

Carbon Neutral Retrofit Apartments at 19 Beaver Road
Didsbury, Manchester, M20 6SR

DESIGN & ACCESS STATEMENT

PLANNING APPLICATION

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CONTENTS

Contents 2

1.0 Introduction 4

2.0 Process 5

3.0 Design 7

4.0 Access 12

5.0 Sustainability 13

6.0 Conclusion 15

SUPPORTING DRAWINGS

• PL_000-E-R-001	Location Plan	1:1250
• PL_100-E-S-001	Existing Site Block Plan	1:200
• PL_100-P-S-001	Proposed Site Block Plan	1:200
• PL_100-E-0-001	Existing Ground Floor Plan	1:100
• PL_100-E-1-002	Existing First Floor Plan	1:100
• PL_100-E-R-003	Existing Roof Plan	1:100
• PL_100-P-0-001	Proposed Ground Floor Plan	1:100
• PL_100-P-1-002	Proposed First Floor Plan	1:100
• PL_100-P-R-003	Proposed Roof Plan	1:100
• PL_200-E-X-001	Existing Elevations 01	1:100
• PL_200-E-X-002	Existing Elevations 02	1:100
• PL_200-P-X-001	Proposed Elevations 01	1:100
• PL_200-P-X-002	Proposed Elevations 02	1:100

1.0 INTRODUCTION

This statement has been prepared to support a full planning application for the conversion of an existing commercial building in Didsbury to residential apartments. The document should be read in conjunction with the supporting plans listed on the previous page.

This proposal seeks to convert an existing commercial building in Didsbury to residential apartments. The building was a two-storey semi-detached mixed use building, a commercial shop building with accommodation on the first floor, which has been extended over the history of its use. This proposal seeks to change the use of the building to be purely residential. With the introduction of a second storey to the single storey extension on the North Elevation, and the addition of retrofit insulation, cladding and refurbishment, this proposal would enable the creation of four single bedroom residential apartments of a high standard in terms of both construction and energy efficiency.



2.0 PROCESS

SITE APPRAISAL

The existing building was extended with a two storey outrigger to the rear (east) elevation in 1977 (F06572) to create additional space for a staff area and bedrooms above. The building was further extended in 2003 with a single storey extension to the North elevation (067266/FO/SOUTH/03). The building is currently in use as a single commercial unit, with a showroom, workshop and staff area downstairs and a storage and office arrangement upstairs. The building is unique on Beaver Road, being the only property with a commercial appearance as a principal elevation in a residential area.

The building adjacent and others in the immediate context are of a mostly solid wall red brick construction, with decorative white render adorning the first storey. The roofing materials are terracotta style clay tiles or slate.



Satellite photo of site

3.0 DESIGN

3.1 USE

The change of use of this commercial building will repair the domestic nature of Beaver Road. This proposal would remove the requirement for commercial vehicles and late night working, both of which are currently possible on the site of the commercial UPVC window fabrication business.

The proposal provides ample space to facilitate off road parking for up to two vehicles.

3.2 AMOUNT

The site area is 206m². Of this, the existing building footprint occupies 96m². This proposal does not seek to increase the building footprint. The existing building would be extended on the first floor to match the ground floor area and footprint, by means of a second story addition to the existing extension to the north elevation. This would enable the creation of 4 no individual apartments, which would comply with space standards and include adequate storage, of internal floor areas 37.2m², 40m², 37.6m² and 37.3m². This proposal would seek to divide the 60m² rear yard into two gardens, each accessible via the ground floor flats.

3.3 LAYOUT

The dwellings will be set out over the two levels of the existing building, retaining the yard at the rear and turning it into gardens. The bedrooms will have their own ensuite-bathrooms. It features no rooms that might cause overlooking issues from the proposal into neighbouring properties.

This proposal would replace the arrangement of double doors and large commercial windows on the west elevation with more appropriate domestically scaled windows to match the existing windows on the first floor, and neighbouring buildings. The ground floor flats would be accessible directly from the front yard area. The first floor flats share a landing area and staircase, accessible via a third door on the principal elevation.

3.4 SCALE

The proposal makes use of the existing building and footprint, and only seeks to increase building volume via a first floor extension to the existing single storey element to the North. This extension would appear to align with the similar first floor extension on the neighbouring property to the north.

3.5 LANDSCAPE

The proposal seeks to integrate landscaped gardens to the rear of the site, which is currently used as a material store and commercial yard.



3.6 APPEARANCE

Beaver Road is not located in a Conservation Area, is not a listed building and is not within an area of flood risk. There is a small variety of architectural styles and finishes within the immediate context, of a mostly late 19th and early 20th century style. The majority are solid wall construction in red masonry, with decorative render applied at first floor level.

