2.10 Northern Quarter Roof Expression Study

Proposed Roof Expression



The Northern Quarter prides itself on its individuality through its culture and atmosphere. The quarter's architecture has similar qualities and it's at the roof level where they are most prominent. The roofscape is awash with a range of expressions around the quarter. Theses have been characterised in the page opposite, under the following headings:

1. Building Crown
The use of expressive decoration around a high point on the building, usually at roof level.

2. Elevation Moment
A flat expression of the façade that projects past the final storey of the elevation, concealing the roofscape.

3. Turret
A moment along the façade where the building form is broken to form a 3d expression. Round, Square and hexagonal examples are present around the quarter.

4. Moments of Fun
The Northern Quarter exuberates fun through the expression and culture of itself. Moments of architectural fun and obscurity are evident, with colour and form being the dominant theme. Juxtaposed geometric forms hang together with regularized roof forms.

01. Building Crown
02. Elevation Moment
03. Turret
04. Moment of Fun

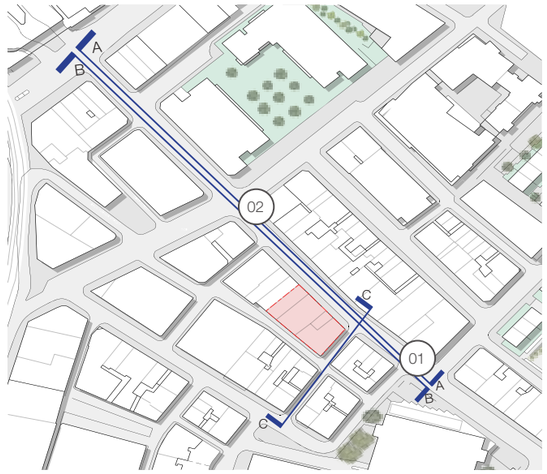


Elevation AA



Elevation BB

2.11 Site Contextual Photographic Elevations



Sectional Key Plan



Thomas Street East



Thomas Street West

Thomas Street has two sides and two ends; the street has consistent height along the north side (Section AA), but a more varied height along the south (Section BB).

Running from Shudehill, Thomas Street is grand and opulent with obvious wealth attributed to the cotton trade, but mainly due its location to Smithfield Market. The former offices of the Market and the collection of the buildings around the High Street junction are the more elaborate architectural expressions along the street. Once past High Street, the buildings are varied in scale and the elaborate architectural expression simplifies. Towards the middle of the street, weavers cottages, both rebuilt and existing, create a simple and elegant rhythm along the north elevation. The south has 3-4 storey buildings with various roof heights.



