Henning Stummel Architects
Land at 152 Royal College St.
Design & Access Statment

Design and access Statement
152 Royal College Street

This application is for the redevelopment of a prominent corner site along Royal College Street. The site has a south facing flank overlooking the canal. Unfortunately, the busy and confusing junction in front of the site detracts from the beauty and of this lovely location.

This is a distinctive urban space along the otherwise uniform Royal College Street. The canal and the green of the trees combine to create a park like setting that our project seeks to address.

Site Plan

1 : 1000

0 10 30 60

Character of the area

The site is in a conservation area, which is largely early Victorian in character. Brick terraced town houses define the dominating scale, rhythm, and materiality. Along Baynes Street the adjacent building to the East, by Jestico and Whiles is an interesting example from the eighties, looking to re-establish high-density mixed use.

178 Royal College Street - Yellow brick three storey terrace, with a shop on the ground floor.

Bruges Place along Baynes Street.

History

A Victorian town house stood on this plot. This was lost to fire in the early seventies.

For years the empty site was used for motor vehicle trade, most recently about eight years ago (and perhaps ahead of its time) the site was used for the sales of electric scooters.

We've submitted two earlier schemes, both granted, subject to S106 agreements. Although exciting, their realization would have been slow, and we were unable to raise the finances.

178 Royal College Street - Yellow brick three storey terrace, with a shop on the ground floor.

It is our ambition to finally bring this site into use and we've learnt lessons from the previous schemes.

The option of incremental realisation:

We're now looking at short terrace of small townhouses that would overlook the canal. This approach allows for incremental development. This offers options regarding financing and procurement. Moreover, this idea responds to strong local demand for family dwellings.

Quick and clean Construction:

The proposal is designed for quick closed panel prefabrication, to minimize inconvenience, dust, and dirt as well as road closures. This approach also reduces the uncertainties associated with traditional procurement.

Basement:

We decided not to build a basement. This reduces cost, time, and risk. Basement construction is associated with a large carbon footprint, because it requires lots of energy-intense concrete. In any event subterranean space has little quality.

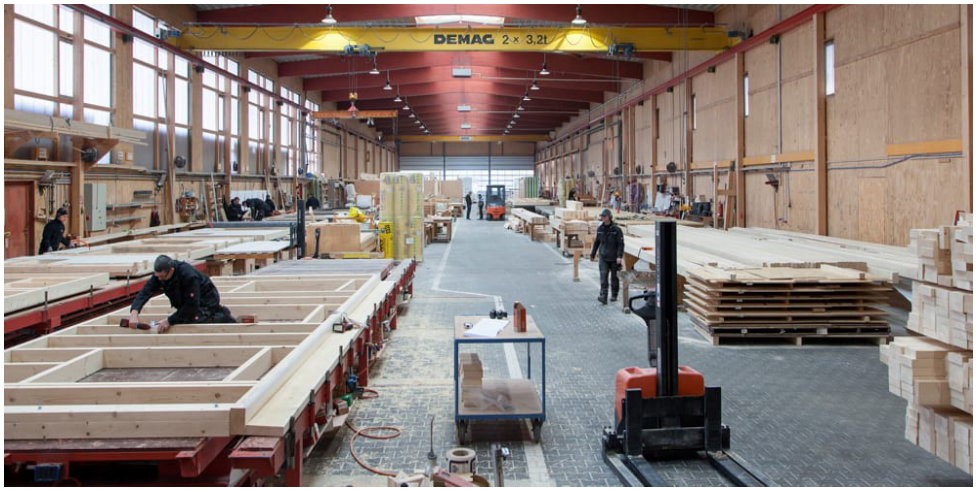
Environmental standards
Carbon footprint

Energy efficiency in running dwellings has long been an issue and the standards set by 'Passive House' are to be met. More recently the carbon footprint embodied in the construction has moved into focus. Our aim is to use mainly regenerative materials and to do this efficiently.

Method of Construction:

This proposal is for prefabricated timber frame construction, made up of insulated wall elements which already include windows and external cladding. These can be rapidly assembled with a crane on site, whilst fulfilling high standards in quality, airtightness (achieving 'Passive House' standard every time) and minimal embodied carbon footprint.

