in the woodland fringe behind the garden (6).

29 Lanchester Road



The above photographs show the interior of number 29 Lanchester Road. The entrance to the house is via a long low corridor with a low ceiling (1). The only daylight into the space is through the glazed front door. From the entrance hall there is a door into an internal garage which again suffers from a low ceiling and also undermines the ability of the home to provide an active frontage to the street (2). Also accessed from the hallway is the kitchen (3) which is a dark space due to the conservatory which is located beyond (4). The access to the conservatory is via a small sliding door which makes moving between the two spaces difficult while the conservatory is prone to overheating in the summer and becoming too cold in the winter. There is stepped access from the conservatory to the garden which again restricts the flow of movement between spaces and accessibility. At the first floor the first bedroom (5) is only 1.8m wide - too narrow to comfortably accommodate a bed and furniture. The second bedroom (6) is accessed via steps which again creates accessibility issues, although wider this room isn't an adequate width to comfortably accommodate a double bed. To the rear of the house the first floor living space is an attractive light filled space which enjoys view so the mature oak tree to the rear of the garden (7). At the top floor the front bedroom (8) is also accessed by coming down some steps and although a pleasant space is undermined by the shape of the room with the roof structure creating a number of recesses and steps in the plan.

29 Lanchester Road



Plot Shape and Boundary

As illustrated on the adjacent plan a key constraint of the overall plot is the width of the access, this is as little as 3.3m at the very front of the plot. As with many of the plots on the south side of Lanchester Road due to the curved road geometry the site is roughly wedge shaped and increases to around 7.8m wide at the end of the garden to the south.

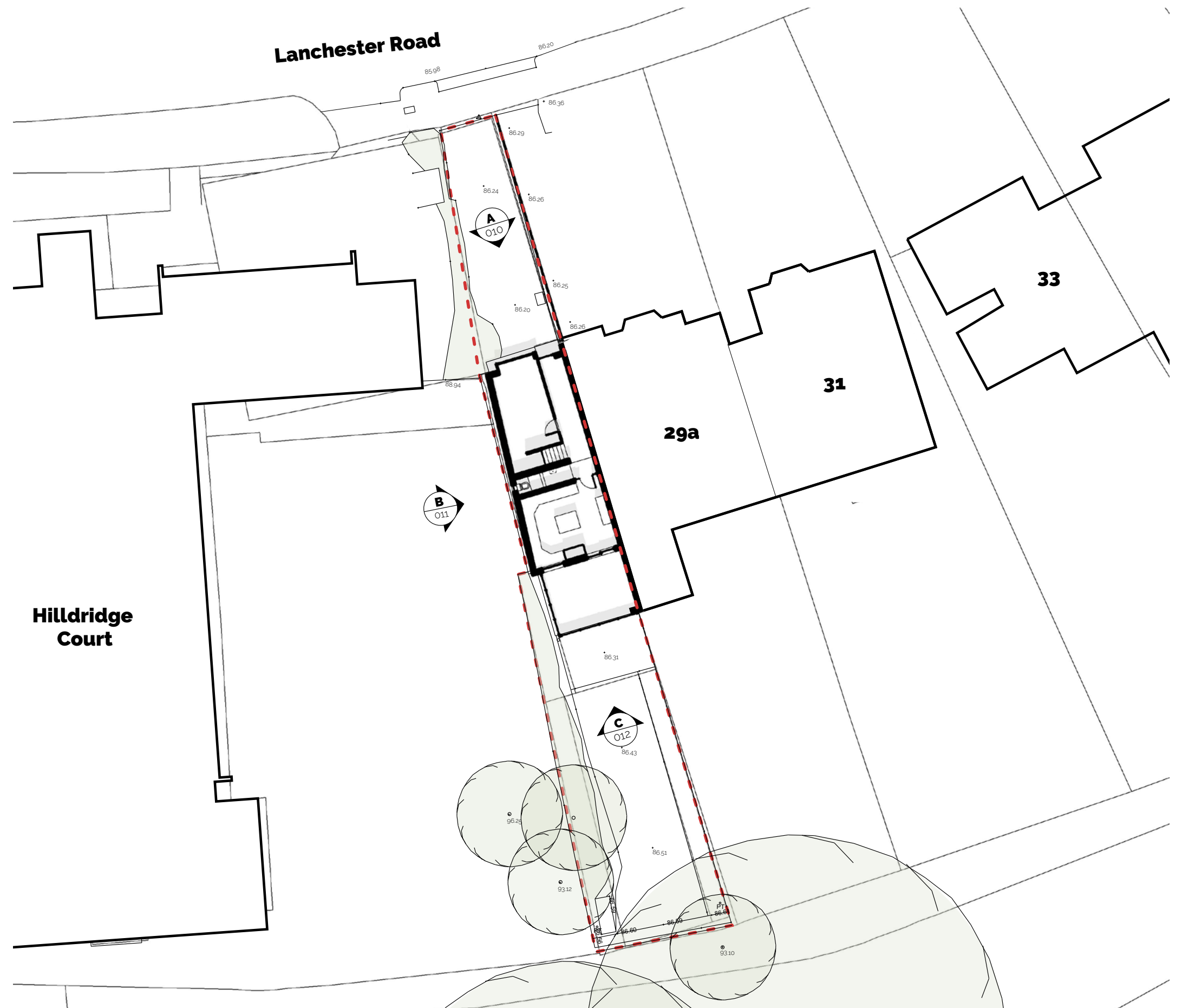
The plot measures around 47m from the back of pavement to the end of the rear garden. The house is approximately 13m set back from the back of pavement and extend 16m to the back of the conservatory, leaving a garden depth of around 18m.

Orientation

The garden faces around 17 degrees to the south east, with the street frontage consequently almost due north.

Topography

The plot rises slightly from the road to the rear from roughly 86m AOD to around 86.6m AOD at the rear of the property. The drive slopes towards the entrance and there is a step up into the house. 29 Lanchester Road is located at the low point of the road with the high points at the junction with Woodside Avenue to the west at around 89m AOD (around a storey up) and to the east in front of number 49 which is around 91m AOD (2 storeys up). Beyond the southern boundary of the garden is land owned by TfL which rises sharply in a bank to a high point of approximately 92m AOD with a 2m fence above this. The garden of 29a is around 0.6m above the garden of number 29.



29 Lanchester Road



Adjacent Buildings and Proximity

The conservatory of number 29 (1) aligns with the rear extension of number 29a (2). The main front and rear elevations align. The roof of both properties is continuous although the rear dormer of number 29 (3) extend out further than that of number 29a. There is a rear area of projected flat roof at first floor (4) which is consistent with that at number 31, 33 and 35. Of these number 33 appears to show the original form and alignment of this cluster of houses to the rear.

As set out on preceding pages Hildridge Court is to the west with a large communal garden between number 29 and the flats (5). Please note that the aerial image is not current as the large Hornbeam (6) which previously sat immediately to the west of number 29 had to be removed due to damage caused by its proximity to the foundations of number 29. The stepping of the building height can be seen in this aerial view from the single storey garage structure (7) which is around 3m from the boundary with 29, to a two storey gable (8) which includes a gable window and is around 6m from the boundary with number 29. Finally the main element of Hildridge Court is a taller 3 storey part (9) whose eastern elevation has windows which face directly towards the flank wall of number 29. This is around 17m away from number 29.

To the south of number 29 at the top of a bank is an access road (10) used by Transport for London. This serves a number of industrial sheds but these are largely screened from views to the rear of the property by the screening provided by the extensive tree and planting within the bank.

Trees & Vegetation

Most notable is the ancient oak tree (11) which sits to the rear of numbers 29 and 29a. This measures around 17m tall with a crown of around 24m which over hangs the garden of number 29 by between 4 and 5m. This beautiful tree is framed by a number of other trees along the boundary to create a pleasing backdrop to the garden.

Proposals



Overview of the Proposals Having lived here for 10 years we are keen to make improvements that will allow the family to continue to enjoy the home as we all grow older. The key changes are:

- 1. To the rear of the house** - Replacing the conservatory with a permanent extension. A lower extension is proposed to the east which extends south. We are also proposing a studio at the rear of the garden. We have reduced windows to remove any overlooking of the garden of 29a.
- 2. To the roof** - Re-roof the house and redesign the area facing Hilldridge Court. An extension to the rear that will project further forward than the current dormer but is located away from 29a. We also propose extending the dormer from the front around to Hilldridge Court.
- 3. To the front of the house** - Replacement of the garage door with a window, re-roofing the garage projection to match 29a and re-cladding the front of the house with insulation and render to the first floor and glazed tiles at the ground level. We are proposing the addition of a modern bay window to the first floor.
- 4. Internal replanning** - A new entrance hall is combined with layout changes which will increase visual and acoustic separation to 29a.
- 5. Improvements to the driveway** - Resurfacing, incorporation of a new bin enclosure, seating as well as new planting, level access to the house.

Proposals



Below we have summarised the change in accommodation at each floor showing the existing and proposed areas alongside the increase in area and by %.

Floor	Existing		Proposed		Change	
	sqm	sqft	sqm	sqft	sqm	%
Ground Floor GIA	69.6	749	79	850	9.4	14%
Garden Studio GIA	-	-	14.6	157	14.6	-
Total Ground floor GIA	69.6	-	93.6	1,008	24	34%
First floor GIA	65.6	706	59.4	639	-6.2	-9%
Second floor GIA	40.8	439	54.6	588	13.8	34%
Totals	176	1,894	207.6	2,235	31.6	18%

As shown by this comparison the overall increase in area is around 32 sqm or roughly a 20% uplift in the current area. Please note that these figures

Overview

This view from the south-east (the rear) compares the existing condition with that proposed.