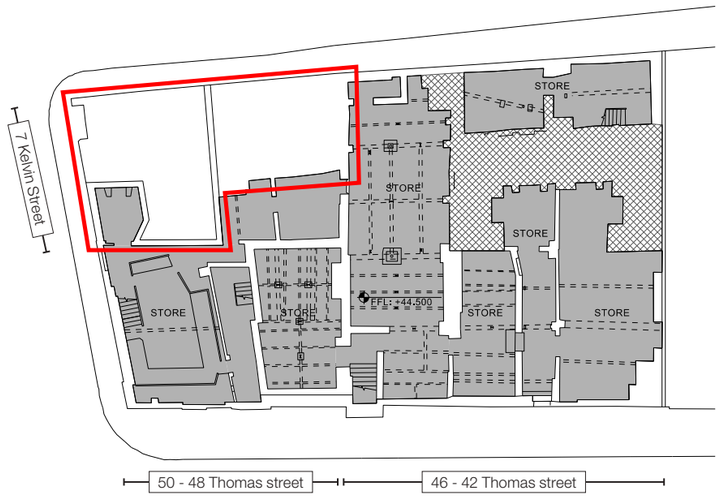


Elevation CC

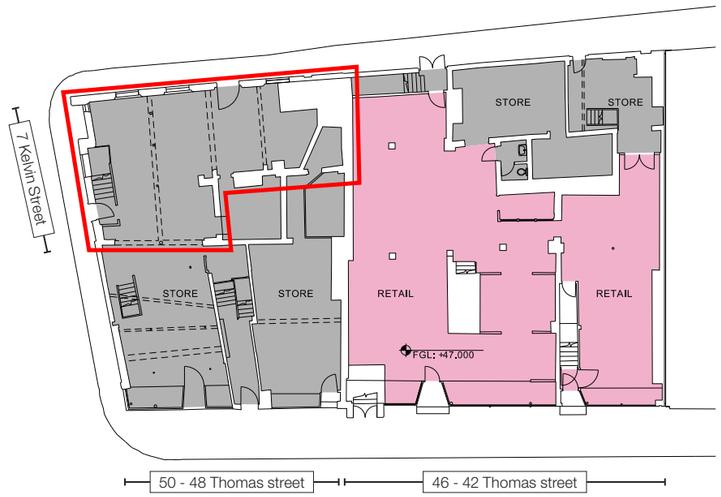
3.0

Existing Building

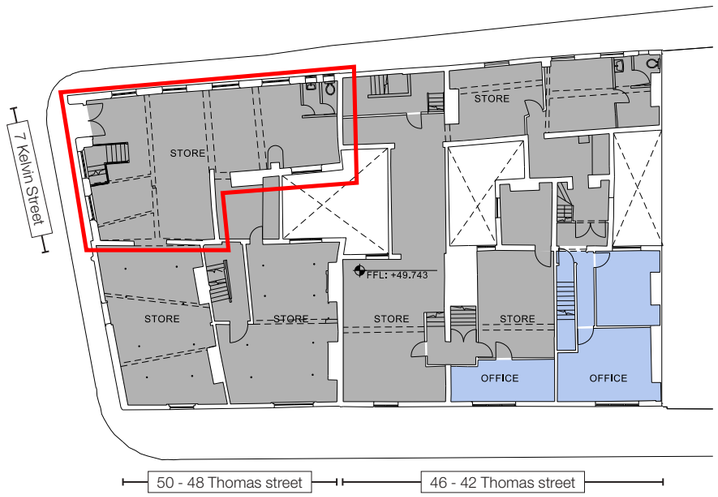
Existing Plans



Basement Plan



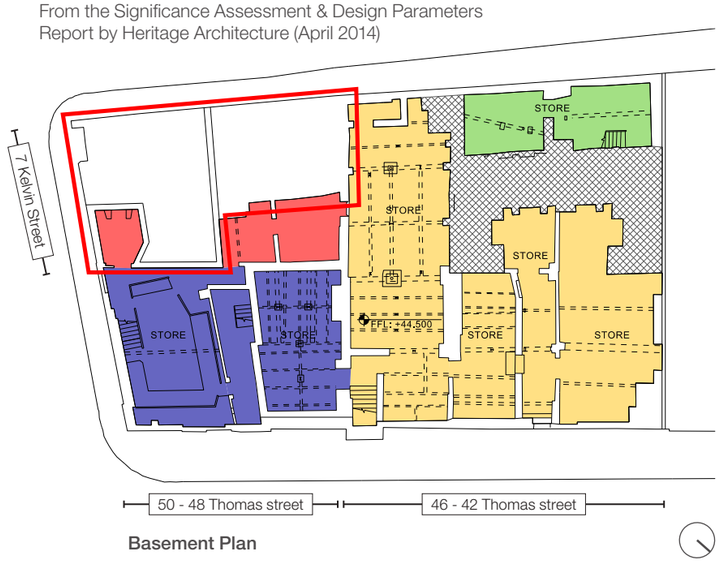
Ground Floor Plan



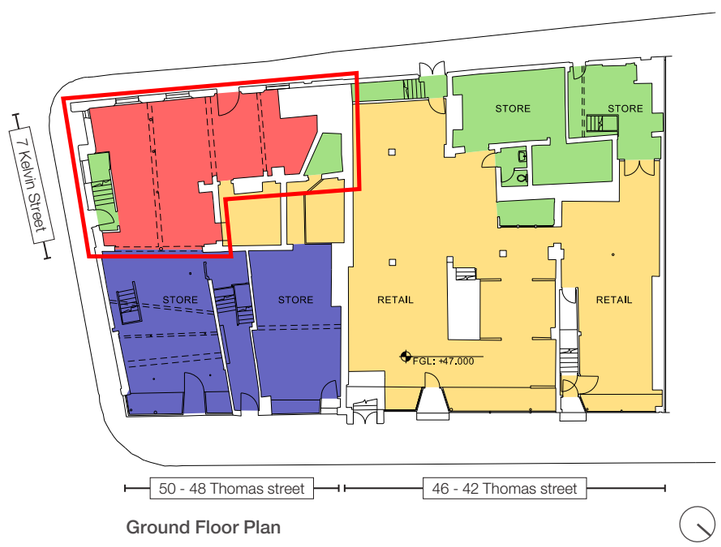
First Floor Plan

Significance Plans

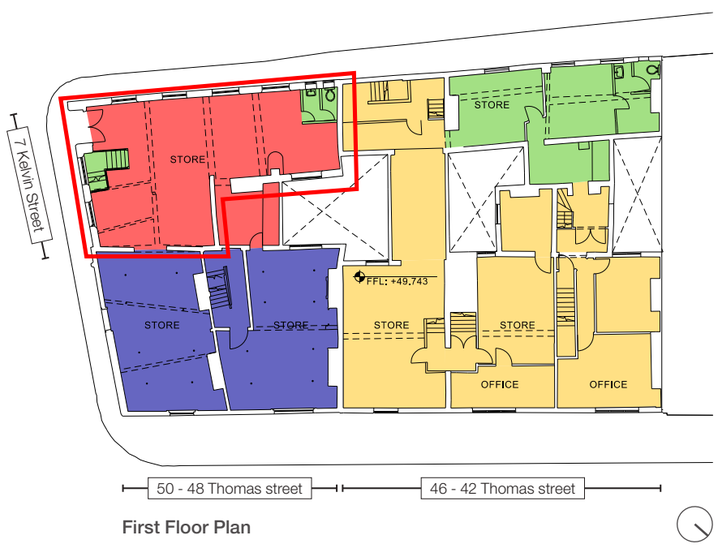
From the Significance Assessment & Design Parameters
Report by Heritage Architecture (April 2014)



Basement Plan



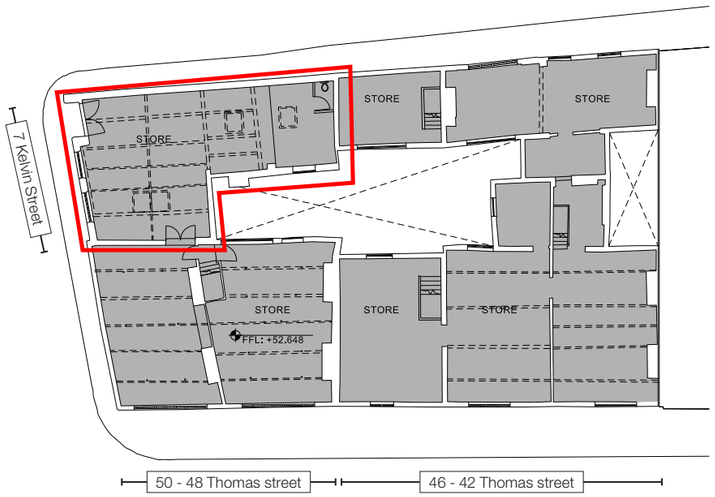
Ground Floor Plan



First Floor Plan

3.1 Existing Plans

Plan



Second Floor Plan



Roof Plan



Second Floor Plan

Existing Plans Key

- Retail
- Office
- Store
- Listed Building

Significance Plans Key

- High heritage significance
- Considerate heritage significance
- Some heritage significance
- Low (or negligible) heritage significance

The site is a collection of buildings and addresses, which over the decades have been developed, added to, and amended, finally morphing into two properties occupied by Shopfittings Manchester. As discussed earlier, the existing buildings are surplus to requirements, offering inefficient room for the company to operate from the premises efficiently.

