June 2016

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Contents

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The Practice

National award-winning practice Robert Dye Associates is based in NW London, and has more than 20 years experience in the design and management of domestic/residential architecture. Architectural project experience ranges from new-build houses, careful restoration and conversion of existing buildings for residential and commercial use, to international museum and university buildings.

Following RIBA regional success in London, the practice received the profession's highest award for residential architecture in 2005, winning the RIBA Manser Medal for a sustainable modern house in a sensitive conservation area context in Southwark.

The practice has a burgeoning reputation for delivered projects that have sustainability at their core, and has well-established contacts with structural and environmental engineers, quantity surveyors, and landscape/arboricultural consultants who are sympathetic to the studio's particular approach within new and existing contexts.

Typically the studio manages projects from inception through all stages to completion; it has extensive experience of preparing construction documentation and administering building contracts on site, from one-off residential to large-scale public works. The practice is particularly experienced in London's complex urban and suburban context, whether building new or modernising and extending historic residential buildings.

The work of Robert Dye Associates has been televised in the UK and Japan, the subject of various exhibitions in London over the last decade, and is regularly published in the architectural press worldwide.

Principal, Robert Dye BA Hons Dip Arch RIBA

Robert won the annual RIBA student prize before graduating with honors in 1977. He has practised architecture both in England and abroad. Working for Sir James Stirling, his major projects included the Clore Gallery at the Tate, London, and as project architect a new-build expansion of the Fogg Art Museum for Harvard, and a new Performing arts Centre for Cornell University.

Since establishing his own practice in 1989, he has continued the successful pursuit of design quality in more fine- grain, predominantly residential work. The practice's (timber-framed/recycled materials) new-build Stealth House was a finalist for a RIBA sustainability prize, then for the European Conference of Leading Architects annual Putz prize, and picked up the prestigious Manser Medal for 2005's best contemporary house at the Stirling Prize ceremony.

Robert has taught sustainability, architecture and urban design at various universities in the UK and America for more than 20 years, and is currently a lecturer on sustainable cities for the Urban Design Masters course at the Bartlett School, University College London.

He has received several awards, contributed to a BBC2 programme on the future of London's architecture, was a member of the LDDC Urban Design Advisory Group shaping the future of Docklands, and is active in judging architecture awards for the RIBA.

Stealth House, Grove Lane, SE4 - Manser Medal winning semi-detached house, adjoining Conservation Area.

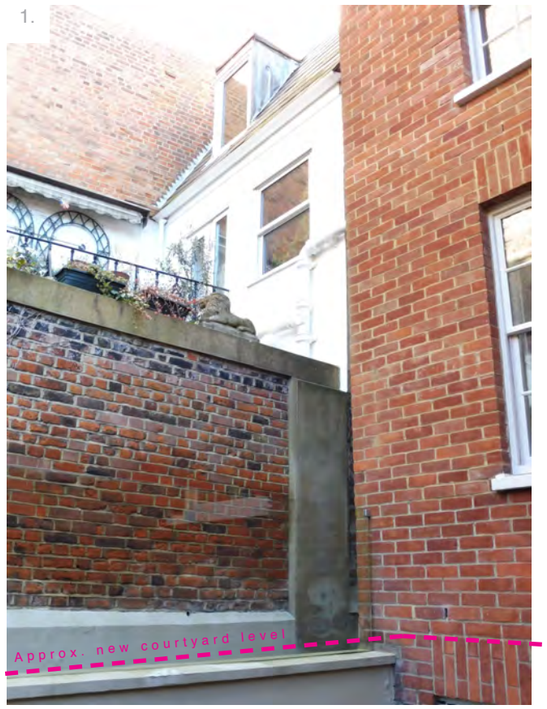
Ardleigh Road N1 - Side and rear extensions to semi-detached house in a Conservation Area

Kingstown Street, NW1 - Two neighbouring projects, both including partial rebuilds, modernisation & extensions to article 4 conservation area mews houses.

Shortlisted for two 2013 Camden Design Awards 'Enhancing Context Award' and 'Don't Move, Improve Award'

Hamilton Terrace, NW8 - Extension & modernisation of grade II listed terrace house.

1.



2.

3.

Photograph Description

1. Photograph showing the side boundary wall to No.18 New End. The dashed red line indicates approximate height of Lower Ground Floor extension

2. Photograph of small paved area leading out from the kitchen and the steps up to the main patio. The dashed red line indicates approximate height of Lower Ground Floor extension

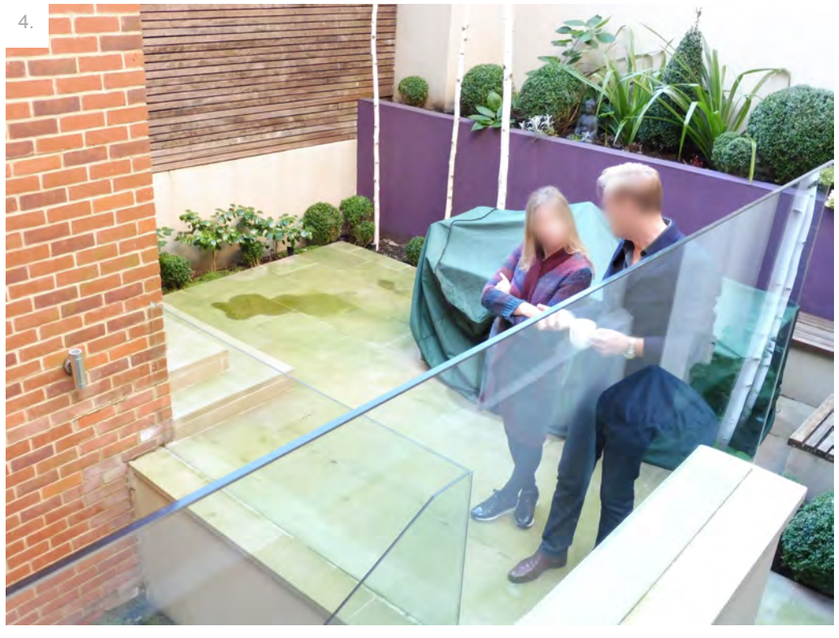
3. A photograph of the french doors to the rear of the stairbox and boundary fence to No. 22 New End.

4. A photograph of the hardscaping of the patio, rear planter and boundary fence.

5. A view from the ground floor looking down onto the patio below and the planter to the rear.

6. A view onto the rear boundary wall with the raised planter and the context of neighbouring properties of 10-14 New End to the rear of the garden.

4.



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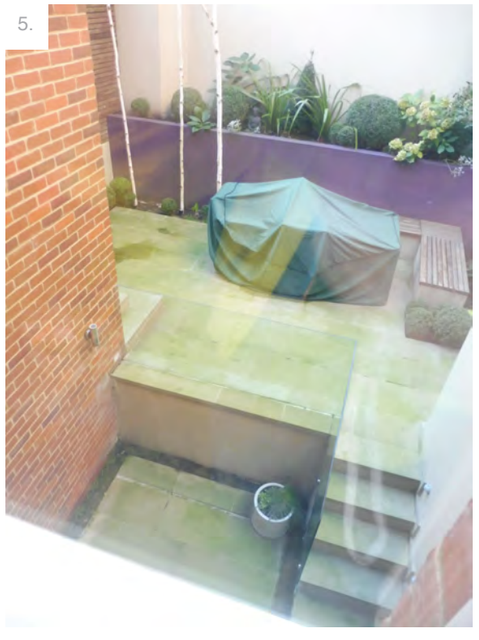

6.

Existing Context and History

No.20 New End lies in the Hampstead Conservation area. The Conservation Area was designated in 1968 with New End lying within Sub Area 2: Christ Church/Well Walk.