Key

- 1 Replacing the existing conservatory with an extension which extends to fill the leftover gap to the boundary
- 2 Addition of a garden studio to the end of the garden
- 3 A rear gable roof extension to accommodate a master bedroom, solar panels and address the garden
- 4 Reduced area of glazing removing views directly into the garden of 29a

Existing

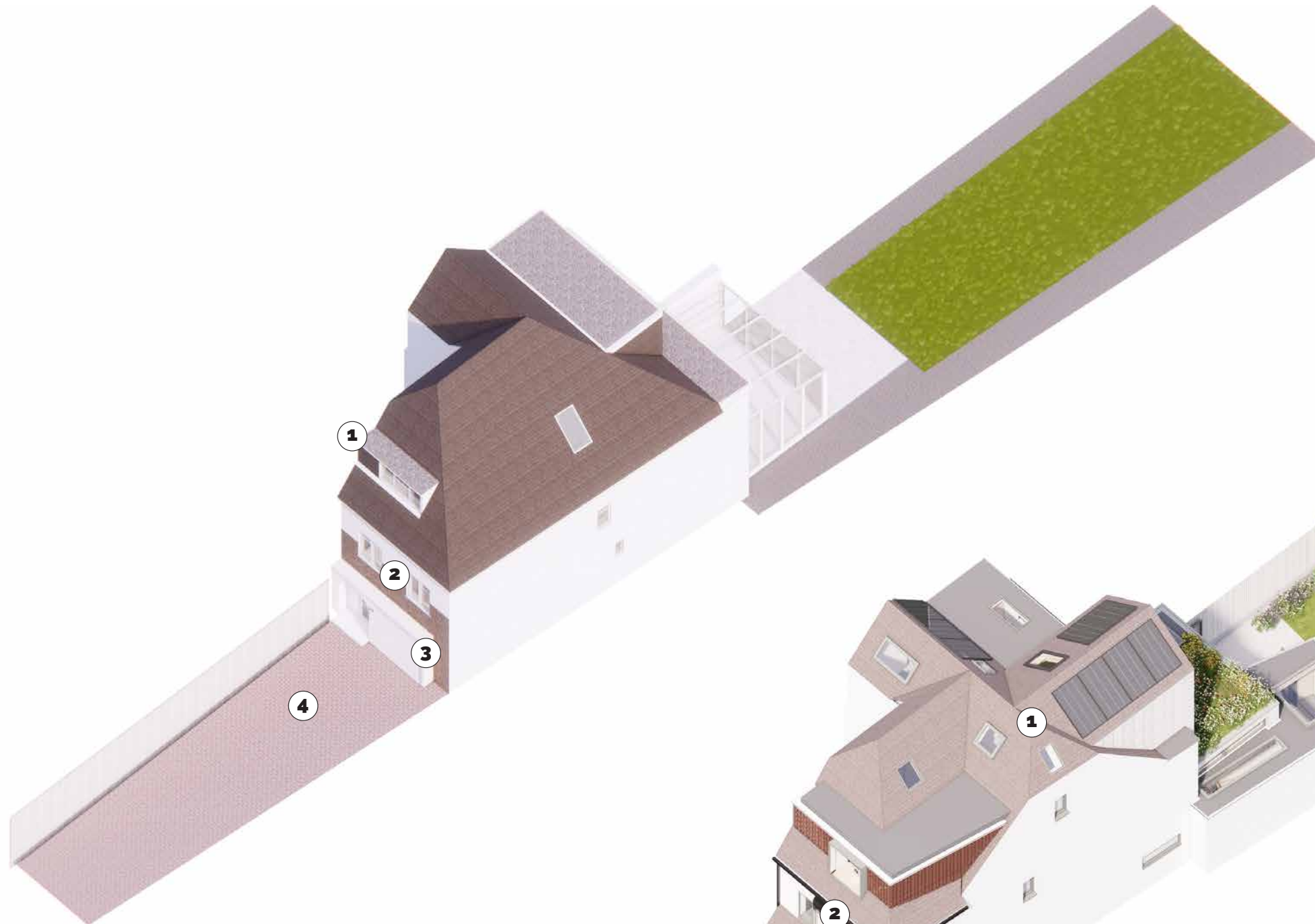
Proposed



Overview

This view from the north-west (the front) shows the changes to the front of the house

Existing



Proposed



Key

- ① Extend the existing dormer, new window, add half-hip to gable, new windows to the gable
- ② Add bay window to first floor bedroom
- ③ Garage replaced with window and new roof and cladding
- ④ Resurfacing of the drive, addition of bin enclosure & seating

Aerial View Street Side

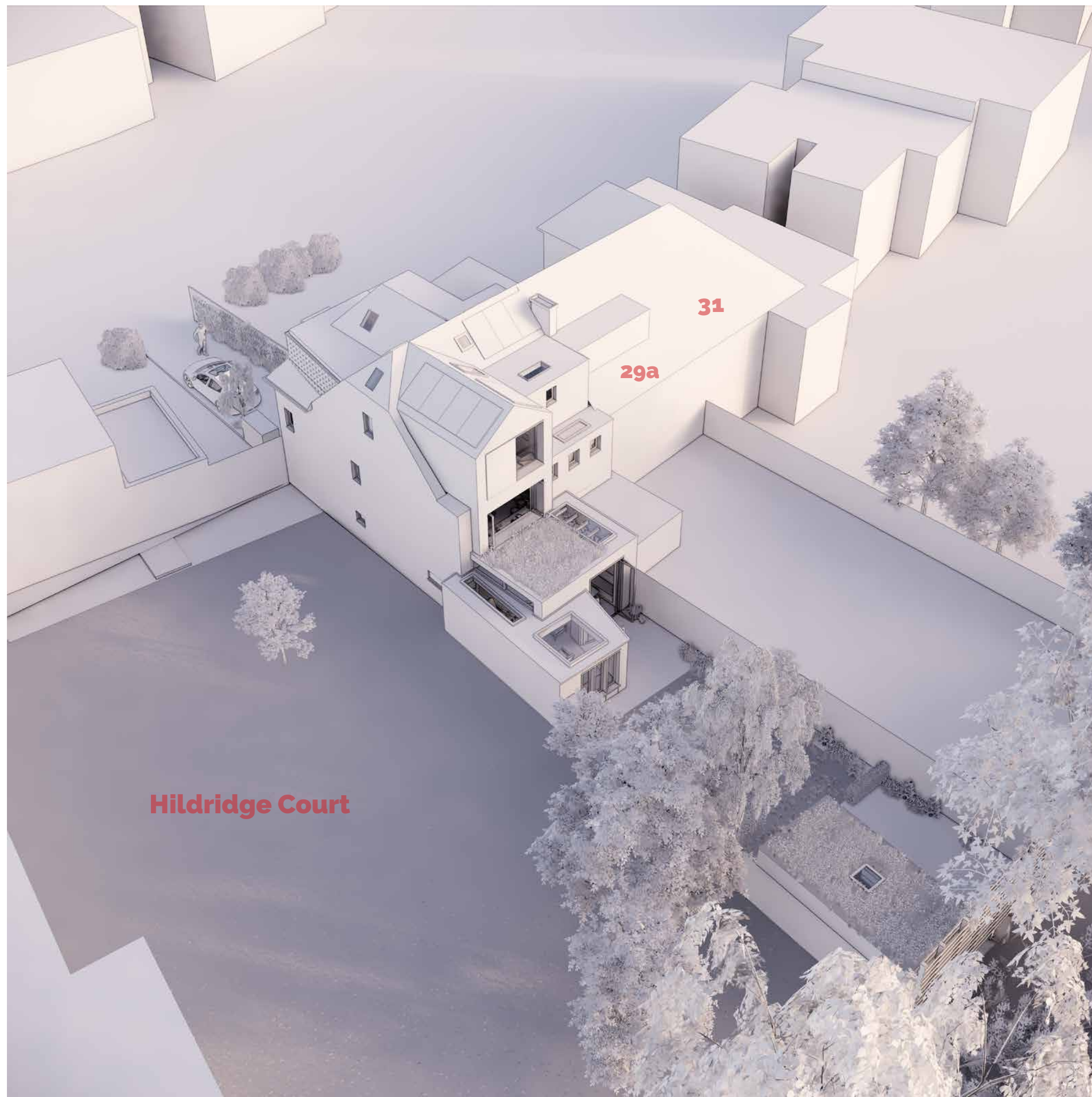
This aerial view from the front (north west) shows the proposals in context.

The new bay window to the first floor mimics the bay windows that occur all along Lanchester Road (photo below).

This view also shows the way in which the entrance roof is redesigned to align with 29a.

The front drive will include a bin enclosure and bike stand located on the boundary with Hildridge Court and a seat located adjacent to the fence to 29a.





Aerial View Garden Side

This aerial view from the south-west (the rear) shows the proposed rear extension and garden studio.

The rear extension is in two parts. The main part is on the footprint on the conservatory and extends up to the height of the existing party wall of 29a. The roof is a meadow grass covering and will screen views from the living room into the garden of 29a. The lower part of the rear extension fills the gap with the fence to Hildridge Court and extend further into the garden to the south within the area of the existing patio.

Above the extension the living room window is replaced with a bi-fold design and window seat framed by a bay that then continues up to roof level to form a new bedroom facing directly on to the garden of 29 Lanchester Road. The window to this bedroom is set in a deep reveal to limit any views into the garden of 29a. A patio area is proposed in the area between the studio and the fence of 29a. Integrated PV (photovoltaic) panels and roof windows are proposed to the roof.

The studio is situated behind the retained existing birch tree at the south end of the garden. Similar to the rear extension it is designed with a meadow grass roof to provide an attractive outlook from the rear of 29 and 29a. There are no windows facing directly towards rear elevations of 29 or 29a (on the north side). The main window is located on the east side facing towards the fence to 29a.

The proposal is that the large existing windows to the first floor and second floor dormer are reduced in size with raised sills to remove any overlooking of the garden to number 29a.

Ground Floor Plans

The existing access is from the long narrow front driveway with the proposals seeking to break this up through a change in material and the creation of a bin store and seating area by the front door (1). The existing entrance (2) is via a step up into a porch. The proposals are to replace the step with a tiled ramp to provide ease of access. The front door is also proposed to be replaced with a larger door, again for ease of access.