42-46 Thomas Street contains the major retail element for the company and has been heavily remodelled to suit this need. This is to such an extent that the shop stretches from Thomas Street to Back Turner Street, removing any signs of the courtyards or separation, which would have been present in their original form. Heritage Architecture considered this area as low significance in their report, April 2014. The company uses the upper levels of the building for storage; there are networks of small-interlinked rooms connected by numerous staircases and level changes. The upper levels were considered as considerate significance by Heritage Architecture.

48-50 Thomas Street, used for storage, or empty, due to the state of the building's repair. Since working on this project and while writing this Design and Access statement, the building has been deemed unsafe and is going to be demolished shortly. Numerous alterations have accrued within the building including the removal of the chimney breast at ground floor, which has eventually led to its gradual collapse. Within Heritage Architectures report this building was considered as high significance.

7 Kelvin Street, a grade II listed warehouse, is mainly used for storage and workshop space. The building internally is in a general state of disrepair with many alterations, which have opened it up to no.50 Thomas Street.

Inline with Heritage Architectures report, the scheme seeks to develop 42-46 Thomas Street. The scheme aspires to reinstate the weavers cottage, 48-50 Thomas Street, respecting the scale and massing of the existing building, but reinterpreting the facade with modern details. 7 Kelvin Street will then be sensitively restored wherever possible, whilst integrating its new residential and retail use.







Thomas Street Elevation



Back Turner Street Elevation



Thomas Street Photographic Elevation



Back Turner Street Photographic Elevation

3.2 Existing Building 1

42/46 Thomas Street



Photographic Details



Long Section

Developed as workshop dwellings, 42/46 Thomas Street predate the Green map of 1794. Constructed in the late 18c they form a pair of three storey, single fronted houses constructed of red brick. Modern ground floor shopfronts with wide, off centered upper storey windows, finish the elevation.

To Back Turner Street, once separate from the front development, residential windows are evident for a possible three bay property. The ground floor has been dramatically altered, with limited evidence of the historical use along the back street. Numerous brickwork patching is evident for the development, which has occurred over time.

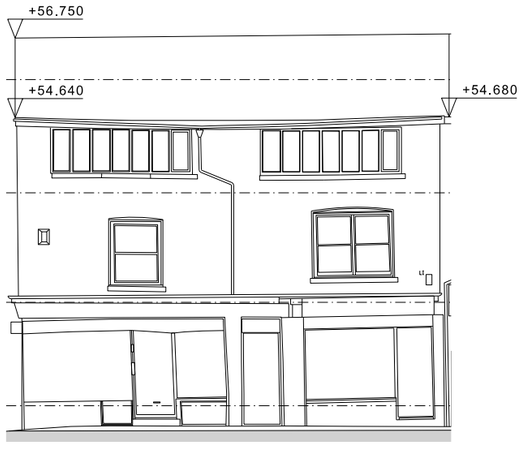
The internal programs of these buildings have been dramatically altered to suit the use of the occupiers over the years, leaving little historical interests, as stated on the previous page. The floors of the existing building are at an array of levels and constructions.

Key

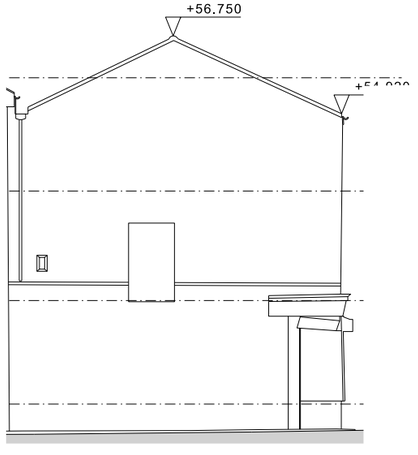
01. Single storey link
02. Two storey link
03. Light well
04. Ground floor retail
05. Basement