Hampstead Conservation Area

Hampstead is a Conservation Area of considerable quality and variety. A range of factors and attributes come together to create its special character and significance. These are principally; its topography; the Heath; the range, excellence and mix of buildings; the street pattern and Hampstead's historical association with clean water and fresh air. The Conservation Area stretches beyond the village itself to include South End Green, Frognal and Rosslyn Hill and offers many fine and interesting examples of the architectural development of London.

In the 19th century the enclave of New End became the site for working class cottages and municipal buildings and that character is still strongly evident, alongside a few earlier properties.

Planning and Development History

The current property was built in the 1970s. Since its construction, It has been altered under two planning consents with the addition of a stair box extension to the rear, and a roof terrace in between the front and rear mansards as follows:

2005/4833/P Erection of a rear extension at lower ground, ground and first floor levels to provide additional accommodation for the single-family dwelling house.

2006/0455/P Removal of existing flat roof to mansard to create a terrace at third floor level of the single family dwelling house.

The Applicant has confirmed that approximately 9 years ago, landscaping work was undertaken in the rear courtyard/garden, adding the planter and partially raising the levels to create the current paved courtyard. The original ground level is indicated on the accompanying application drawings.

Description of the Property

No.20 New End was built in the 1970s and comprises one medium sized end of terrace house in red\brown brick. The building is not listed but is identified in the Hampstead CA Statement as making a positive contribution to the CA. It's contribution to the CA clearly comes from its front elevation, which while a relatively recent contributor, is referential to other properties in the area, particularly those across the street, though the disposition of the windows evidence that this is not an original period property. The Upper Ground Floor (UGF) is elevated from the street level by 5 steps at the front. An enclosed areaway to the street provides a sunken front courtyard and light to the Lower Ground Floor (LGF). A side passage leads down from street level to the rear garden, which is just higher than the LGF level.

The rear garden is enclosed on all sides by tall brick walls in parts 4-5m that give it a courtyard feel, emphasised by its square plan. It is currently paved, with a large raised planter element along the rear wall. The paving steps down a few further steps to give access to the LGF. Its deep setting means that it is dark and dismal and providing sub-standard external space.

Design and Proposal

This proposal responds to the client's brief to expand the family living area of the house, and change the nature of the garden/courtyard so that it is turned into a light outdoor space, directly accessible from the main living floor of the house.

In principle, the design comprises a partial width extension of the main house at LGF into the rear courtyard, with the existing courtyard being lifted up to the ground floor level. A small glass link extension at UGF, will link the courtyard to the main public rooms of the house.

The courtyard will have an intensive green roof build-up with a min of 200mm growth medium ensuring that it can sustain normal urban garden growth, such as lawns, shrubs and trees, with automatic irrigation supplied as required by selected plant species. We have attached in the appendix to this application the relevant sections (2.2.4 and 2.3.1) of The GRO Green Roof Code 2014, which has been used in the preparation of this proposal. A new planter will be placed along the southern edge of the courtyard at a slightly lower level re-instating natural ground in the courtyard and allowing a source of natural drainage from the site. The lower level of the planter will mean that the fence to the southern edge from the planter level will be well over 2 m tall, ensuring that privacy to the adjacent property is maintained. The area of the new planter is the same as the planter which it replaces, ensuring that there is no loss of naturally draining ground between the existing situation and the proposal. The extensive green roof should reduce rainfall run-off to 40% per the GRO code. Collectively with the planter, this will mean that the new courtyard will represent a significant improvement in both Sustainable Urban Drainage (SUDs) and biodiversity over the existing hard paved courtyard.

The existing height of the garden walls means that even with the raised courtyard level, the walls will still be over 2m in height to any neighbour except to the south where the fence will be extended so that it is approx 1700 above the new courtyard level.

The glass link extension is designed to maximise transparency when viewed from the rear so allowing the existing brick rear and sidewalls to remain legible as they extend from exterior to interior. This glass link will also serve as a skylight allowing generous light to enter the lower ground floor below.

The LGF extension will extend out from the current kitchen diner area and provide new internal family area, which is currently lacking.

The proposal is designed so that there will be no impact on the significance of the conservation area. The courtyard garden will effectively be indistinguishable from any other small rear garden in the immediate vicinity. The only other visible part of the proposal is the glass box. Due to the height of the surrounding walls and the corner nature of the site, there are very few vantage points from which it will be visible, and these are only at distance. It will never-the-less be simply and well detailed and allow the existing mass of the property to remain legible and dominant.

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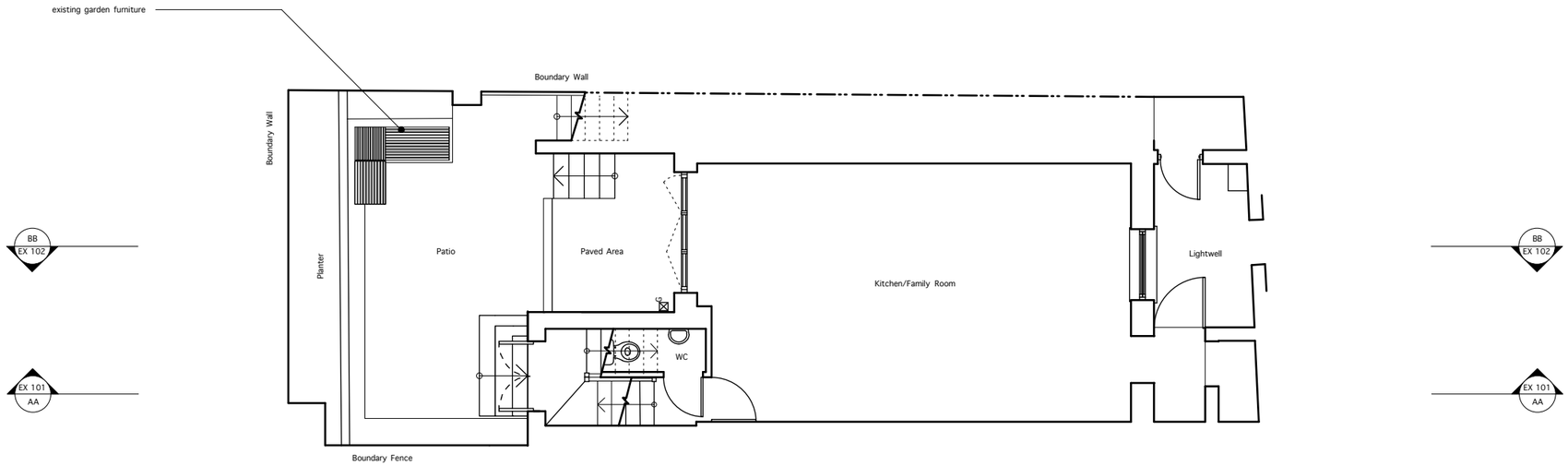
project: 20 New End
project no: 262