The existing hallway (3) has a very low ceiling and the proposals are that the floor above here is removed to create a double height space. At the moment there is a further step up to the rear of the property. Again for reasons of ease of access the proposal is to introduce a ramp in its place.

Adjacent to the entrance is the existing garage with access via an 'up and over' garage door (4). The proposal is to convert the garage to a front room and entrance hallway accessed via generous double sliding doors. The proposal includes a new window seat incorporating storage to the front and a coats cupboard to the rear of the room. The existing ground floor cloak room / WC (5) are difficult to access with both a step up to access the room and two doors in a very narrow space. The proposal is to relocate the WC to a new room accessed from the rear of the front room, beneath the stair. A new boiler / plant room is created in the location of the existing WC. At the moment the washing machine (6) is located within the kitchen, the proposal is to relocate this into a dedicated, sound proof utility cupboard located off the hallway.

The existing kitchen (7) is dark and dominated by a large central extractor hood. Access to the conservatory (8) is via sliding doors and as a result has both a step and a narrow opening. The existing conservatory is a uPVC double glazed area which overheats for much of the summer and is difficult to heat in the winter. The proposal is to demolish the conservatory and open up the kitchen into a new family dining and living space which occupies the footprint of the existing conservatory. The kitchen / living space features generous bifold doors with level access to the garden, a new frosted glass window facing Hildridge Court and roof lights to maximise light in the space. The party wall to 29a incorporates built in storage which will offer additional sound separation between the properties.

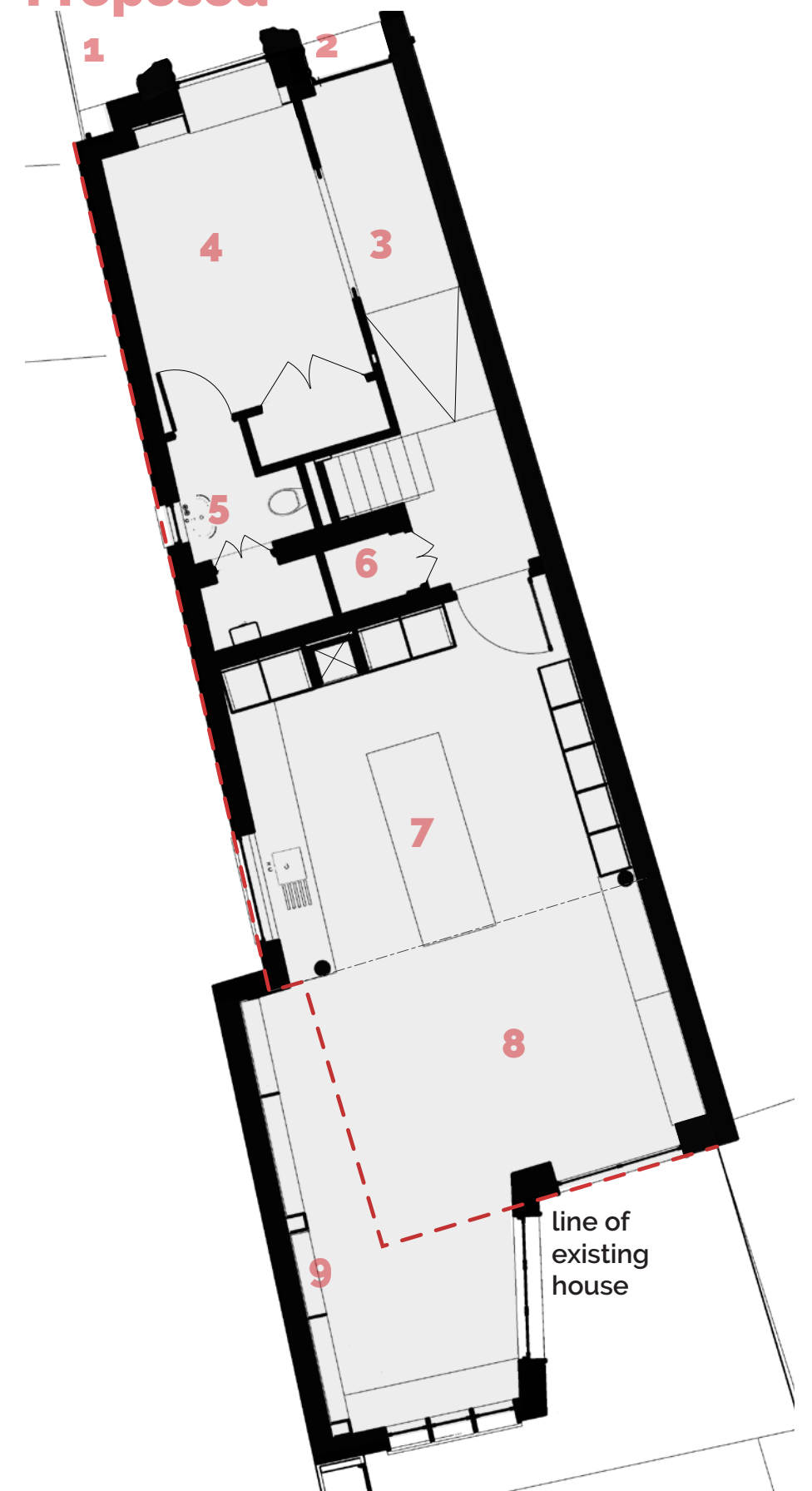
To the side of the conservatory is an existing area of shrubs (9) which is difficult to access due to the width and planting. The proposal is to extend the ground floor to fill this area incorporating generous storage, living space and a concealed home office / study space. This area of the extension has a lower roof height to minimise impacts on Hildridge Court.

Existing



line of existing house

Proposed



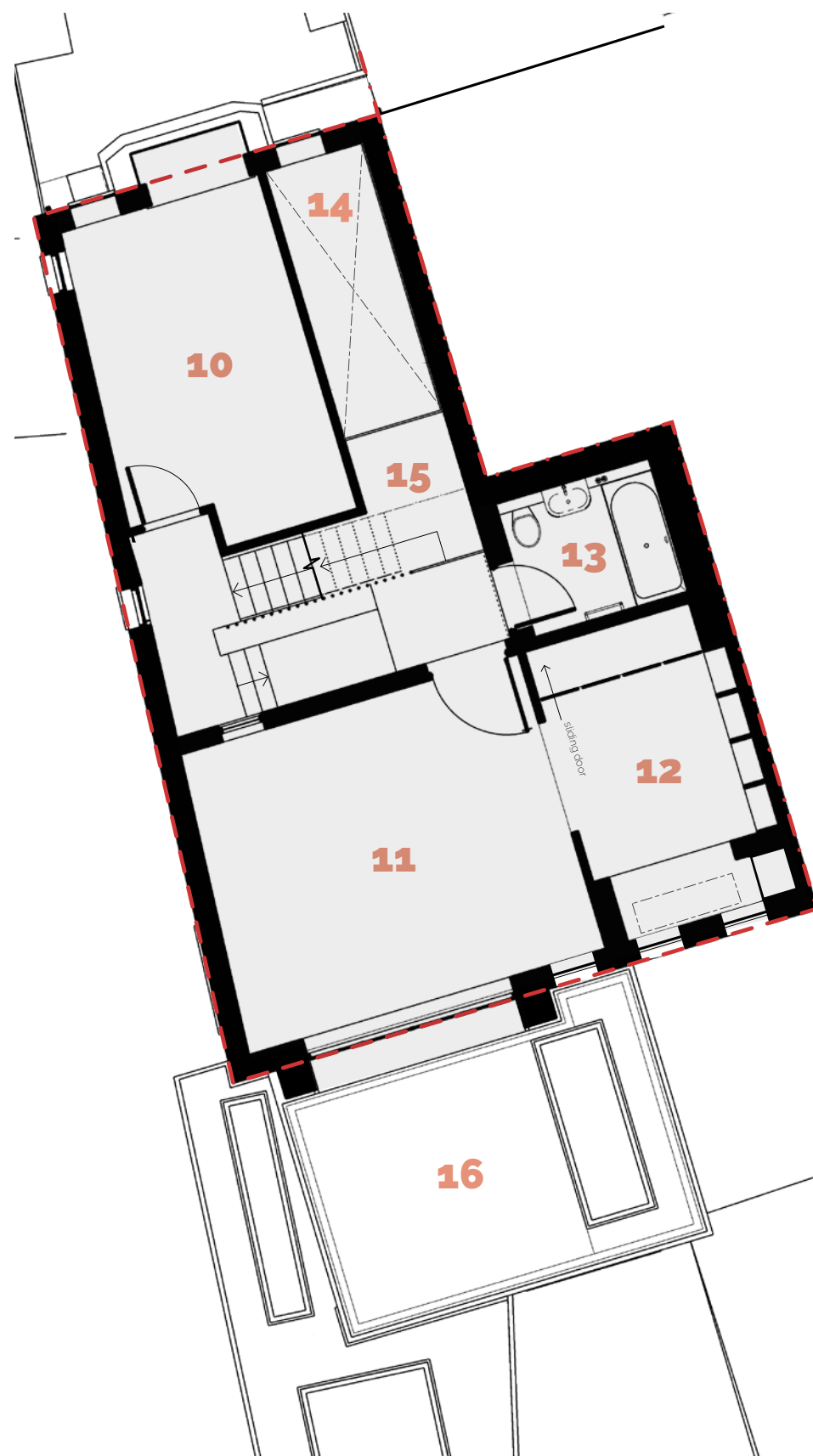


First Floor Plans

Existing



Proposed



At the moment at the top of the first flight of stairs is a cramped landing with a low ceiling providing access to bedroom 4 (10). Bedroom 4 is very narrow (1.8m / 6 ft - it is assumed that there was originally a single large room to the front of the house which was subdivided). The proposal is to increase the width of this room, recess the entrance and adjust the stair to increase headroom in this area. This bedroom is now wide enough to take a double bed (2.7m wide) and now incorporates a generous bay window with a window seat to the front. A full height wardrobe is located behind the entrance to the room.