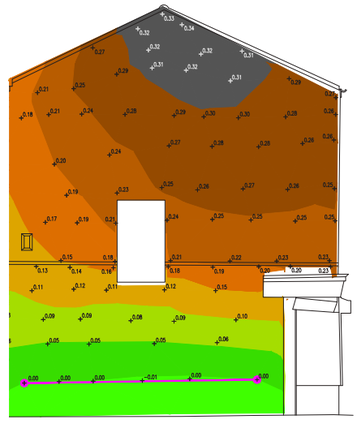




Thomas Street Elevation



Kelvin Street Elevation



Kelvin Street Vertical Check Elevation





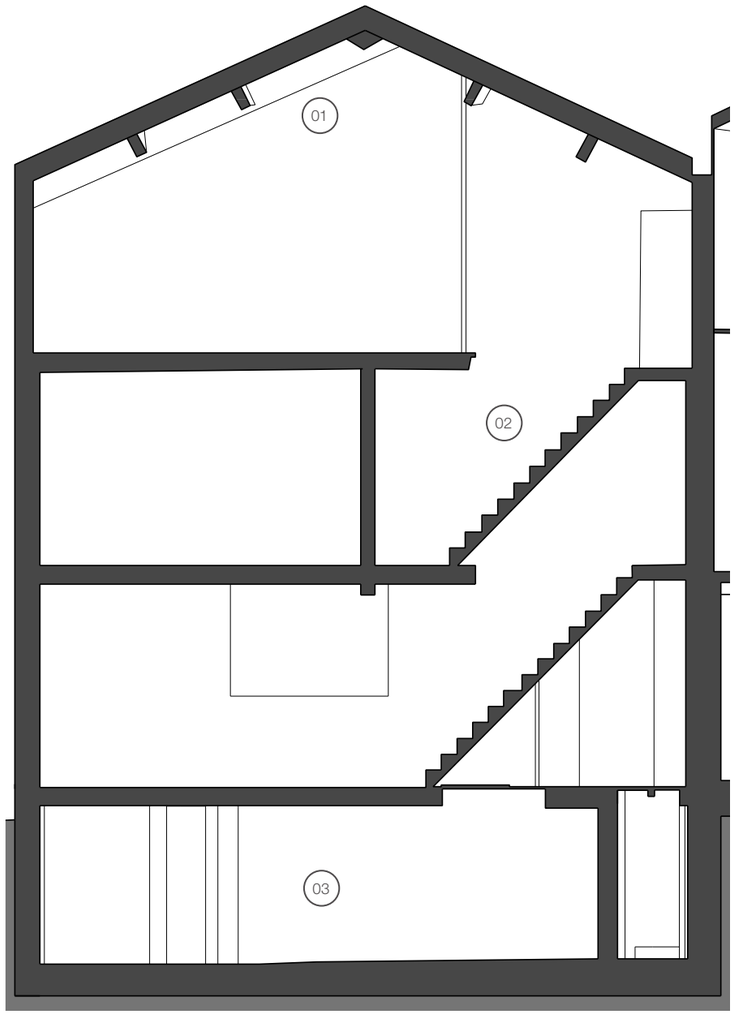


Key

–0.05 - 0.00(m)	0.16 - 0.20 (m)
0.00 - 0.05 (m)	0.21 - 0.25 (m)
0.06 - 0.10 (m)	0.26 - 0.30 (m)
0.11 - 0.15 (m)	0.31 - 0.35 (m)

3.3 Existing Building 2

48/50 Thomas Street







48/50 Thomas Street are pair of single fronted, 3 storey weavers cottages from the late 18c, heavily remodelled in the 20c, with the entire façade above ground floor being reconstructed. Below the building there is a brick air raid shelter dating from 1939, with entrances from Thomas and Kelvin street, which probably remodelled the existing basement. The building has modern shopfronts to Thomas Street, with long windows to the upper storey of the existing loomshop behind.