drawing: Site Plan
scale: 1:1000 @ A3
drawn by: ES

drawing no: EX 000
rev: /
date: June 2016
dwg status: Planning



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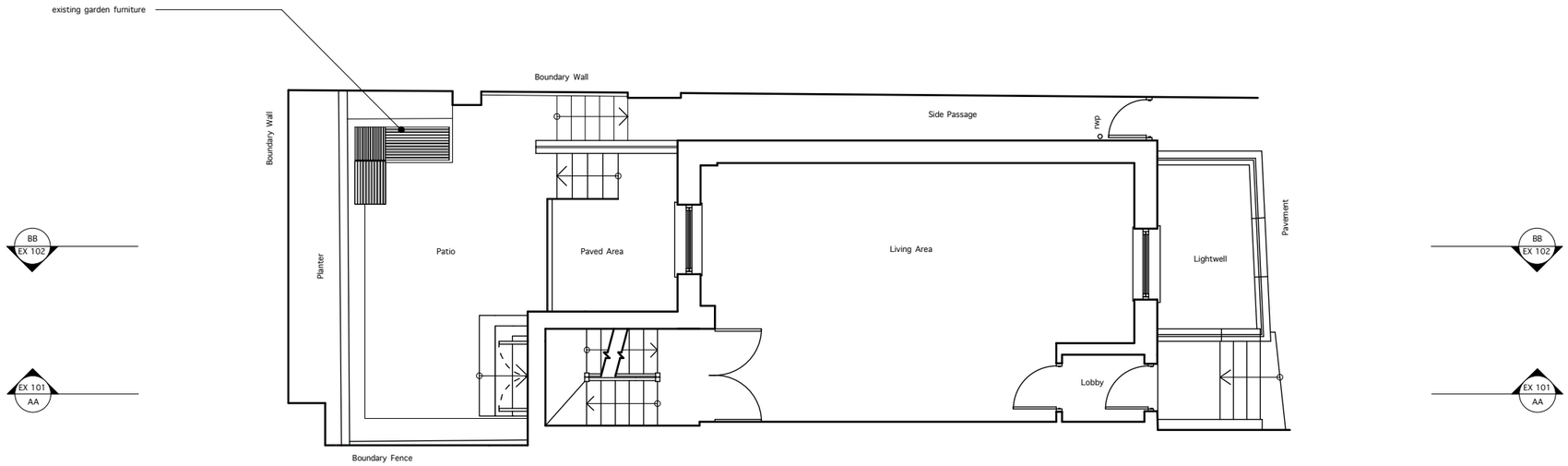
project: 20 New End
project no: 262

drawing: Existing Lower Ground Floor Plan
scale: 1:100 @ A3
drawn by: ES

drawing no: EX 001
rev: /
date: June 2016
dwg status: Planning



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project: 20 New End
project no: 262
drawing: Existing Upper Ground Floor Plan
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drawing no: EX 002
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date: June 2016
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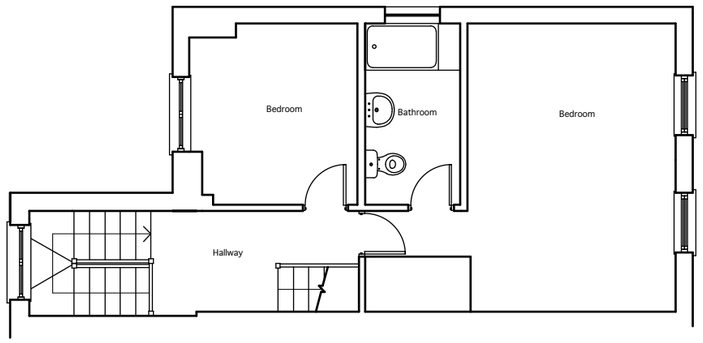

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project: 20 New End

project no: 262

drawing: Existing First Floor Plan

scale: 1:100 @ A3

drawn by: ES

drawing no: EX 003

rev: /

date: June 2016

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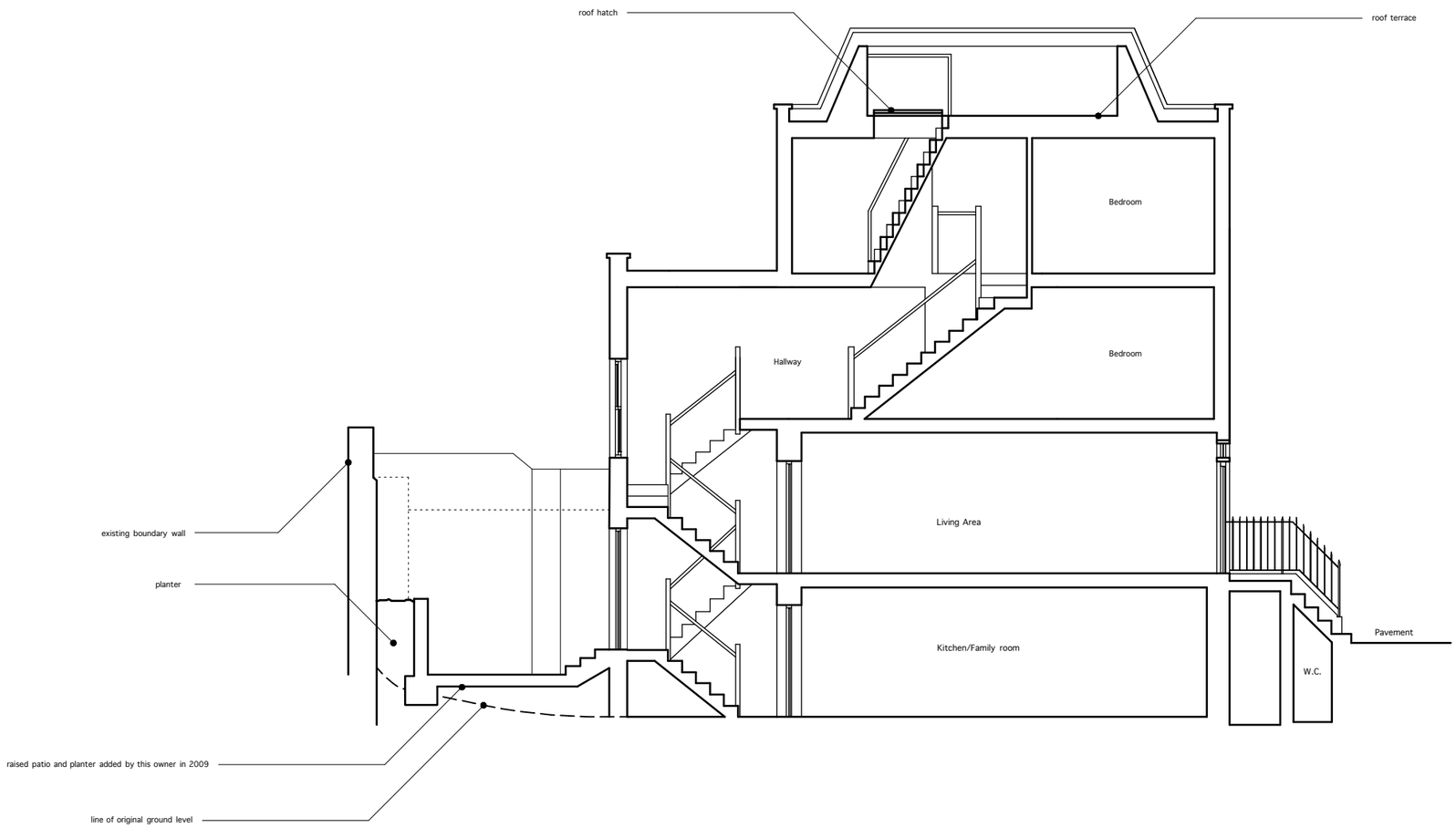