The factory environment allows offcuts etc. to be recycled, thereby avoiding any waste.



Brueggemann Workshop - Munster prefabrication plant

Cladding

The most efficient way to assemble a house made of prefabricated timber stud walls, is to prepare as much as possible in the factory and to avoid work on site. To this end, manufacturers install windows and attach the cladding in the factory, so it is advisable to choose a light and resilient cladding material. We're suggesting a ship lapped cladding made from an Eternit product called 'Equitone'. This avoids the pitfalls of traditional ship lap. It is fire resistant and requires no maintenance.

Historically, there were countless ship-lap timber houses in London. It was a local vernacular.

Three Colt Street at the beginning of the 18th Centruy.

Traditional wooden houses however require regular maintenance and are prone to fire. The extremely resilient Eternit cladding addresses both these issues.

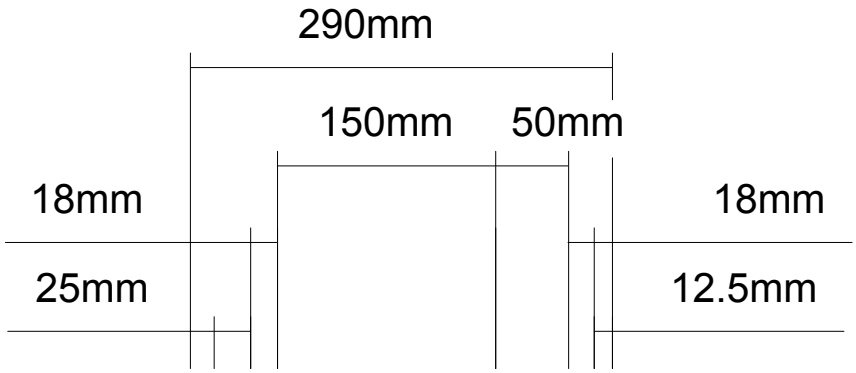
The mottled colour requires no re-decorating. Air borne particulates will not alter the appearance of the cladding. We suggest an iron oxide colour that will be in dialogue with the surrounding brick houses.

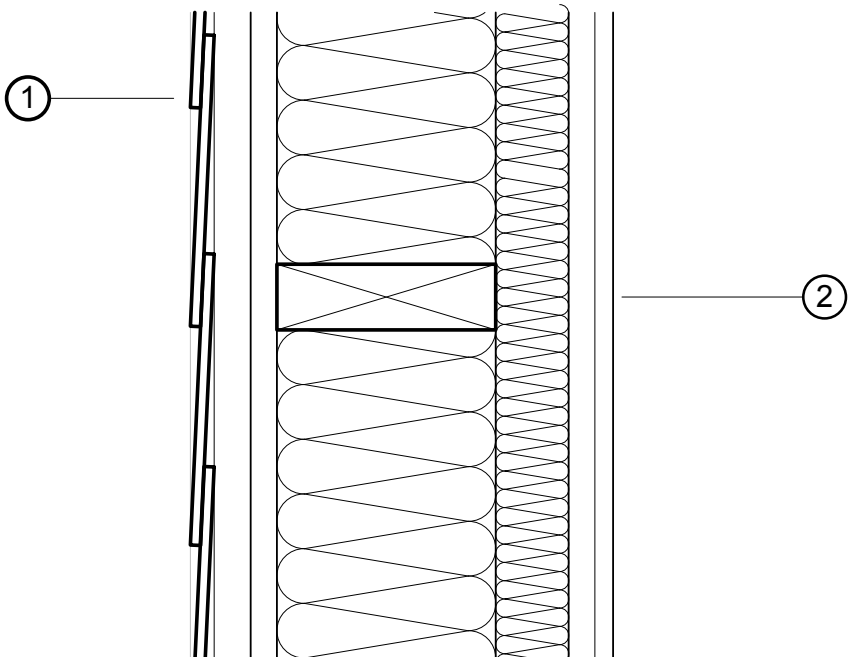
Equitone N331 Fibre Cement Board.

Wall build-up

This is a ventilated façade with a generous air gap, which ensures that moisture within the wall is regulated and reduces the danger of heat building up. The walls themselves are built of pine studwork at 600mm centres and insulted with an insulation made of recycled paper, wood fibre or possibly mycelium (this would be the first application in London – mycelium is a natural fire-retardant).