To Kelvin Street, the façade is simple and devoid of any architectural detail. There is a distinct line at ground floor where the upper levels where rebuilt. The brickwork is in common bond with a header course every six brick courses. The gable end has a pitched roof, which together with No. 7 forms a pair, creating a distinct architectural language along the street.

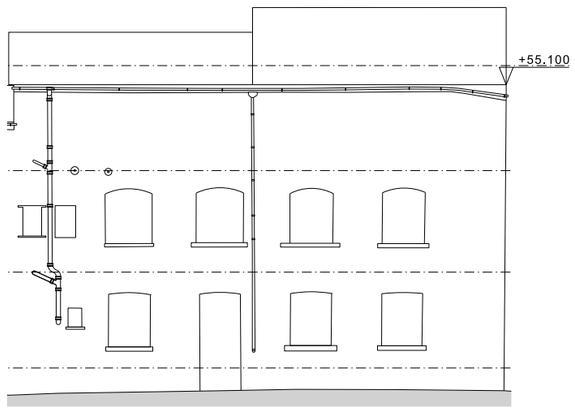
The vertical check elevation on this page illustrates the amount the elevation is out of plum. The wall heavily lists from the middle of the ground floor, with the top of the wall 0.35m out. Once a wall is past the middle third it is considered unstable; with the existing wall having a depth of 0.3m, this wall is completely over itself and unsafe. As stated on the pervious page, steps have been taken to notify the relevant bodies about the condition of the building, with the demolition to happen soon, to aid public safety.

Key

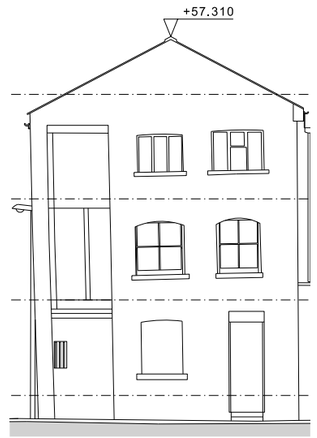
01. Exposed roof truss
02. Stairwell
03. Basement



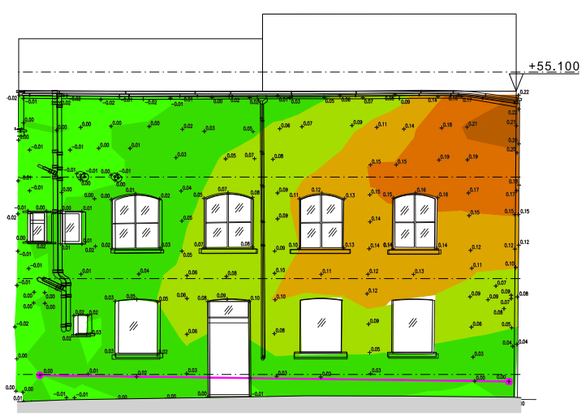




Back Turner Street Elevation



Kelvin Street Elevation



Kelvin Street Vertical Check Elevation



Kelvin Street Vertical Check Elevation



Key

–0.20 - –0.11 (m)	0.6 - 0.10 (m)
–0.10 - –0.06 (m)	0.11 - 0.15 (m)
–0.05 - 0.00 (m)	0.16 - 0.20 (m)
0.00 - 0.05 (m)	0.21 - 0.25 (m)