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project: 20 New End
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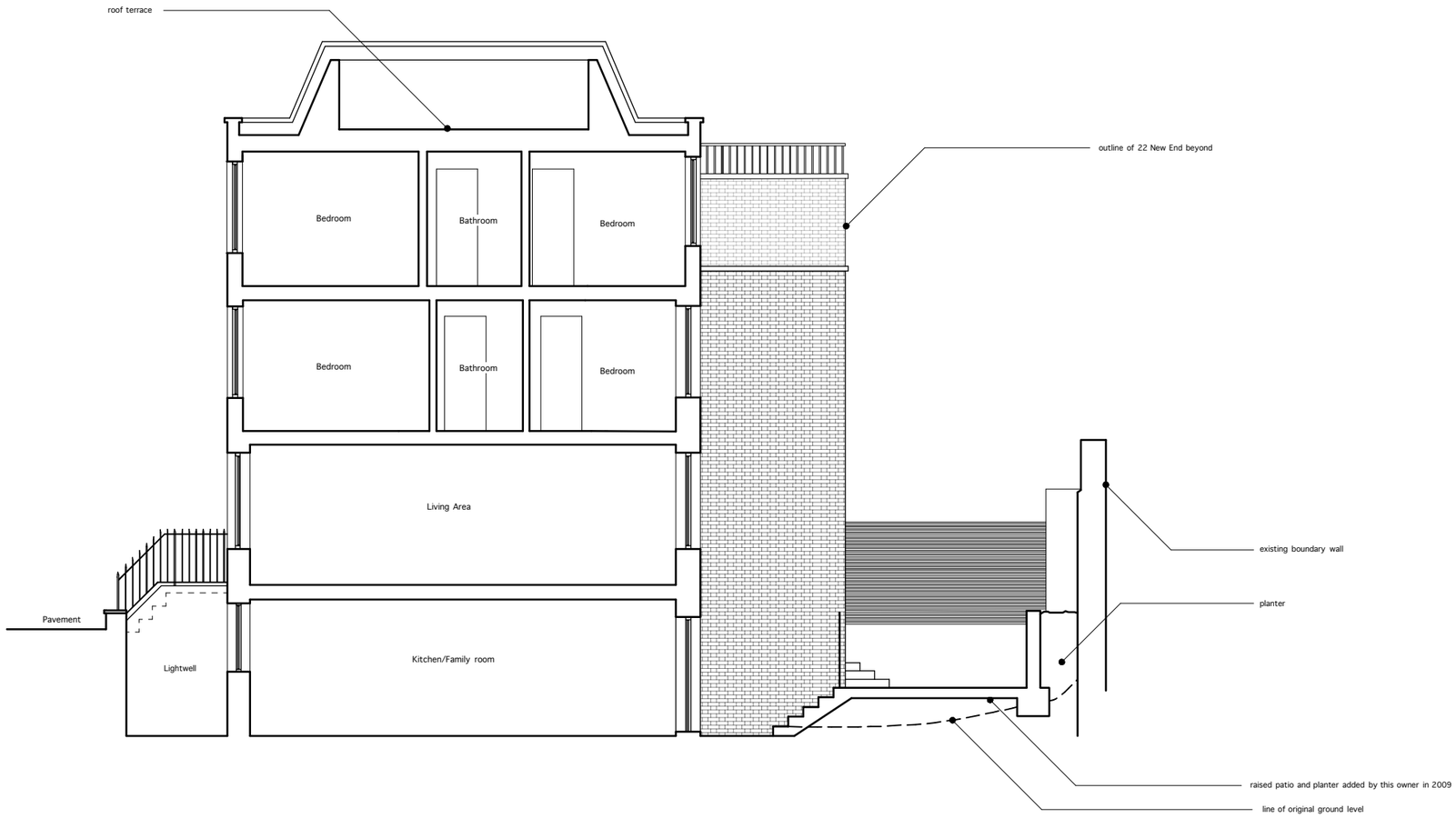

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project: 20 New End
project no: 262
drawing: Existing Section BB
scale: 1:100 @ A3
drawn by: ES
drawing no: EX 102
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date: June 2016
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project: 20 New End
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drawing no: EX 201
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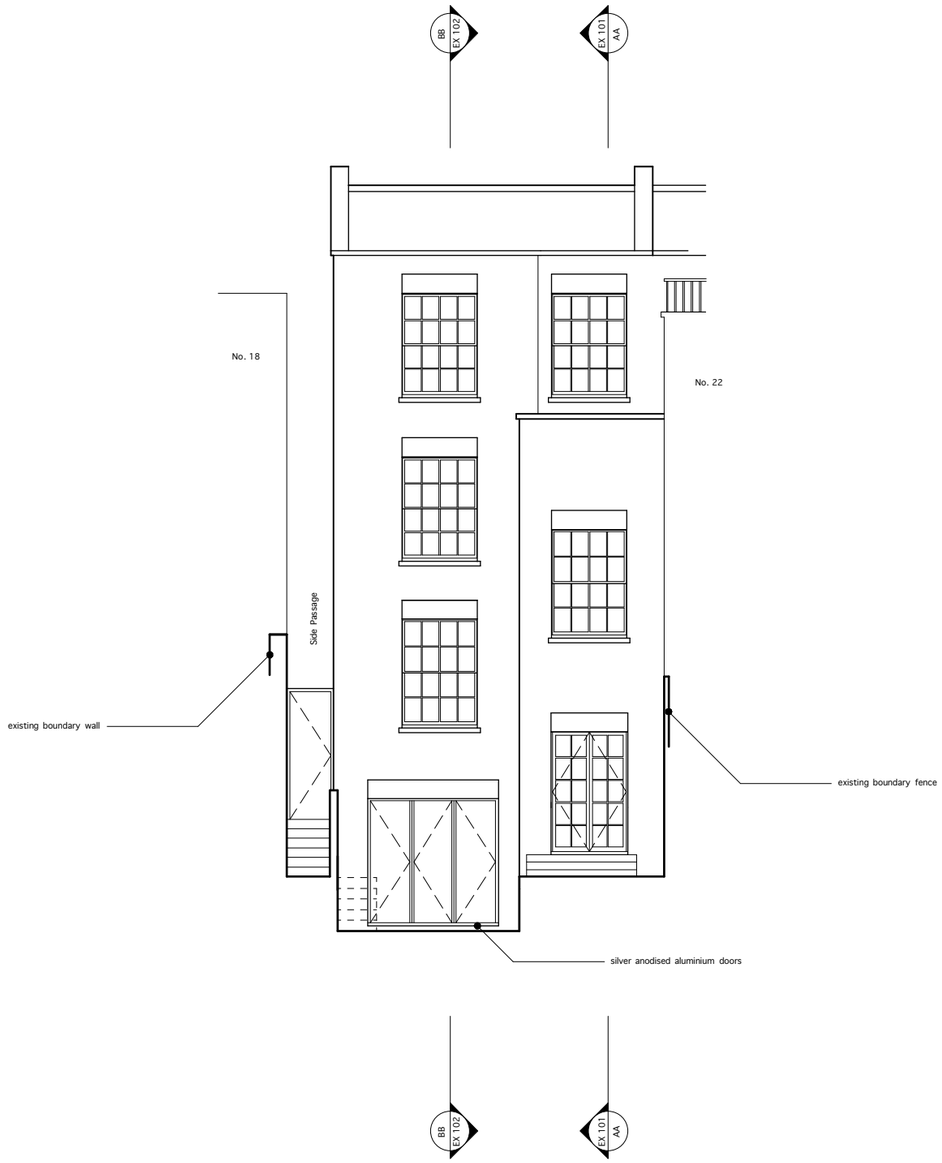