General Wall Detail
1 : 5 Section





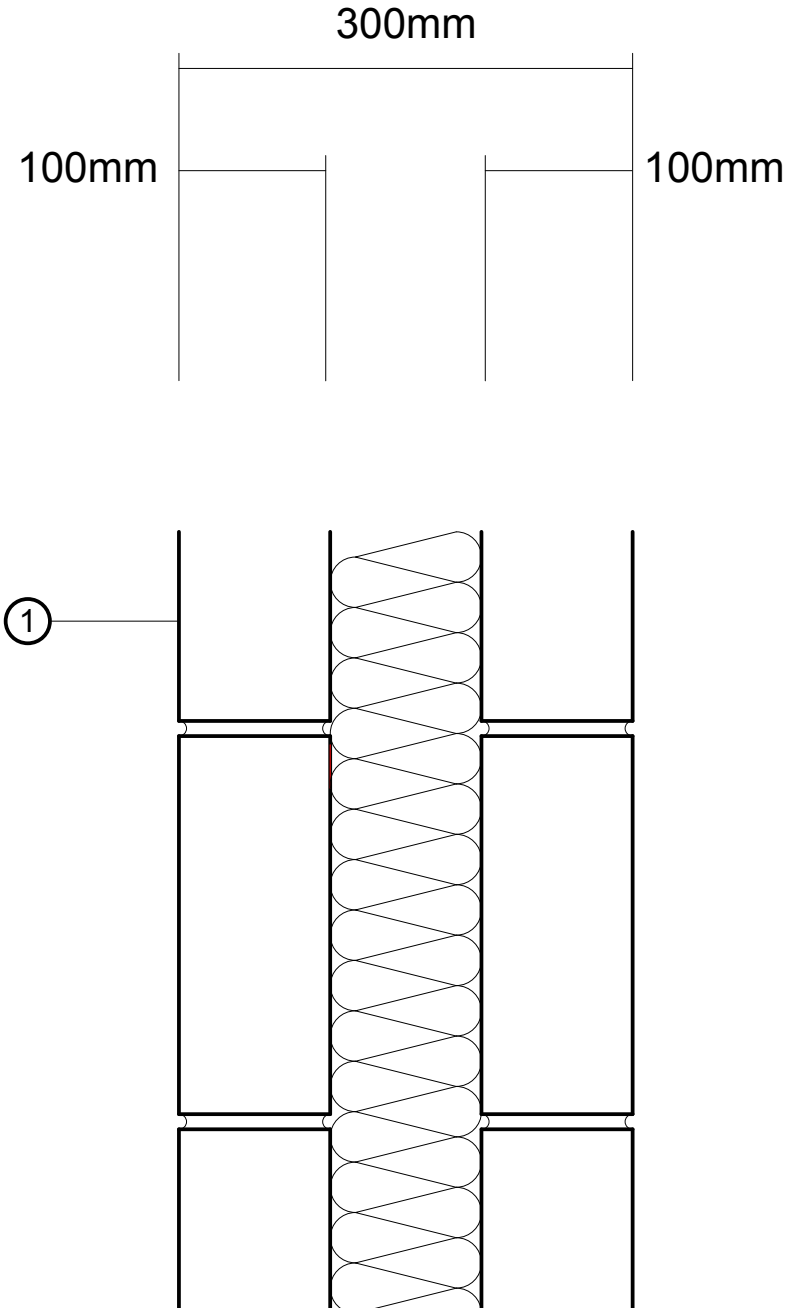
1 8mm Equitone Fibre Cement board
25mm Vertical Timber Battern
18mm OSB
Vapour Barrier

2 12.5mm Plaster
18mm OSB
50mm Insulation
150mm Timber Stud
150mm Insualtion

Stud construction makes more efficient use of limited timber resources than cross laminated timber.

The party walls are made of two layers of traditional 100mm masonry separated by an 100mm layer of acoustic foam. This build-up provides both thermal mass and minimises the transmission of sound from one unit to another.