The existing living room (11) is a large open plan space with a number of nib walls and two large windows, the eastern most window overlooking the garden of 29a has a raised area (12). The proposal is to subdivide this room using the existing nibs and adding sliding doors and this step combined with built in storage on the party wall will improve the acoustic separation to 29a. A new library / study area is created in this new area (12). The large window to the east is replaced by two high level windows and a roof light to remove overlooking of the garden of 29a. A window seat and new bi-fold window are added offering views over a meadow grass roof which obscures views to the garden of 29a replacing the view of the plastic roof of the conservatory. A new window is opened up between the hall and the living room and sun tunnels are added to the west wall.

The existing family bathroom (13) is refurbished and provided with daylight via a combination of a new fan light and a sun tunnel from above.

The current bedroom 3 (14) is entered with two steps down and the room is not quite wide enough to properly accommodate a double bed. The proposal is to split this bedroom with some of the area used to increase the adjacent bedroom (10) and the remainder offering double height to the entrance. The double height space allows for the addition of a small reading balcony (15) with an area of low ceiling and views back to the entrance. A window at this level provides daylight to the hall which is also complimented by sun tunnels from the room above.

--- line of existing house

Top Floor Plans

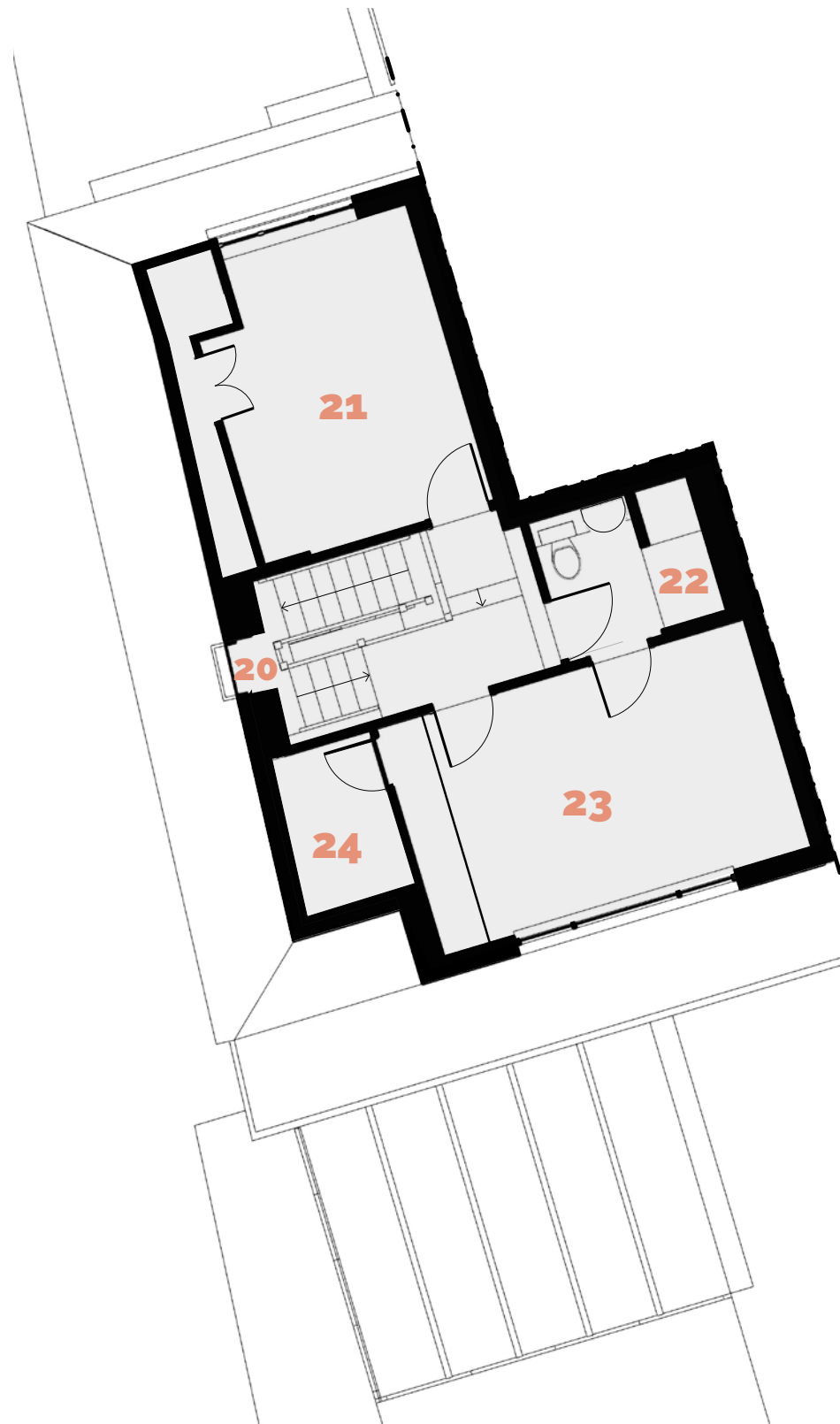
The existing half landing (20) is well lit by a roof light but is too low to provide access to the front bedroom. The combination of the revised roof and the changes to the stair offer the extra headroom to allow access to the front bedroom from the half landing. The landing benefits from a large roof light and window to the gable. The redesign of the staircase also allows the creation of a reading platform to the top floor.

The front bedroom (21) is as the floor below slightly too small to accommodate a double bed comfortably. The extended dormer allows for an increased width (>3m) to address this short coming. The larger dormer window to the front offers a lowered sill and a recess for a desk as well as access to the eaves storage. The new room benefits from a vaulted ceiling and roof light. Full height storage is located on the party wall - again helping to maximise sound separation to 29a.

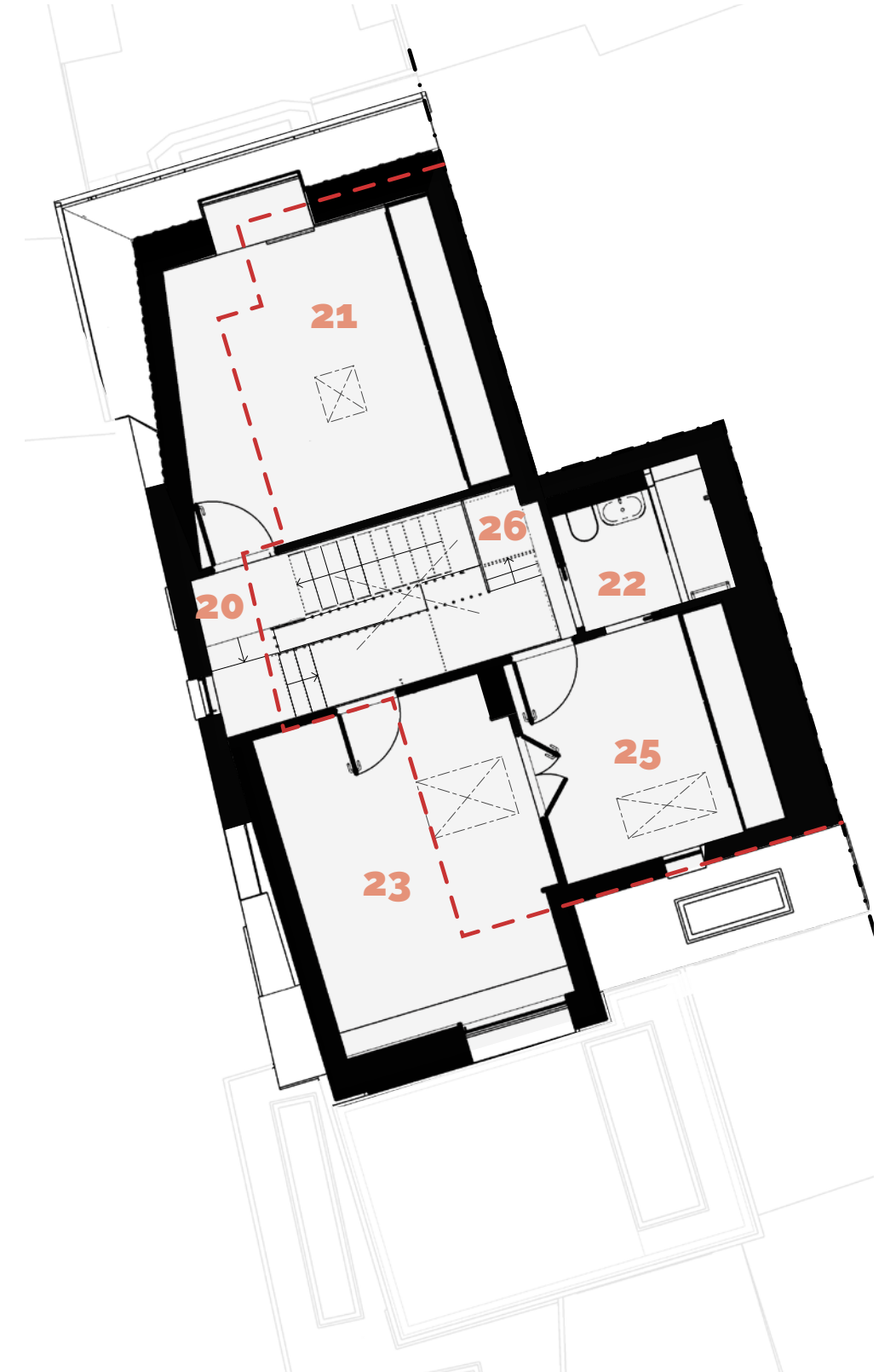
A 'jack and jill' shower room (22) is accessed from both the landing and master bedroom and this is retained in the proposals and refurbished with the addition of a new Velux window and vaulted ceiling maximising daylight and ventilation.