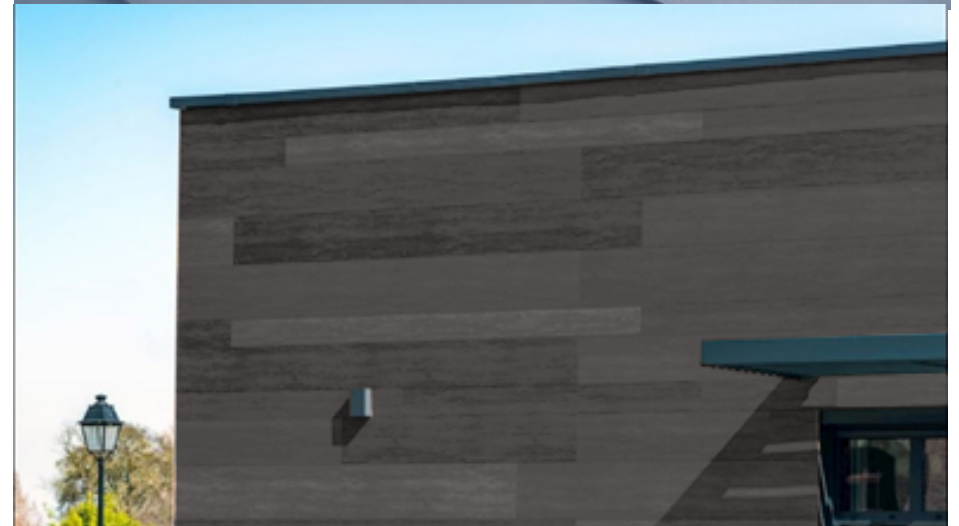
The proposal features a contemporary approach to the street facing vernacular of the neighbouring residential buildings.

3.7 MATERIALS

To replace the substantial amount of substandard commercial style glazing on the ground floor principal elevation, this proposal would seek to introduce a composite cladding, to reflect the decorative black timber embellishments on the nearby residential buildings. This would be implemented in a contemporary architectural style to reference the masonry coursing which has been removed in the past. The introduction of this cladding would enable the introduction of an external insulation as a retrofit measure to substantially enhance the energy performance of the building. This composite cladding would be Rockpanel Wood Black Oak.

The three doors on the principal elevation would be rearranged so the central door would form a more obvious and contextually appropriate main entrance to a private residence, while the doors to either side would be of a black timber appearance to blend in with the cladding. This would further enhance the domestic appearance of the building.

The external cladding will take the form of an insulated render on the first floor level to reflect the vernacular of residential buildings in the immediate context. The first floor render would be K-Rend K1 Polar White.



The roofing will be clay tiles to match existing, which are terracotta style and very typical of the area, and contextually appropriate. The proposal seeks to enable the installation of 8 no. Photovoltaic panels on the rear elevation of the roof.

The existing lead roof shop signage panel on the principal elevation would be replaced with a contemporary style minimal metal porch of zinc finish, to mimic the porches over the entrances of other residences on Beaver Road.

Windows would be of white UPVC as would be contextually appropriate.



The existing Principal elevation and neighbourhood context

3.8 RELATIONSHIP TO NEIGHBOURS

The footprint of the existing and proposed building are identical. Therefore, there will be no encroachment toward the neighbouring properties. Additionally, the proposed second storey extension would not affect the views or daylight to the neighbouring property to the North. This proposal does not seek to introduce any additional glazing to the North Elevation.



Neighbouring properties opposite the site of the proposal

4.0 ACCESS

The access to the site would be from Beaver Road. This proposal seeks to utilise the in-use retained access to the site as access to the proposed new dwellings. The proposed landscaping will accommodate parking for at least two vehicles on-site, and will feature sufficient secure storage for bicycles for the four proposed apartments.

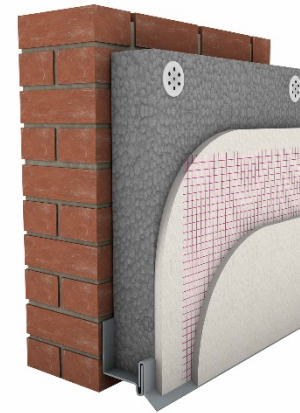
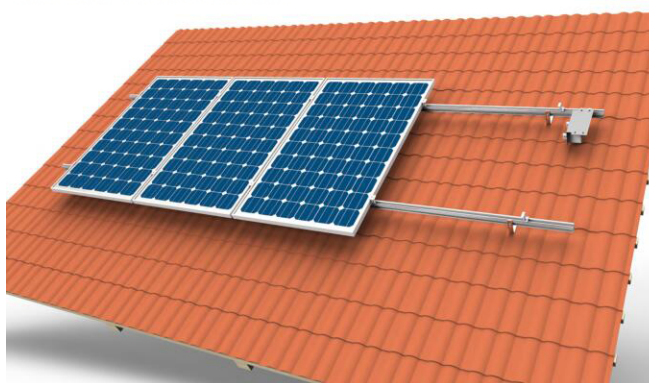
Works will ensure visibility splays are sufficient at the top of the access driveway, to ensure safe manoeuvring for vehicles to exit the site onto Beaver Road.