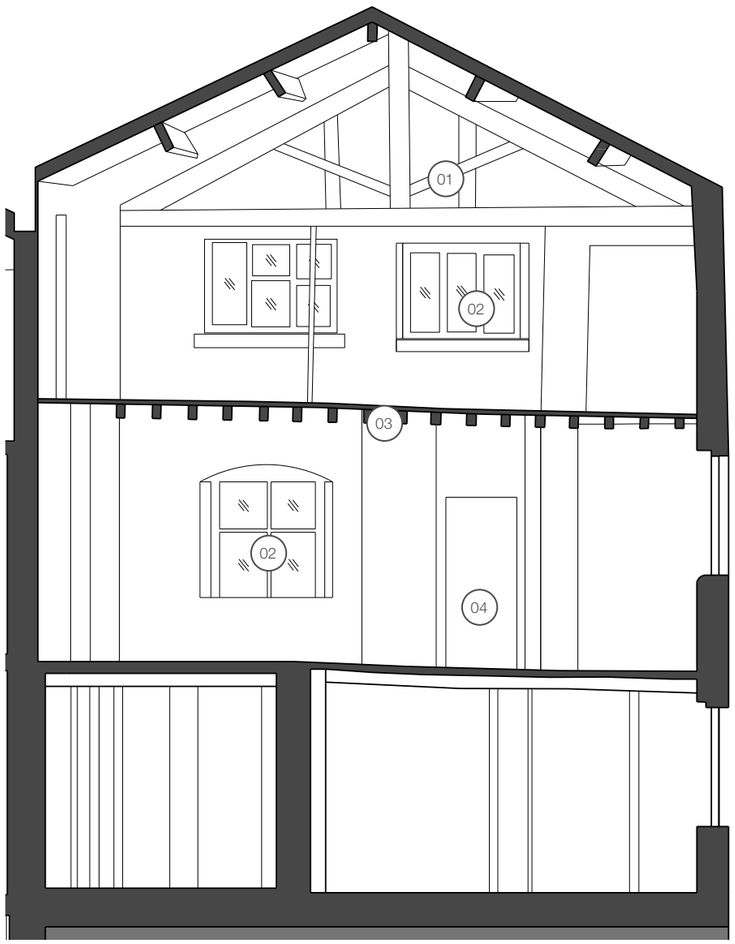
3.4 Existing Building 3

Grade II Listed Building _ 7 Kelvin Street









7 Kelvin Street is a small 3 storey warehouse constructed in the mid 19c, built on the rear wings and backyards of the site. It is constructed in a reddish brown brick with a gable roof. The Back Turner Street elevation is 4 bays long, with 3 bays to Kelvin Street. The structure is grade II listed and is an early example of small scale warehouse in the area.

The Kelvin Street elevation is the most interesting, with the dominating recessed loading doors located at first and second floors, and original timber planked double doors. It is still possible to see various lifting and grab rails used for transporting goods in and out of the building. There is a small niche at ground floor, which will have been used for monitoring the movement of the goods. The upper windows have sprung arches, with a row of soldier course brickwork with stone sills. At ground floor the windows are boarded up.

Back Turner Street is constructed of common brick with heavy cement mortar pointing of modern installation. There is a regular pattern of the four windows at first and ground floor with sprung arches and recessed box frames. There are no windows at second floor.

The vertical check diagrams illustrate that the top of the gable and the right top of Back Turner Street will need to be addressed through the construction stage to remove some of the listing present.

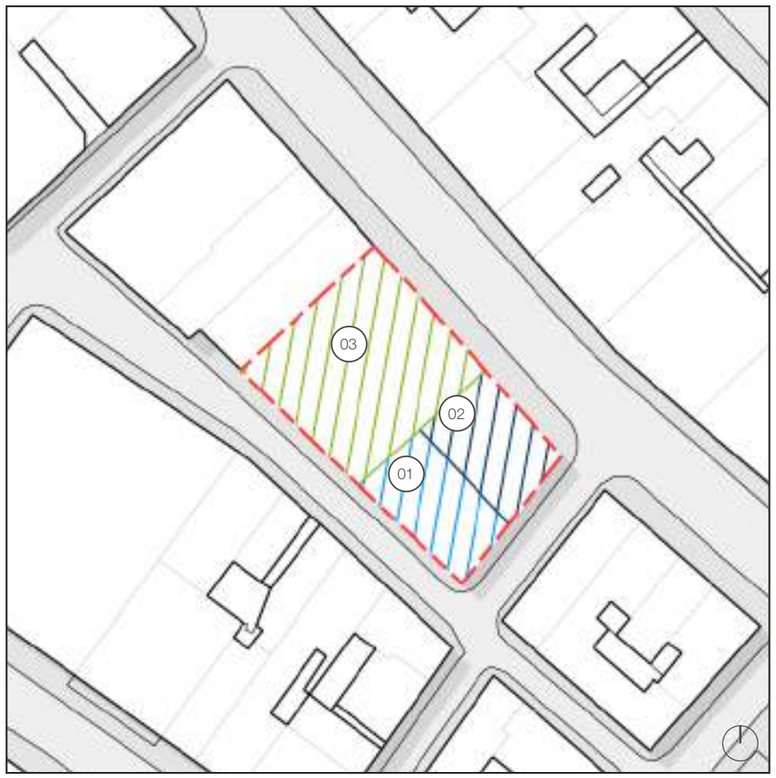
Internally, to the topmost floor there are three king post which support the roof. Lifting gear is also present above the loading bay doors. The lower levels have been heavy altered over the years and constant water ingress has meant a lot of the floors and timber generally is in a poor state of repair.