The existing master bedroom (23) has a low ceiling and is only just able to accommodate a double bed due to the width and shower room door. A full width wardrobe to the west end of the room makes access to the eaves storage difficult. The proposal is to extend the roof here to the west and south and the resulting space is subdivided into two bedrooms. The proposed master bedroom (23) is located to the south west facing directly onto the garden of number 29. This new master bedroom enjoys a vaulted ceiling and roof windows. The combination of a deep window reveal and built in storage minimises views into the garden of 29a. The adjoining room (25) is large enough to act as a small double bedroom but is intended to be used as a dressing room and study room connected to the master bedroom. As on the first floor, the large existing window with views into the garden of 29a is replaced with a smaller window with a raised cill and a rooflight to ensure that good levels of daylight are still achieved.

Existing



Proposed



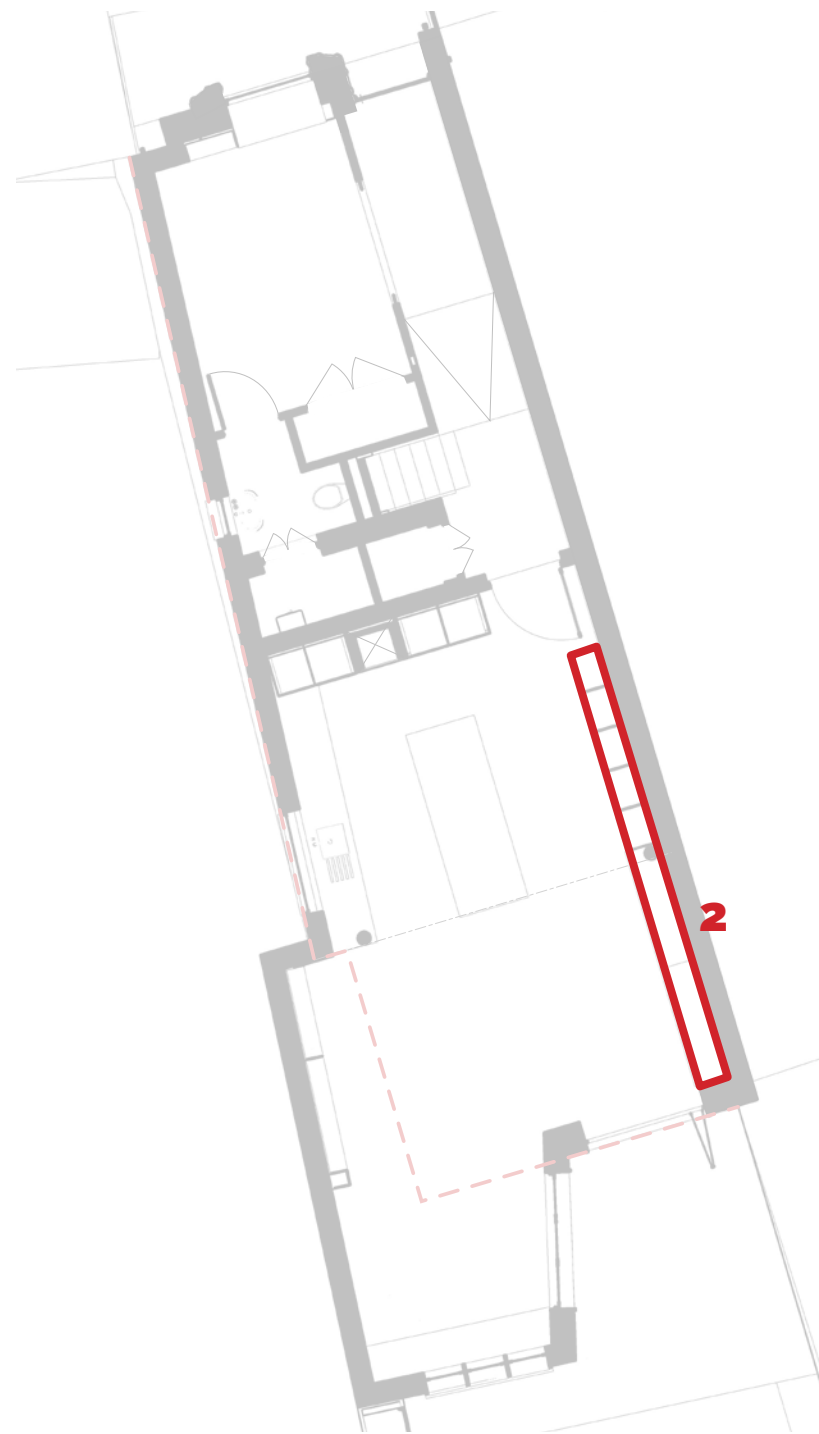
line of existing house



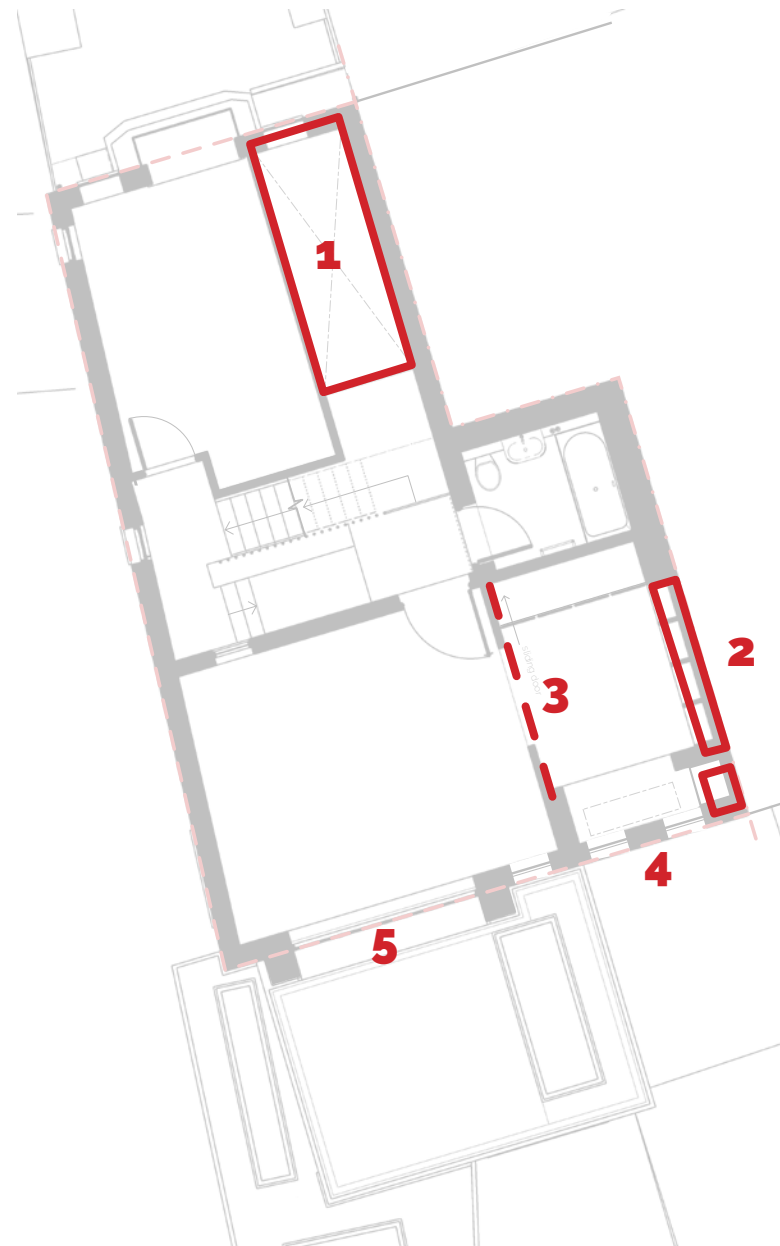
As illustrated below the design has been carefully considered to improve the relationship to 29a. In addition to the below improvements we propose to undertake improvement works to the party wall and floors to improve acoustic separation.

The proposals have been shared with the owners of 29a. No major concerns were raised, the principle query related to the combination of the flying freehold and the adhoc nature and multiple stages of the construction of 29. We agreed that investigative work / opening up would be carried prior to finalisation of any detailed design and that this would be shared with the residents of 29a.

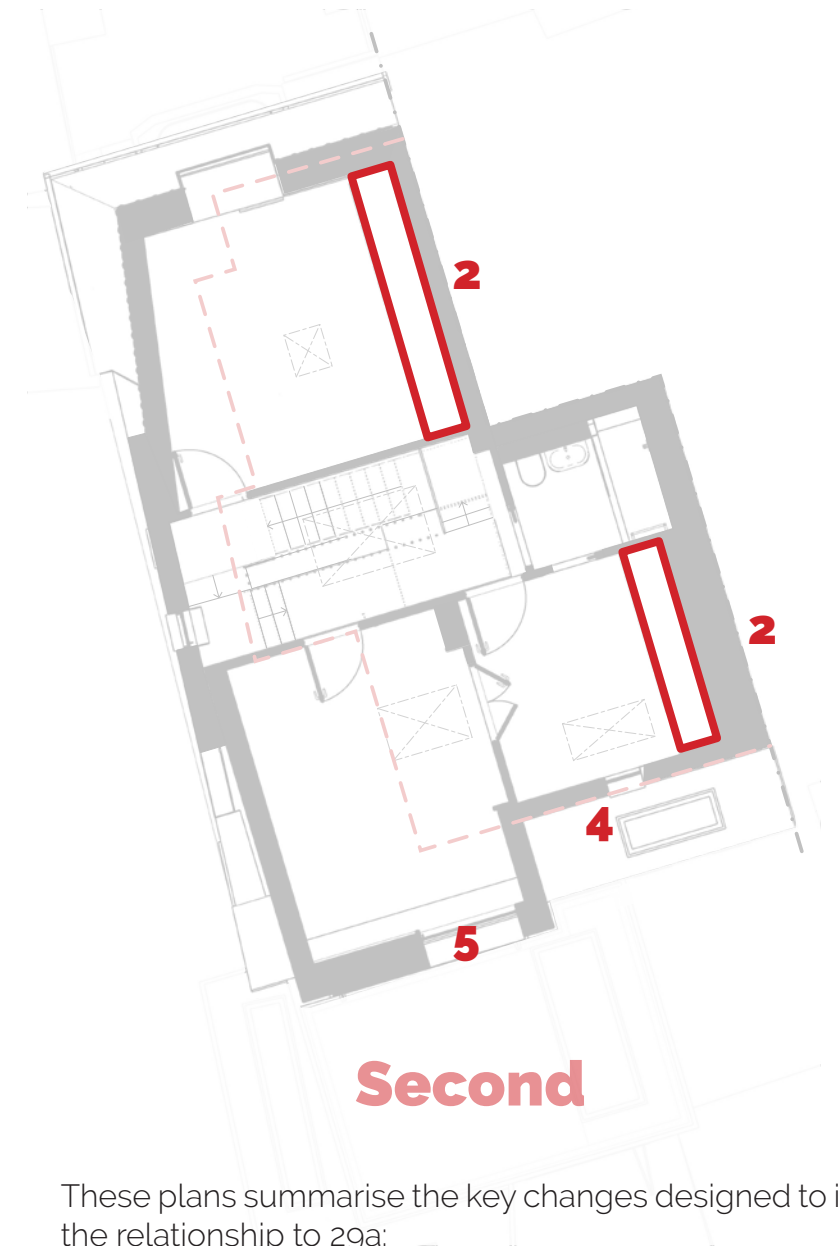
Summary for 29a



Ground



First



Second

These plans summarise the key changes designed to improve the relationship to 29a:

1. Omission of first floor bedroom to improve sound separation
2. New built in storage to ground, first and second floor party walls
3. Separation of the living room from the library, review of the floor in this area to improve details for sound separation
4. Smaller windows with raised cills to first floor and second floor rooms
5. Deep recesses to other windows to limit angled views across to 29a

Street Frontage

Existing

The existing elevation has a limited relationship to the street as the house is set back 14m from the back of pavement, the width of the front elevation is very narrow and (approximately 4m) and the combination of the garage door and porch result in no windows to the frontage at ground level. This is in contrast to the rest of the street where homes are wider, have large bay / bow windows and are typically set closer to the street.



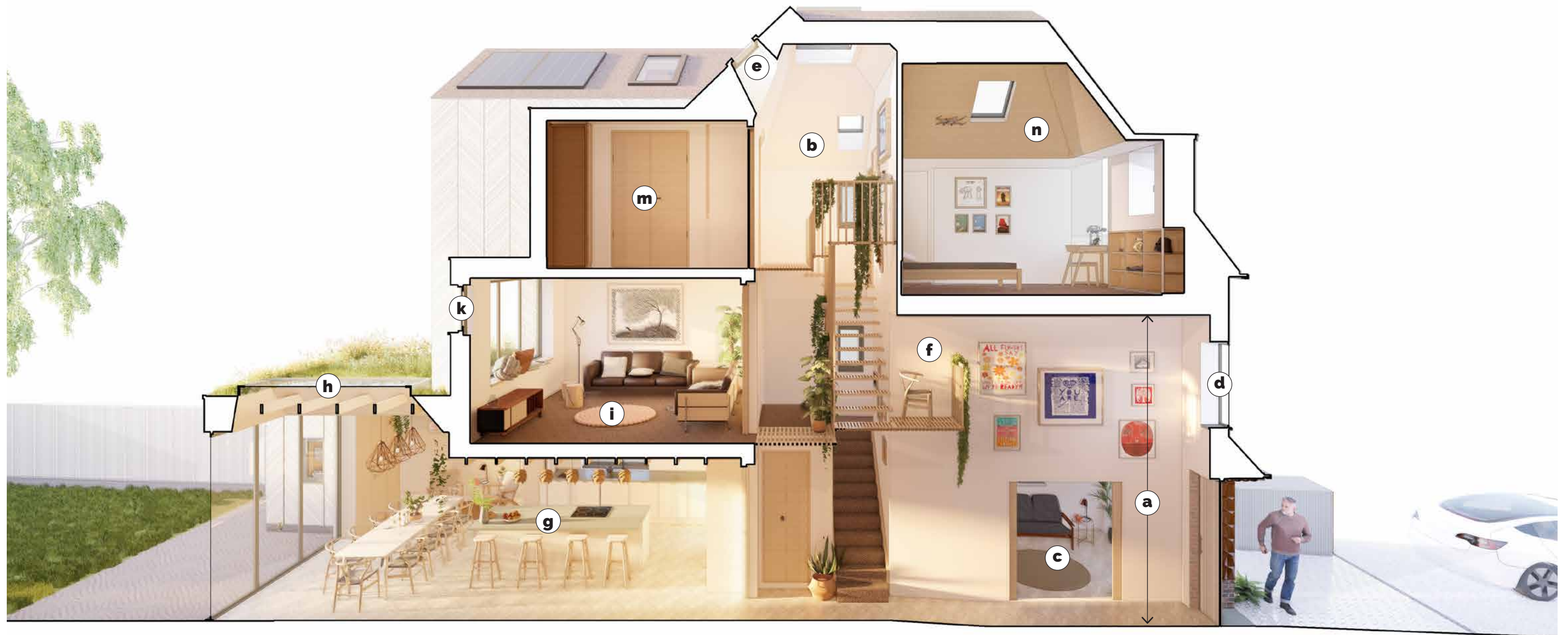
Proposed

The proposals seeks to address the shortcomings of the existing home's street frontage by introducing a large window to the ground floor front room in place of the garage door, a large picture window first floor bay window and a larger dormer window.

The windows are all centred on the elevation and complimented by two additional opening lights positioned symmetrically to either side of the bay window.



Proposals Sections



Sectional perspective D is cuts through the double height entrance (a) and atrium stair (b) showing the improved arrival space with the sliding door for the former garage (c) providing a greater sense of space. A window above the front door (d) and stair roof windows (e) bring lots of light into the space, while a reading platform (f) accessed from the first floor landing offers an alternative perspective onto the entrance.

To the rear of the house the previously closed in and dark kitchen is opened out into a larger family room (g) with a large roof window (h) and taller space allowing light deeper into the room and allowing for the family and guests to enjoy time together in one single space. This extends the full width of the plot, filling the small area of garden between the conservatory and the boundary. .

At first floor the living room remains to the rear of the house (i) - as existing - but now enjoys an new window (k) which brings additional light through to the entrance and atrium stair.

Above this at second floor the rear bedroom 4 retains its current position but is now connected to the new master bedroom. To the front the bedroom now exploits the roof above to create a vaulted ceiling which offers the opportunity for a roof light.

Proposals Sections



Sectional perspective E cuts through all the main rooms. At the ground floor the converted garage is converted to a new reception room (a) with window seat (b). The low floor to ceiling height is mitigated by exposing the timber floor structure (c). Coat and shoe storage (d) is located within this front reception room and a ground floor wc is located behind this. A new utility room (e) is located beneath the stair. To the rear an additional window is added to the flank wall (f) bringing additional light and ventilation into the kitchen, the window is glazed with obscured glass to ensure the privacy of Hilldridge Court.

At first floor the living room enjoys a southerly aspect with views across a new meadow grass roof (g) with large bifold doors and window seat (h) allowing this space to open up. To the front bedroom 3 is extended and a large bay window with built in seating is introduced (k) offering a space to relax and additional animation to the street. A new window is also introduced to the flank wall in this bedroom (m), again with obscured glass to ensure the privacy of Hilldridge Court.

At second floor the master bedroom enjoys a vaulted ceiling with exposed rafters (n) and roof window. An extended window seat is positioned against a deep set window (p) which will help with shading the window from high angle summer sun and also maximises the privacy of the adjacent gardens of 29a and Hilldridge Court by restricting lateral views. At the top of the atrium a computer controlled roof window (q) ensures fresh air is pulled through the house using the 'stack' effect and floods the stairs with natural light. An additional roof window and gable wall window, both obscured, are also added in the stairwell (r).

Proposals Sections



Sectional perspective F cuts through all the main rooms but faces the opposite direction from sectional perspective E, looking instead towards number 29a (to the east).

The key additional elements visible in this view are the downstairs toilet (a) and boiler room beneath the stair (b).

At the first floor the built in wardrobe (c) to bedroom 3 adds needed storage and provides additional acoustic separation from the stair well. The bay window at the front is more clearly seen in this view (d).

At the second floor the glass dormer (e) of bedroom 2 relates to the bay window below whilst offering the perfect location for a desk. The full height built in storage (f) in bedroom 2 runs along the party wall of 29a enhancing the acoustic separation between the two houses. In the master bedroom the roof window (g), high level storage (h) and interconnecting doors to bedroom 4 (k) can all be seen.

Proposals Sections

This **sectional perspective M** through the family room at the rear of the house illustrates the roof window and fanlights that introduce diverse daylighting into the room. The carved out ceiling maximises the depth that light reaches into the room.

The deep roof allows for the meadow grass roof to be located above to frame views from the living room.

The family room steps down to Hilldridge Court reducing the impact to their gardens and allowing west light into the family room in the evenings. This lower area creates a more intimate space and incorporates casual seating, discrete storage and access to the patio.



A view through to the garden from the breakfast bar through the family room to the garden



Sectional Perspective M

Proposals Sections



Sectional Perspective K

This **sectional perspective K** through kitchen, living room and master bedroom / bedroom 4 shows the main spaces to the south of the house.

As illustrated the kitchen flows smoothly from the hallway with full height cabinets located at the rear of the room.

The living room is subdivided into the main area to the west (left of the image), looking out on to the meadow grass roof and the smaller study area to the east (right of the image) which incorporates generous storage thereby improving the sound separation to number 29a. The new double height entrance and window to the front are visible through the living room door.

The master bedroom's vaulted ceiling and roof light ensure that this space is filled with light and cooler air, while the interlinking door to bedroom 4 allows this space to function as a dressing room. Again storage is located on the party wall to number 29a.



View from the master bedroom towards the oak tree showing the vaulted ceiling

Proposals Sections

This **sectional perspective J** through the stair and atrium shows the lightweight CNC stair added to allow as much light to penetrate to the ground floor as possible. The rooflight at the top of the space opens automatically to cool the air and provide fresh air, while additional windows to the gable wall ensure this will be a light filled space.