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project: 20 New End
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drawing no: EX 202
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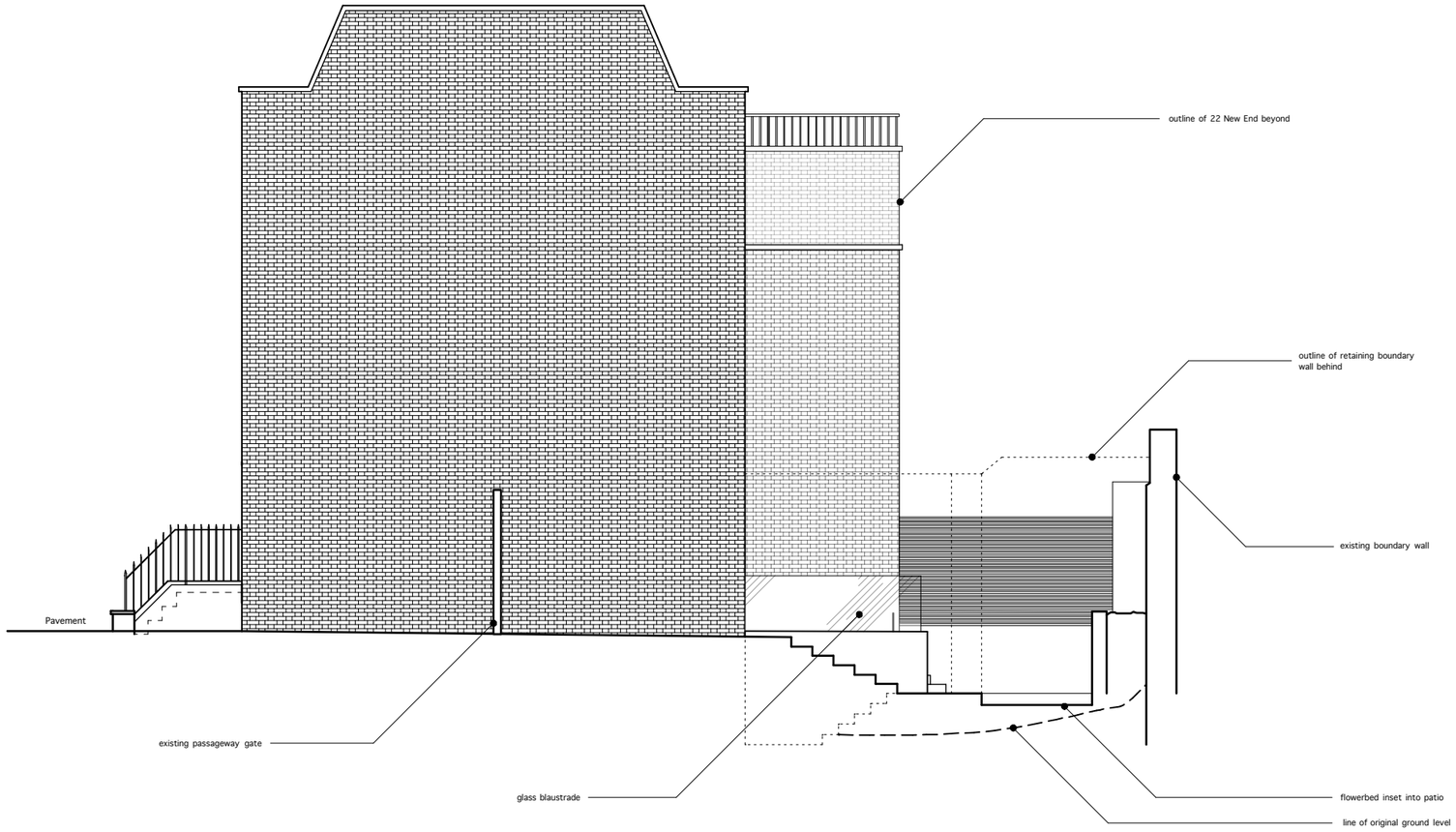

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project: 20 New End
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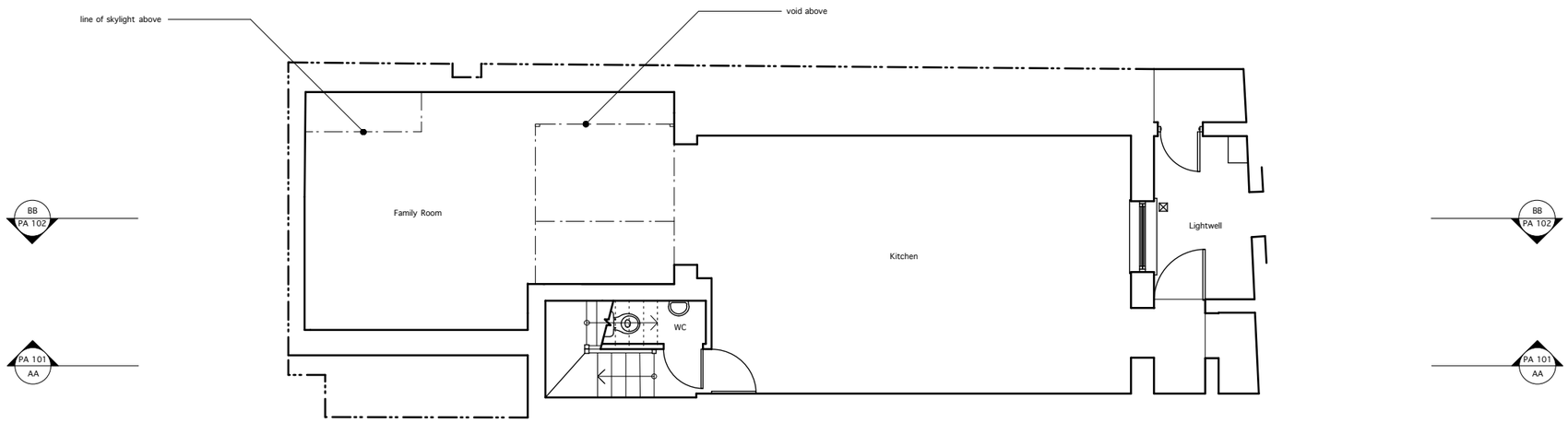