General Party Wall Detail
1 : 5 Section



1 Finish
100mm Blockwork
100mm Insualtion
100mm Blockwork
Finish

Air pollution

A report about the local air quality was produced by consultants PES. This showed the air to be better than we had anticipated. What is more, over the coming years widespread use of heat pumps and the electrification of traffic will improve matters. Non the less, busy urban junctions have higher levels of air pollution, and this may affect the air quality particularly in the corner house.

Heating and ventilation:

With ‘Passive House’ construction the houses will be airtight. Each dwelling is heated with its own air source unit and fitted with integral heat recovery ventilation.

The air intake is above the roof and away from the busy junction and the ventilation system can provide clean air to all the habitable rooms throughout the year.

Groundsun - Air Source heating unit

Sustainable Urban drainage

We are proposing extensively planted green roofs to absorb extreme precipitation and offer greater biodiversity.

C1 Shaping Good Places

1.Physical context

To ensure that that this proposal meets current guidance we have the scheme against the criteria set out in the 2015 London Mayors policy

Royal college street at the beginning of the 20th Century.

The character of Royal College Street is determined by early Victorian brick townhouses, so that height and materiality are fairly homogeneous along its length. Our proposal picks up the proportions and the rhythm that dominates Royal College Street.

Baynes Street developed more recently and is less uniform, but also less influential on how the neighbourhood is perceived. This street however sits on the canal, and this prompted us to explore a short terrace overlooking the canal.

We established that there is room for three small town houses on this site. Three establishes a group or a theme. The relatively modest seize of about 100sqm per house offers adequate and affordable family living, to meet local demand.

These compact, tall south-facing dwellings need to respond to the different parameters at either end of the plot. Each house will be different...
The use of a unifying design features, such as using the same external cladding and similar silhouettes unite the group.

As reference we include an image of some fishermen's huts in Hastings.

Fishermans Huts in Hastings.

The scale and rhythm of Royal College Street determines the proportions of the corner house.

The middle dwelling can potentially be a little higher and the house at the other end of the terrace will need to be lower to reduce its impact on Bruges Place and the rear of 154 RCS. So, all three houses have a distinct height.

A visualition of the furture proposal (under-developement) along Baynes Street.

We see the little terrace a continuation of the charming canal front pedestrian terrace on the other side of Royal College Street.

2. Local network of public space

The terrace overlooks a lovely, but hitherto neglected green space on the banks of the canal.
The passive surveillance provided from the little terrace will make this more secure and improve the character more generally.

The exciting project for an elevated ‘Camden Highline’ is within a hundred meters walking distance.

3. Topography

The Baynes Street pavement is right in front of our little terrace and the junction with Royal College Street is busy. We concluded that habitable rooms at ground level would not be desirable. We sought different solutions for each house.