Two small reading platforms are shown, one overlooking the entrance at first floor and above that a raise platform at second floor. These spaces will integrate shelving and storage.

The revised stair arrangement allows access from the half landing between first and second floor to bedroom 2, while bedroom 3 door is recessed to create a more generous landing at first floor.

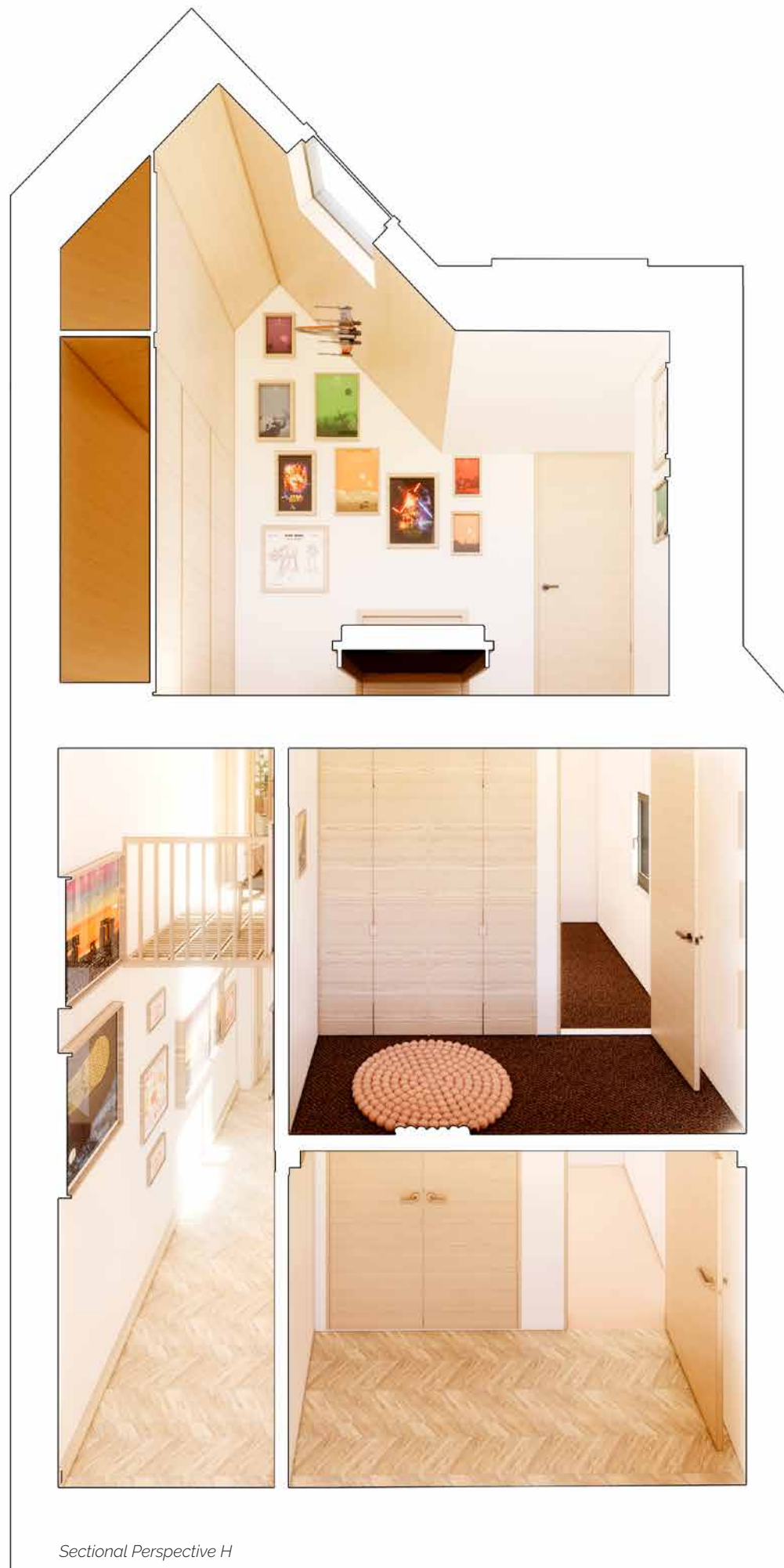


View looking up from the ground floor inside the atrium



Sectional Perspective J

Proposals Sections



This **sectional perspective H** through the front rooms shows the double height entrance and the vaulted ceiling to bedroom 2 at the top of the house. The double height entrance and full height storage is located on the party wall to 29a to improve acoustic separation between the two properties. Similarly the bedroom at first floor and converted garage are both designed with integrated full height storage which helps with acoustic separation of these rooms from the stair.



View from entrance showing how the south light filters through the house

Sustainability

One of the primary motivations for the proposed works is to increase the sustainability of the house in every aspect.

Embodied Energy

This starts with the reuse of as much of the existing structure as possible. Complimenting this is the intention that the proposed extension is constructed from a lightweight panel systems dramatically reducing the embodied energy of the new fabric while minimising the disruption and energy intensity of foundations. This low embodied energy approach extends to the use of timber cladding to the rear extension. Not only is timber a lightweight and a low embodied carbon solution but it also locks carbon sequestration, capturing and locking carbon out of the atmosphere through sustainably grown and managed forestry (wood will be FSC certified). Calculations show that timber construction uses around 20% of embodied carbon as masonry construction traditionally used. We are targeting embodied energy of less than < 625 kgCO₂e/m² for the new build elements, less than half typical new build.

Reduced Energy in Use

To reduce the energy of the house when in use the proposal is to significantly improve the fabric performance. Proposed measures include wrapping the existing building in rendered insulation, replace the existing double glazed uPVC windows with high performance aluminium windows and repairing the existing roof and insulating it to create a warm roof with high levels of insulation. The aim is to make the building as airtight as possible, targeting air changes of 3 air changes per hour in the existing house, again helping to reduce energy losses.

The proposals also aim to reduce energy in use by reclaiming energy that is created. This includes through the use of waste water heat recovery - extract the heat from the waste water from showers and baths. Passive measures are maximised, the home benefits from a southerly aspect with the principle living spaces all orientated to maximise the opportunity for passive solar gains to naturally heat the home in winter. Daylight levels are maximised throughout using roof windows that allow maximum daylight penetration and minimise the need for artificial lights - all rooms have been designed to exceed average daylight factors of 2%.

Together through all of these steps we are targeting operational energy of less than 35 kWh/m²/y (around 7,200 kWh), a 75% reduction from current building regulations.

Renewable Energy, Heat and Power

The proposals are for 10 x 400 kWh solar photovoltaic panels that will provide electricity which should provide the majority of the houses electricity demands. The proposals also assume the retention of the existing gas boiler but supplementing this through the addition of a ground source heat pump to the rear of the property to dramatically reduce the gas use and lowering the carbon emissions of the household.

Water Usage

The proposals target reducing the use of potable water to 75 litres / person / day, a 40% reduction on building regulations. This is proposed through a number of measures including mist showers (see Nebia product in appendix) as well as other low flow appliances and water butts for the rear garden.

Modern Methods of Construction

The ambition is to find a way to deliver the extension and studio using modern methods of construction. Working with digital fabrication techniques such as those championed by innovators such as Facit homes and U-Build (please refer to appendix for further information) there are a number of benefits including but not limited to:

- Reduced waste - manufacturing the building components in a controlled environment with digital fabrication allows optimised material usage and where material isn't used maximises recycling.
- Reduced traffic - lighter weight and more compact building components lead to fewer deliveries, reducing traffic impacts and pollution from transport.
- Circular economy - the extension can be dismantled and reused or recycled at the end of its life further reducing waste and reusing captured carbon.



An example of Modern Methods of Construction, the Facit Chasis system by Facit House

Climate Resilience

Whilst the design is intended to minimise the impacts of the home on the environment we are already facing the challenge of a changing climate. To address this another key aspect of the design is the ability of the building to perform in extreme weather events including increased summer temperature, extreme rainfall and storms as well as high winds.

The proposals include the following measures to respond to climate change:

- Solar shading - south facing windows a combination of deep overhangs and sliding shutters and automated blinds to roof windows will control solar gain
- High ceilings - vaulted bedroom spaces allow stratification of warm air and a more comfortable sleeping environment
- Roof windows and central atrium space - to maximise cross and stack ventilation the central stairwell allows air to circulate through the home with automated opening roof windows at the top for optimum air quality
- Green meadow roofs - increase water attenuation and reduce the impact of high rainfall
- Passive cooling through running the ground source heat pump in reverse, bringing cooler ground water into the home to cool the home
- Exposed thermal mass is designed into the south facing spaces to further reducing the impact of peak temperatures

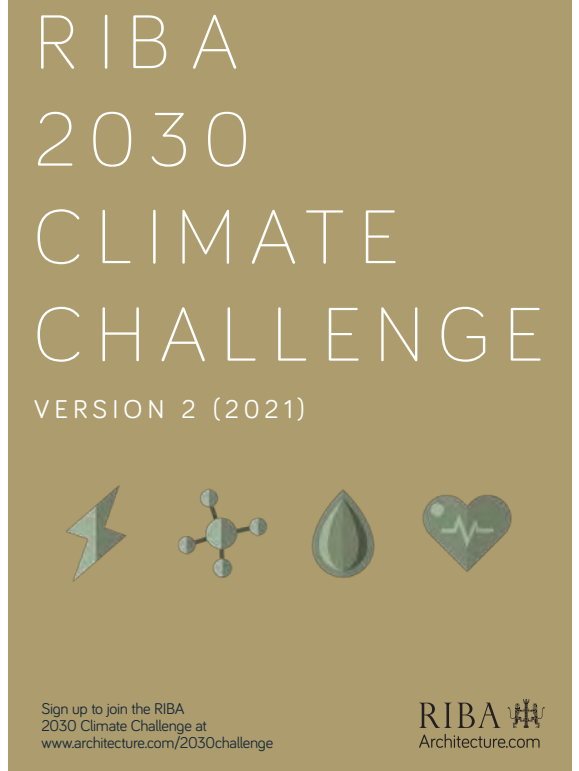
Biodiversity Recovery

To help meet the challenges of a growing city and the climate and ecological emergency, there must be a step change in how development relates to London's natural environment. Not only must we continue to protect the most valuable green and wild places, new development proposals need also to strengthen our green infrastructure and ecological networks.