5.0 SUSTAINABILITY

This proposal would seek to replace the existing floor slab with a new insulated retrofit slab. Additionally, retrofit insulation would be applied to the existing roof above ceiling level, detailed around new mechanical elements. As mentioned above, all external walls would be externally insulated and overclad. The new windows would be of a U-value performance appropriate to triple glazing. All retrofit enhancements to the thermal envelope of the building would seek to comply with BREEAM checkpoints.

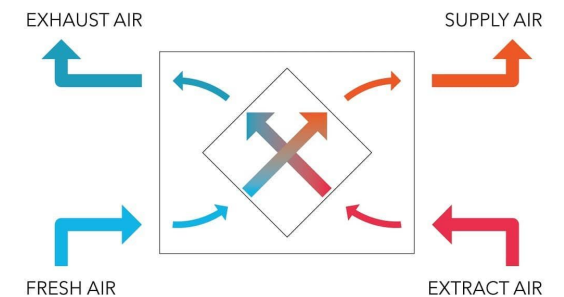
In addition to the aforementioned Photovoltaic array, this proposal seeks to introduce further energy enhancements including Airsource heat pumps, working with underfloor heating throughout as a manageable low energy heating strategy. This would function with Mechanical ventilation with heat recovery to ventilate the proposed flats. These elements would be serviced through subtle vent tiles on the roof, and white cowls on the north elevation.

2 no electric vehicle chargers would be included, with energy supplied via the PV array.



Air Source Heat Pump Water Heater

**MECHANICAL VENTILATION WITH
HEAT RECOVERY (MVHR)**



Beaver Road



Beaver Road RIBA Stage 2 - Energy Modelling and Technology Review

Energy Modelling Tool	SAP 2012	SAP 2012	SAP 2012
Modelled M&E Design	Baseline - Gas Boiler **	Option 1 - Electric UFH & ASHPHW w/ PV	Option 2 - Electric Panel Heaters & Instantaneous HW w/ PV
Space Heating (kWh / yr.)	15007.22	7306.59	7421.21
Water Heating (kWh / yr.)	2491.89	564.63	1392.87
Pumps, fans etc (kWh / yr.)	165	177.44	177.44
Lighting (kWh / yr.)	551.77	551.77	551.77
Unregulated (Appliances & Cooking) (kWh / yr.) *	0.0	0.0	0.0
PV Generation (kWh / yr.)	0.0	-1743.1	-1743.1
Total Annual Energy Consumption (kWh / yr.)	18215.9	6857.4	7800.2
Annual Running Cost (£ / yr.) inc PV Cost Benefit & RHI	£ 915.67	£ 1,364.13	£ 1,536.39
Annual SAP 2012 Carbon Emissions (kgCO ₂ / yr.)	4151.8	3559.0	4048.3
Percentage compliance over Part L 2013 SAP9	-	14.3%	2.5%
Annual SAP2020 Carbon Emissions (kgCO ₂ / yr.)	3772.3	932.6	1060.8
Percentage compliance over Part L 2013 SAP10.1	-	75.3%	71.9%

Inputs	Baseline - Gas boiler	Option 1 - Electric UFH & ASHPHW w/ PV	Option 2 - Electric Panel Heaters & Instantaneous HW w/ PV
GF U-value	0.25	0.15	0.15
Upgraded external wall U-value	0.30	0.20	0.20
New external wall U- value	0.28	0.2	0.2
Roof U-value	0.16	0.1	0.1
Opaque door U-value	1.8	0.6	0.6
Glazed door U-value	1.6	0.8	0.8
Glazing U-value	1.6	0.8	0.8
Air permeability target	15 (SAP assumption)	5	5
Ventilation	Natural ventilation	MEV- Vent Axia Sentinel Multivent A	MEV- Vent Axia Sentinel Multivent A
Main heating efficiency	89.5%	100.0%	100.0%
Water heating efficiency	n/a	300% +	100%
PV	None	2.4kWp PV	2.4kWp PV

6.0 CONCLUSION

As architects, we acknowledge the sensitivity of the creation of new dwellings, and the balance needed to provide a modern apartments which are suitable for the future yet enhance the existing surroundings. As such we have developed this proposal with an aim to engender a collaborative relationship towards developing a design that works for all parties and one which will gain full planning consent.

We feel the proposal enhances its local context and references the local architectural vernacular and landscape. The proposal complies with local and national planning policy while improving its relationship with neighbouring properties.

We feel the scheme at present evidences a duality harking back to a more traditional construction yet offering a contemporary materiality and level of comfort appropriate for aspirational modern living.