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project: 20 New End

project no: 262

drawing: Proposed Lower Ground Floor Plan

scale: 1:100 @ A3

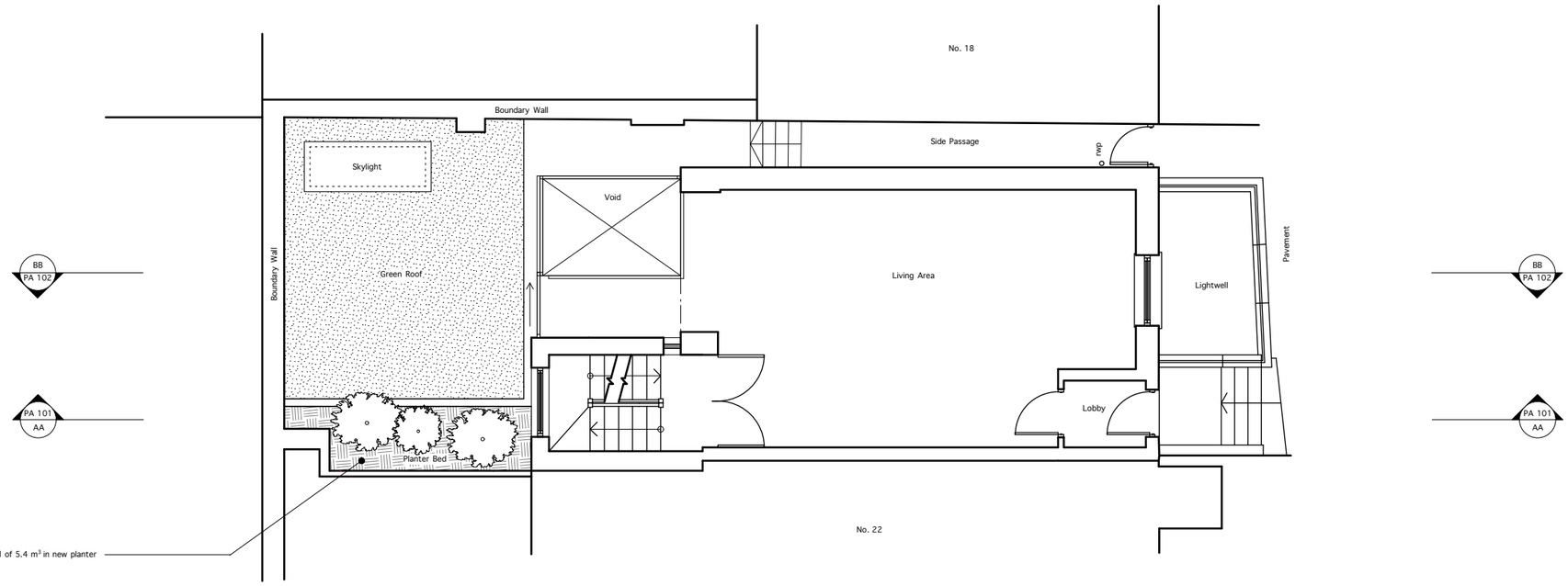
drawn by: ES

drawing no: PA 001

rev: /

date: June 2016

dwg status: Planning



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project: 20 New End
project no: 262
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drawing no: PA 002
rev: /
date: June 2016
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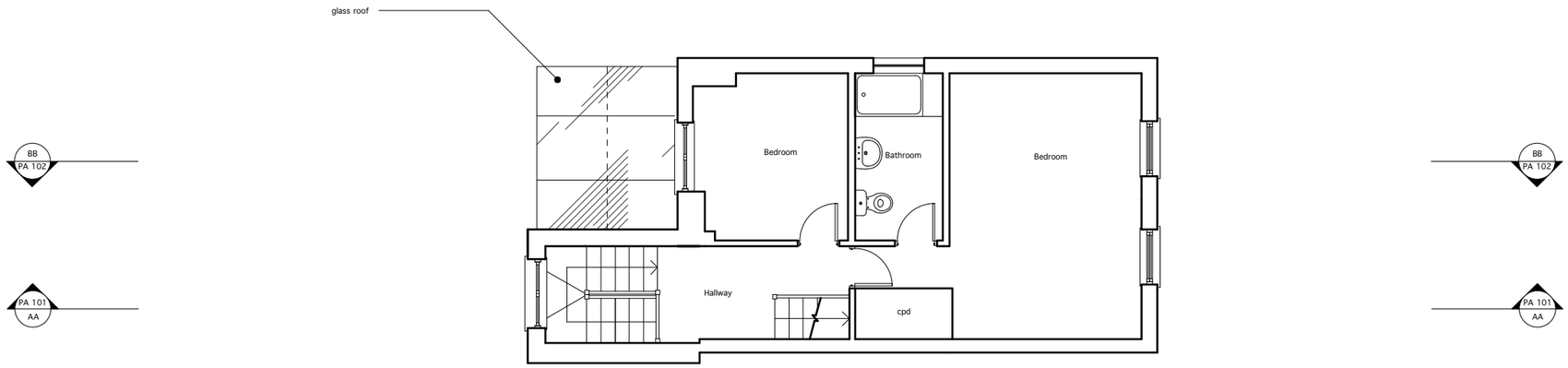

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project: 20 New End
project no: 262
drawing: Proposed First Floor Plan
scale: 1:100 @ A3
drawn by: ES
drawing no: PA 003
rev: /
date: June 2016
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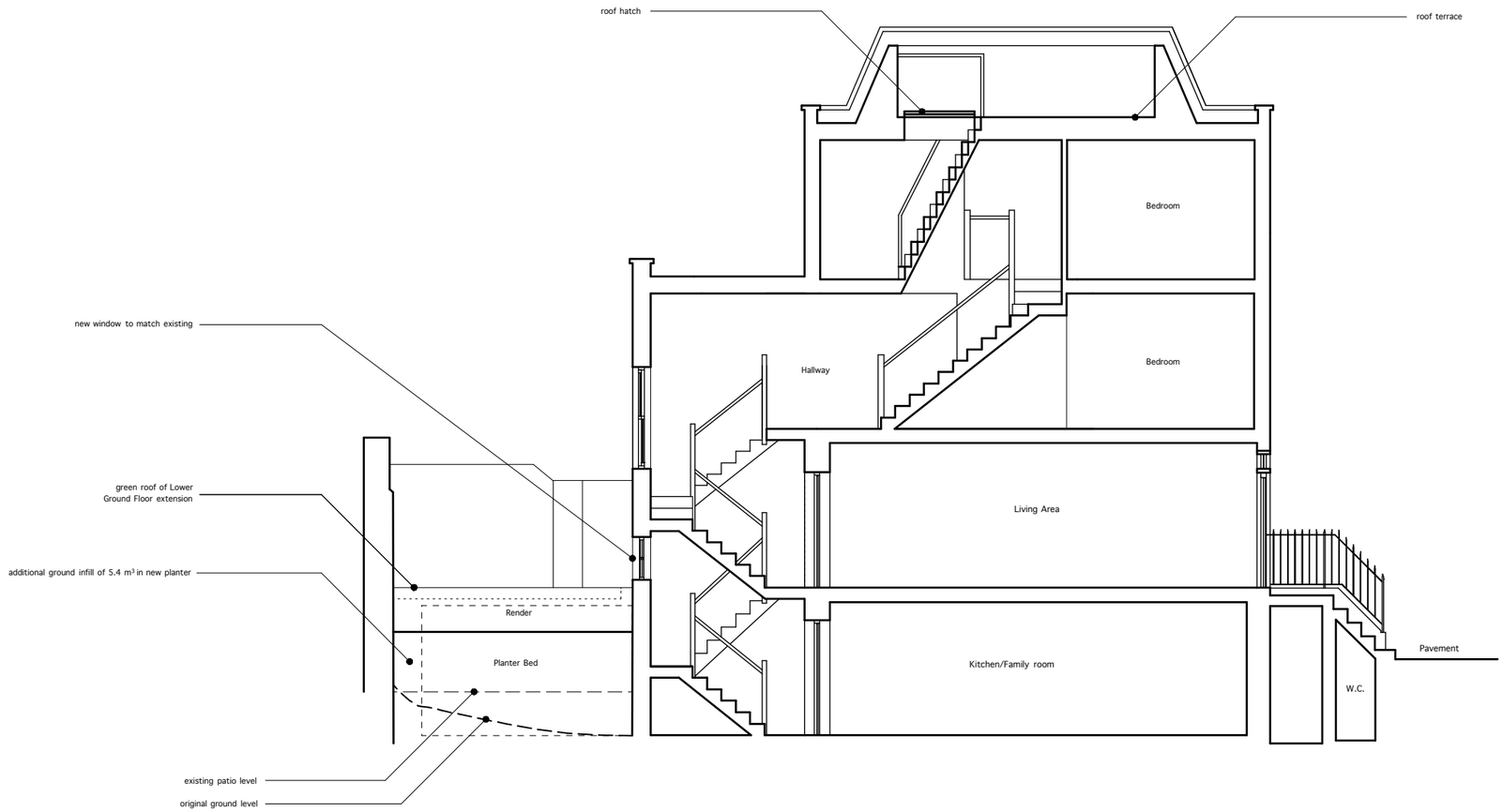