Given the proximity of the house to the ancient woodland of Highgate Wood and the connection provided by the TfL land to the south of the garden of number 29 the proposals have a great opportunity to enhance the biodiversity of this area. To reflect this a semi-intensive roof is proposed to both the studio and the rear roof extension. The area of flat roof at the second floor and roof level are harder to access for maintenance and as such these are proposed as lower maintenance areas of Sedum blanket roofs. To compliment this species rich meadow grass is also proposed in the rear garden.

Standards

Together all of the measures outlined will result in a home that substantially reduces its environmental impact while being more flexible and more comfortable to adapt to a variety of future needs. The proposed targets are in line with the 'RIBA Climate Challenge'.



Accessibility and Inclusive design

A number of measures included in the proposals improve accessibility and as a result are more inclusive than the existing situation.

Entrance and Access

The existing entrance features a step with a further step within the entrance hall. There is a step from the kitchen into the conservatory and a further step to access the garden from the conservatory.

The proposed development replaces this series of steps with a ramp to the front door (a) and an internal ramp (b). The replacement of the conservatory allows for level access into the garden (c).

Accessible Ground floor WC

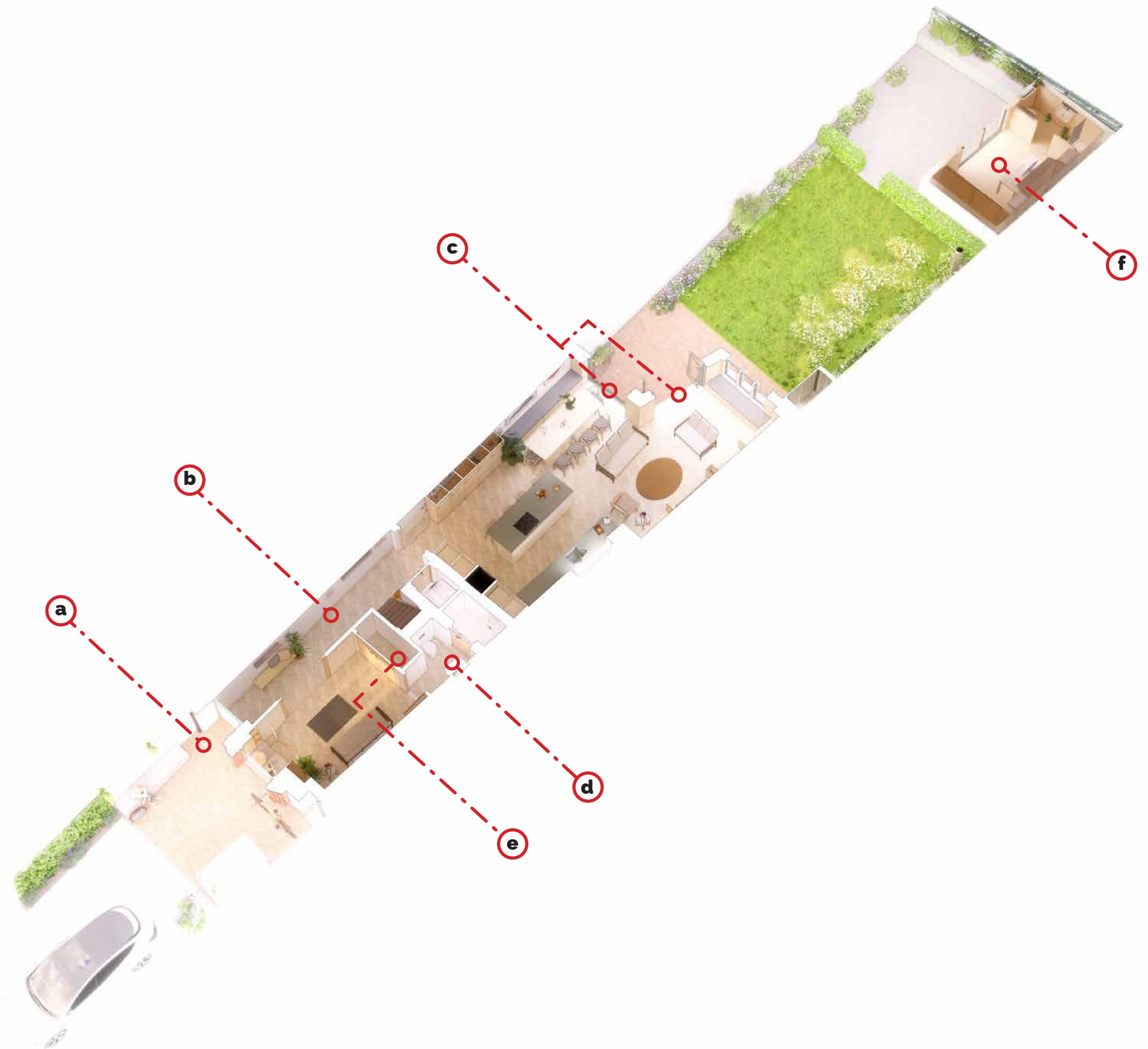
The current ground floor WC is accessed through a narrow cloakroom with a step, low ceiling and narrow doors. The proposals remove this sequence of doors with a single door and a much wider approach and access within the toilet (d). Further there is the scope to convert part of the adjacent coat cupboard to become a shower room if in future a ground floor bedroom is required (e).

Ease of access for visitors to living spaces

The house has its living room at first floor and whilst the proposals retain a living space in this location the proposed development would allow two 'visitable' living spaces at ground level - the converted garage to the front and the combined kitchen and family room at the rear.

The studio to the rear will also allow guest with accessibility issues to stay at the house without the need to use the stairs (f).

Together we believe that the inclusion of these designs will significantly improve the accessibility and flexibility of 29 Lanchester Road.



Axonometric section through the ground floor

Other Details of Proposals



Cycle Storage

The proposal is for a Sheffield stand in the driveway (a) and a discreet bike shed in the rear garden. The home will have storage for 4 bikes.

Refuse Storage

Refuse is proposed to be improved from the current situation where the bins are free standing to providing a covered timber enclosure for three wheelie bins and one compost bin (b).

Arrival and Storage

A new low bench is proposed adjacent to the front door which contains storage for gardening and outdoor shoes / boots (c).

Parking Provision

The parking remains as the existing with two tandem spaces to the front of the house on the driveway (d). The driveway is resurfaced as part of the proposals with a permeable gravel and a new tree is proposed to delineate the area which isn't for cars.



Views

The following pages show a series of views from the front of the house through the house and into the rear garden



A new frameless bay window and dormer to the front elevation combines the replacement of the garage door with a large top hung window, which increase light to the facade. The ground floor is clad in a faceted glazed terracotta tiles designed to catch the light.

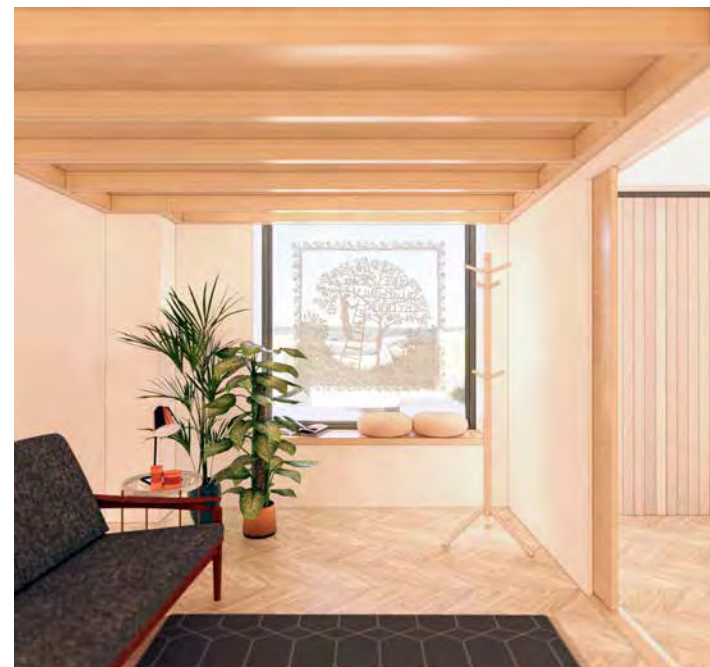


Decorative floor tiles provide a further level of reflectivity and incorporate a ramp to the front door. The existing entrance position is retained but a new door added and the existing flat roof replaced by a tiled roof to integrate with the existing one at 29a.

The bin and bike store area incorporates space for planting above.



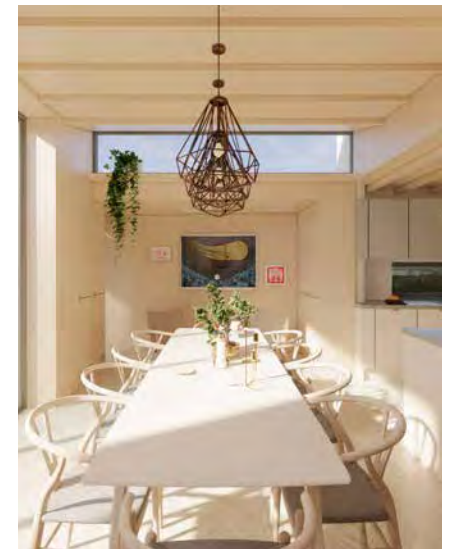
The double height entrance with views through to the south



The converted garage with new window and exposed timber ceiling



The entrance hallway with a view through the kitchen and stair above



Entering the kitchen with the view through to the family space and into the garden



Looking back through the family space from the garden