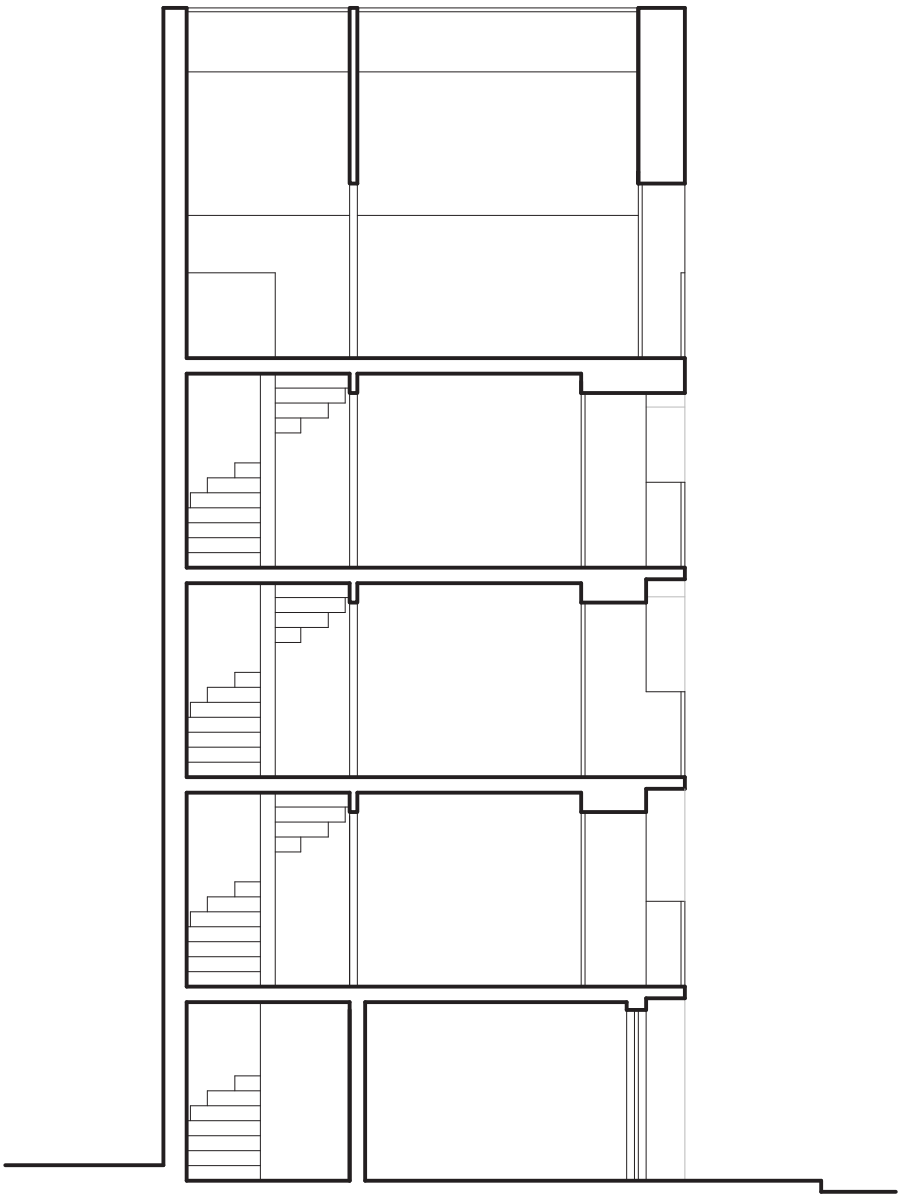
For the corner unit we chose an elevated ground level and a shallow half basement. A low bin and bicycle storage is accessible from Baynes Street. The lower habitable room behind this is set back from Royal College Street, offering a little

defensible space and an external access, that can be retrofitted with a plat form lift.
The tall middle unit has a covered entrance within a generous alcove. This offers as space for the bin and bicycle storage.

The third wider unit has a similar arrangement but there is a barrier free bedroom with ensuite bathroom, set a little back from the road. This has its own entrance and might also be used as an office or sublet.

Otherwise, all habitable rooms are on the upper floors and overlook the canal.

Section
1:100



In this way the scheme makes efficient use of the plot and offers distinct, practical and individual lifetime homes that enrich the neighbourhood.

4. Land use mix

The proposed compact family dwellings will blend into this largely residential neighbourhood. This dense and urban part of town is popular with families. Excellent schools and health facilities are nearby. The British Library, Eurostar, UCL, and the Westend are in cycling distance.

5. External Open space

The houses do not have private or communal gardens. They each however have balconies that add up to at least 5sqm and are described below (4.2.)

As mentioned, the little terrace overlooks a hitherto neglected public space on the banks of the canal. This space is immediately on the doorstep. Passive surveillance will improve its character, making it more inviting to our inhabitants and the wider community.

Airel image above the junction of Baynes street and Royal College street showing the green space opposite the site.

Design for a diverse city - Diversity of residential type

These houses can suit many different scenarios: They can be suitable for a family, a couple, or house sharing. The houses are reasonably adaptable for barrier free living M4 (2), so that they can work as a lifetime home. We have set the three dwellings against the criteria for M4 (2) and the schedule is attached to the application

The corner house offers three double bedrooms and two reception rooms. The middle house offers two double bedrooms and two reception rooms.The Third house offer two double bedrooms, on single and a large reception room.

Accessible housing and inclusion

The house entrances are easy to find and identify from the public domain. The front doors are set within well-lit alcoves that provide cover from inclement weather.

The dwellings have been designed to be accessible and adaptable as set out in requirements of part M4 (2). Staircases are 85cm wide and a chair lift can be retrofitted.