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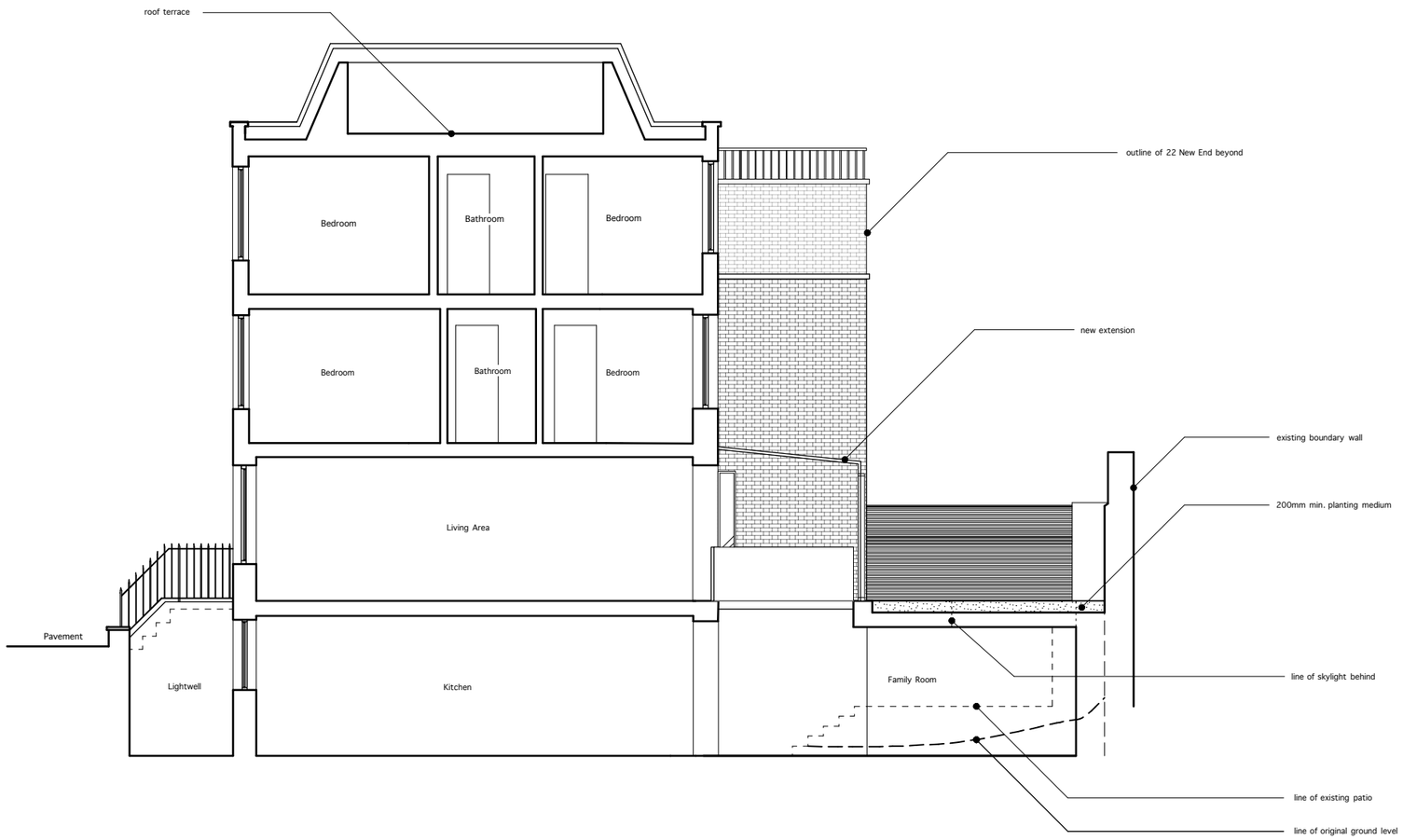
project: 20 New End
project no: 262
drawing: Proposed Section AA
scale: 1:100 @ A3
drawn by: ES
drawing no: PA 101
rev: /
date: June 2016
dwg status: Planning



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scale: 1:100 @ A3
drawn by: ES
drawing no: PA 102
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drawing: Proposed Front Elevation
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drawn by: ES
drawing no: PA 201
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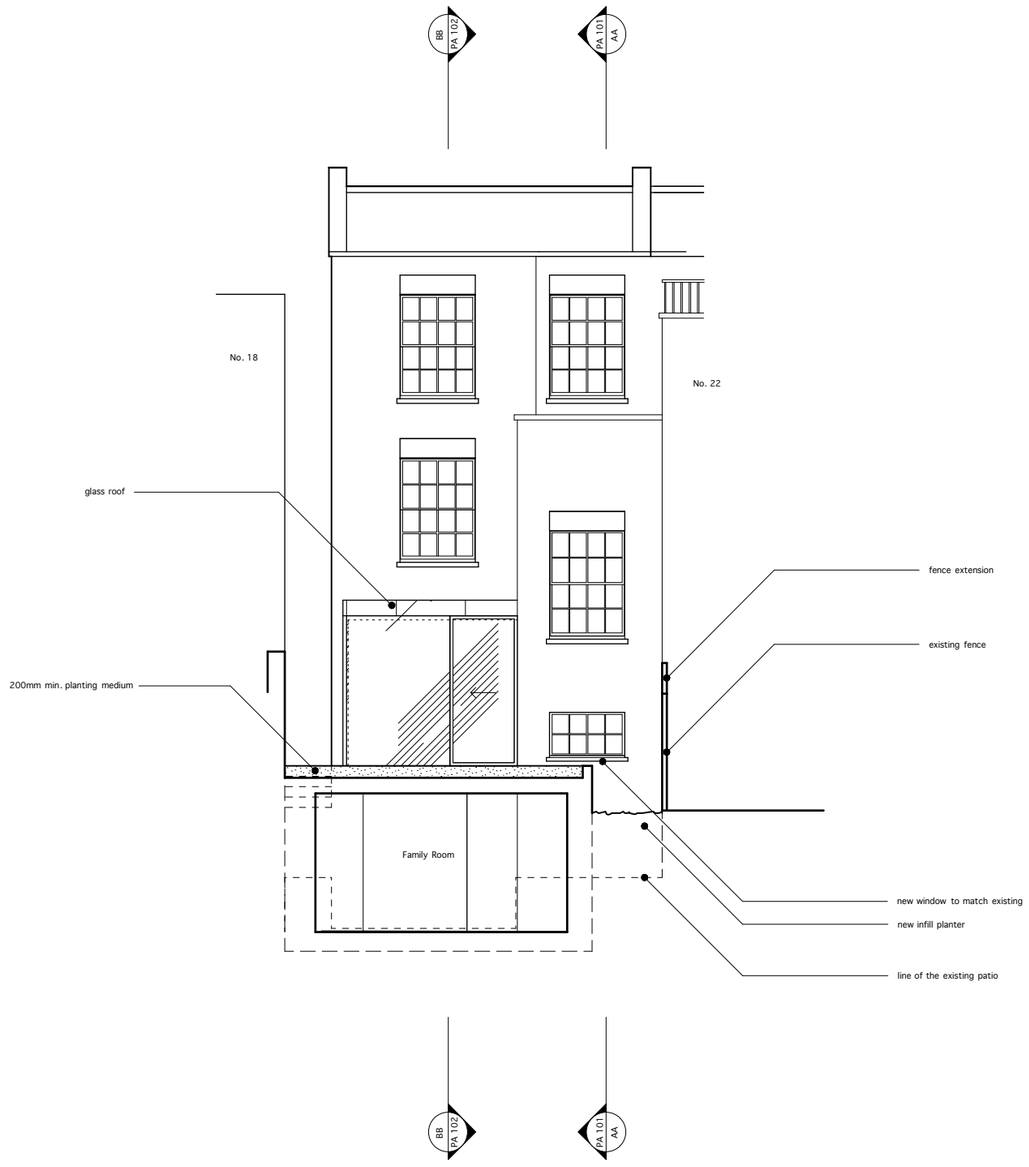