These houses are small in plan, but they are tall.
These proportions reflect the prime location. They can be seen as an alternative to living in apartments. The advantage they have is that each house stands on its own grown and has its own door.

Sense of Community

These distinctive houses will enrich the area and form a group of dwellings that share an outlook over the canal and the little park area, thus improving passive surveillance.

They provide dwellings where people can remain within their community throughout their lifetime.

Consultation

The scheme was shown and discussed with the local resident's association, CAAC, on the 4th of July and was much appreciated. At that time the corner unit included a ground floor shop.

From Street to front door – Access and servicing

The house entrances are easy to find and identify.

Bin and recycling areas have been allocated and provide space for two 120 litre wheely bins.

These areas are covered for protection against rain, but located externally, to manage smells.

Safety and security

The entrance areas meet the requirements set out by the insurance industry and we are happy to consult with the local police to ensure that the house meets the requirements of 'Secure by design'.

We have mentioned the improved passive surveillance that will enhance local safety.

Cycle parking & car parking

The houses have convenient, secure, dry, adequately dimensioned, and accessible bicycle parking.

Public transport is very good, and this is car free development.

Dwelling Space standards

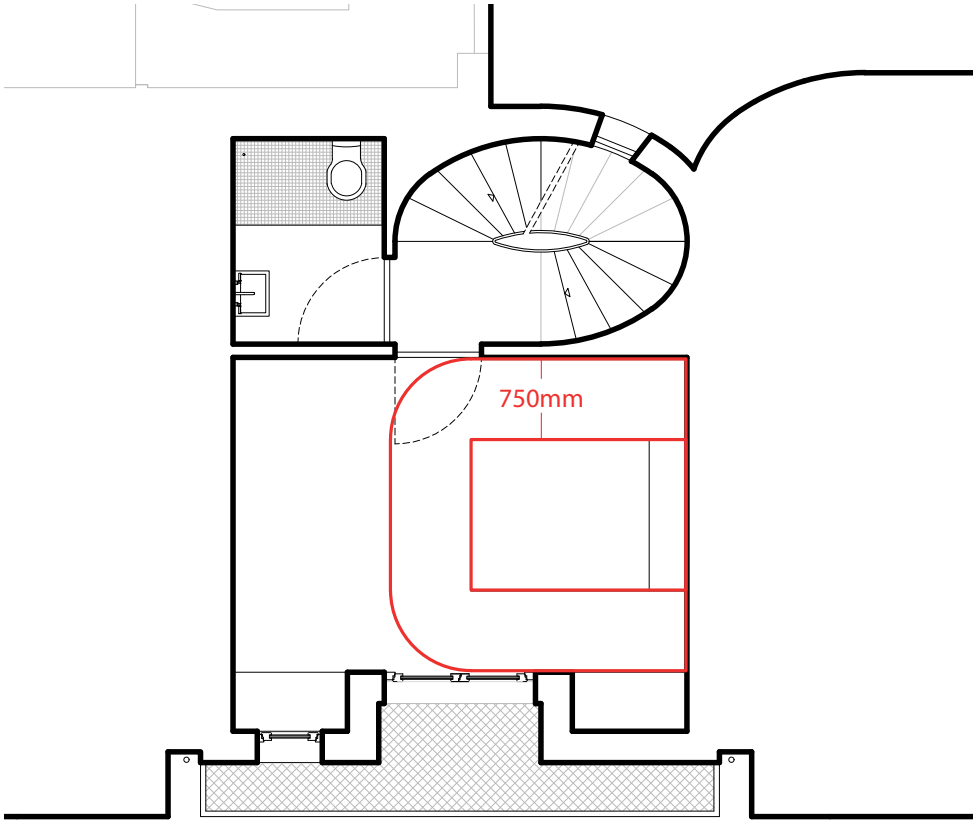
4.1.1
The houses fulfil the London plan housing standards.

4.1.2
The bedrooms exceed the requirements set out in the standards.

4.1.3
The houses have been designed to meet the requirements of Part M4(2). This standard was off course written with lower rise dwellings in mind. The density and hight are in this case a function of the central London location

4.1.4
The Living rooms are capacious, and well-proportioned (widths are a minimum of four meters) so allowing for furnishing options.

Second Floor Bedroom Plan - 750mm distance around a double bed



Private Outside Space

The corner house has at least 5 sqm of private external space. These are provided by balconies that overlook the canal. One is large enough to allow for a table and chairs (1.5m x 1.5m). This offers opportunity for alfresco meals.

Daylight, sunlight, and overshadowing

All habitable rooms have good natural light. Almost all rooms have the benefit of generous South facing French windows (150cm x 210cm) and the corner house have additional windows facing East and West.

The set-in balconies provide shade, offering protection from the high summer sun, but letting the lower winter sun penetrate the space.

Spatial Quality

Internal floor to ceiling heights are 2.5 meters – the living rooms at the upper level are under the roof and have the benefit of the additional ceiling height under the apex. A roof-light above these spaces offers top light and ventilation.

A visualition of the top floor kitchen and dinning area.

Privacy

Habitable rooms are above the street level, and the interiors cannot be seen from below. The balconies, partially set into the volume of the houses lend depth to the façade.

The dwellings are separated from one another by thermal and sound insulated masonry cavity party walls, minimising sound penetration from one unit to another.

The staircases and bathrooms are located to the rear i.e., north side of the dwellings. These are buffer spaces in relation to the house at 154 Royal College Street.

Aspect and Outlook

The dwellings have a spectacular South facing aspect.

Air quality and noise

The building is on a busy corner junction. Our air test results show that the pollution is not as bad as feared. Non the less the houses are of airtight construction with triple glazed windows.

They are is to be fitted with heat recovery ventilation, providing fresh heated air to the habitable spaces, and extracting exhaust air from the bathrooms and kitchen areas. The heat exchange unit will have its intake on the roof away from the junction, that is to say as far away from the source of pollution as possible.

A visualition of the living space on the 2nd floor

Thermal comfort

The well insulated dwellings are designed in accordance with ‘passive house’ standards.

The houses will be heated with air source units, and we are specifying products that do not require unattractive or noisy external fan units but are located inside.

Environmental sustainability

The fabric has been designed to use the greatest proportion of regenerative materials, possible at this time.
We mentioned the ‘passive house’ standards above. Beyond that we are proposing the use of solar roof tiles that are fabricated in a colour to match the rest of the building.

We found two manufacturers and attach images of the products. Danish Solar Energy Ltd. & Megasol Energie, Switzerland (PV rooftiles Magasol)

The Southwest facing roof slope have the benefit of direct sun exposure. (12m2) will offer each house a PV system size of 2.0 kW

Life cycle emissions

Low emissions in operation have been mentioned.
The construction method focuses on using renewable and recycled constructions materials and to do this efficiently and avoid waste.

We anticipate that the houses will have a life expectancy exceeding a hundred years and the materials themselves can be recycled.

The dwellings are being designed to allow for disassembly. Re-erection in a different location should be possible

Water consumption

Plumbing fittings are specified to limit water consumption to 105 litres per person and day.
The tall design and high-level rainwater storage might be used to replenish the WC cisterns.

Urban Greening and biodiversity

This site currently offers little or no biodiversity. Whilst most of the site will be overbuilt, the roofs are to be intensively planted and the balconies offer additional planting space.

Flood mitigation

The intensively planted roofs will slow rainwater run-off. We checked the government website to assess the flood risk. The surface water floor risk is ‘low’, and the danger of river or sea flooding is ‘very low’.

Air pollutant emissions

This project has been designed to be air quality neutral.

Adaptability and circularity

The house is adaptable to diverse scenarios as set out above under 2.1

We also mention the option of reuse, disassembly, and recycling.

Safeguarding development potential

This development does not prejudice the development of adjoining sites. Indeed, the probability of upgrading the adjacent canal front will be enhanced.

Quality, maintenance, and management

The proposal has been designed and detailed for a long life and low maintenance outlook. We're probably looking at individual owner occupiers who will in all likelihood manage their individual properties.

Summery

This proposal offers the chance to dramatically improve a locality and to add a modest, but charming, new, sustainable and desirable dwelling to an established neighbourhood.

A visualition of the furture proposal (under-developement) at the corner of Royal College Street and Baynes Street.