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drawing: Proposed Rear Elevation
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drawn by: ES
drawing no: PA 202
rev: /
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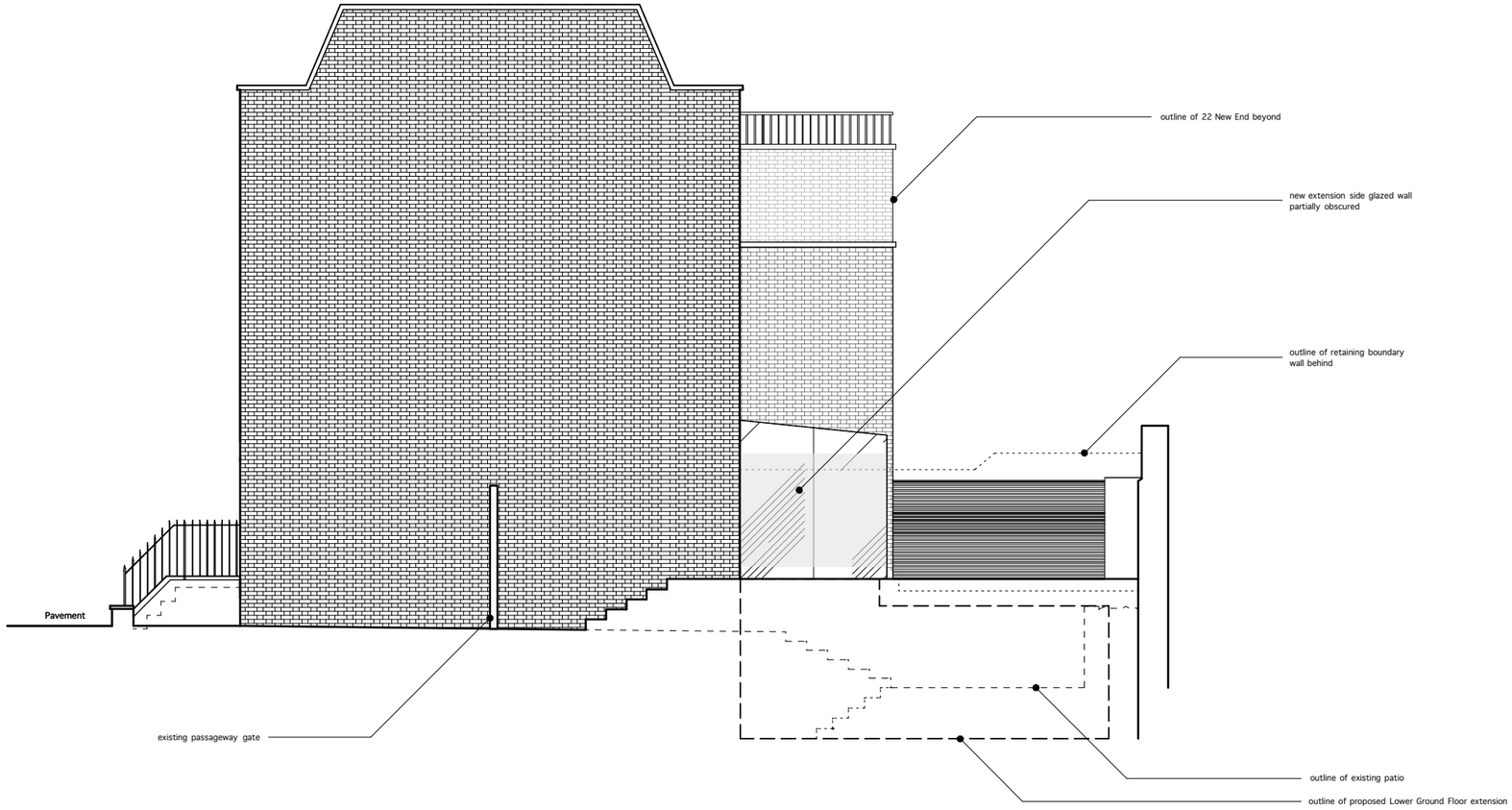

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Excerpts from The GRO Green Roof Code: Green Roof Code of Best Practise for the UK 2014

Fig. 2.2.4 Intensive Green Roofs. p8

Fig. 2.3.1 Sustainable Drainage (reducing flood risk). p9

2.2.2 Biodiverse Roofs

As the name suggests Biodiverse roofs are created primarily for biodiversity purposes and can aim to recreate the habitat that was lost when the building was erected, or even enhance it.

A 'Green' biodiverse roof would generally be broadcast with an appropriate seed mix (often wildflowers and grasses), and/or planted with species of plug plants (often wildflowers, sedums and grasses) to encourage specific plant types that will support certain bird and invertebrate species. Pre-grown mats containing mixes of drought tolerant wildflowers, grasses and herbs can also be installed to provide a more "instant" cover.

This category includes the 'Brown' biodiverse roof or "Brown Roof" which is not purposefully planted. The growing medium is selected and installed to allow indigenous plant species to inhabit the roof over time.

Substrate depths may vary across the roof deck to promote a diversity of both shallow and deep rooted plants and ones which are more and less drought tolerant. Undulating substrate depths also create differing habitats for a greater range of invertebrate species. Pebbles, boulders, gravels, sands, branches and logs may also be placed within the system to offer suitable habitats.

The "management" of a biodiverse type green roof very much depends upon what the client requires. It can be managed more heavily to produce a controlled "wildflower meadow" type environment. Less management input may lead to the development of vegetation which progresses naturally relating to the prevailing conditions.

2.2.3 Semi Intensive Green Roofs

An intermediate green roof type that can include characteristics of both extensive and intensive roofs. Typically requiring a substrate depth of 100 - 200mm, a wider range of plants can be included compared to extensive green roofs, including shrubs and woody plants. Irrigation and maintenance requirements are dependent upon the plant species installed.

2.2.4 Intensive Green Roofs

Intensive green roofs (also termed Roof Gardens) are principally designed to create recreational and amenity spaces for people to enjoy. They are generally accessible and contain features similar to traditional gardens including lawns, trees, shrubs and hard landscaped areas. Intensive green roof systems involve using greater substrate depths (usually above 200mm) and often create a larger weight loading on the roof. Intensive green roof systems require a higher level of maintenance, including regular irrigation.

2.3 Benefits

Green roofs offer many advantages for building developers, owners and their users. They benefit the wider environment through their positive impact on sustainability, biodiversity and the attenuation of storm water. They create visual enhancement of the landscape and fully exploit the spatial opportunities for visual and recreational benefit with the possibility of planning gain. In economic terms green roofs can have long term financial benefits. Combined with Solar Photovoltaic (PV) panels they can enhance the power production of the PV units due to the cooling nature of the green roof.

2.3.1 Sustainable Drainage (reducing flood risk)

More and more impermeable surfaces such as roads and buildings are constructed at the expense of permeable surfaces such as fields and meadows. The result of rain falling on hard surfaces is that it runs straight off through the drainage systems into rivers.

Therefore, in times of heavy or prolonged rainfall, existing drainage systems have to cope with large volumes of water which often, when built, were not designed to do so. This can result in them backing up and subsequent flooding especially during summer storm events.

The major flooding seen over recent years can be partly attributed to the increase in built up areas and reduction of vegetated areas. Therefore developers are 'strongly encouraged' by planners to employ Sustainable urban Drainage Systems (SuDS) on new developments.

SuDS are "A sequence of management practices and control structures designed to drain surface water in a 'more sustainable' fashion than some conventional techniques" (CIRIA 2000).

The Environment Agency can request that local authorities put conditions on planning permission such that the developer must restrict run off from the site to greenfield levels for a 100 year storm event.

PPG 25 (Development and Flood Risk) recommends that SuDS should be considered for new developments and encourage local authorities to include them in their development plans.

The inclusion of a green roof system can be looked at as one method of source control for SuDS:

- Water falling as rainfall onto a green roof is held within the pore spaces of the growing medium.
- Water is taken up and used by the plants.
- Some of the water held within the plant is lost back to the atmosphere by evapotranspiration.
- Rain droplets are often trapped within the vegetation and can then evaporate back into the atmosphere.
- Water can be held within the drainage system of the green roof build up.
- The drain water run-off rate is very much reduced due to the time it takes for the water to percolate through the green roof build up and out via the drainage outlets. This, therefore, releases any excess water over a longer time period enabling the terrestrial drainage systems to cope better.

The table below highlights the reduction in rainfall run-off, as the depth of substrate increases.

Roof Type	Run-off Percentage
Standard	81%
Standard + 50mm of Gravel	77%
Green Roof + 50mm of Substrate	50%
Green Roof + 100mm of Substrate	45%
Green Roof + 150mm of Substrate	40%

Source: Green roofs as a tool for solving the rainwater runoff problem in the urbanised 21st century?
Mentens, J.; Raes, D.; Hermy, M.
Revised 2005.