Key

01. Exposed King Post roof truss
02. Existing windows
03. Exposed floor joists
04. Door

4.0

Layout & Design





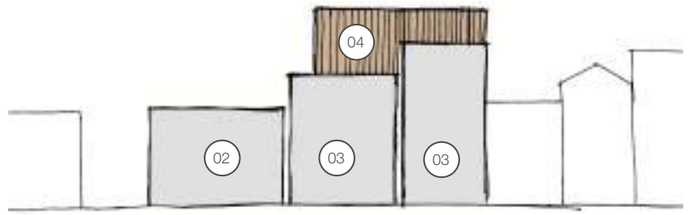
Thomas Street Photographic Elevation



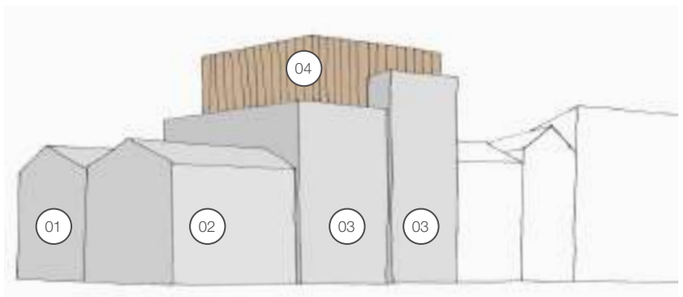
Sketch Diagram of the Elevation



Window Extraction



Thomas Street Elevation



Thomas Street Elevation

Heritage

+ 01. 7 Kelvin Street, Grade II List warehouse of national importance - Careful conservation required to transform this elegant structure into the proposed residential use. Retain and restore historical elements in situ where possible.
+ 02. 50 Thomas Street, Weavers' houses - Historically interesting due to the limited number of surviving examples. The building is in a general state of disrepair with unsafe internal structure. The proposal seeks to demolish the building. The replacement building will respect the form, materiality and window typology in its final design.
+ 03. 42-48 Thomas Street, No historical interest - Buildings to be replaced in this scheme proposal.

Elevation Rhythm

+ 01. Strong vertical emphasis along Thomas Street. Smaller individual buildings varying both in scale and character. Creating a diverse and playful urban grain.
+ 02. Horizontal banding to the retail provision separating the use from the residential elements above. Large apertures between the load paths of the buildings.
+ 03. Vertical window expression further breaking down the grain of the facade.

Scale & Massing

+ 01. 7 Kelvin Street, listed structure retained, form and massing reused.
+ 02. 50 Thomas Street, Weavers houses - Existing building form and massing used to inform the design solution.
+ 03. 42-48 Thomas Street, built form split into two structures replicating the rhythm of the street and surrounding neighbourhood. Total massing reduced in scale to 3-4 stories fronting Thomas Street and Back Turner Street elevations, due to the recessed roof pavilion.
+ 04. Recessed roof pavilion.

4.1 Design Concept



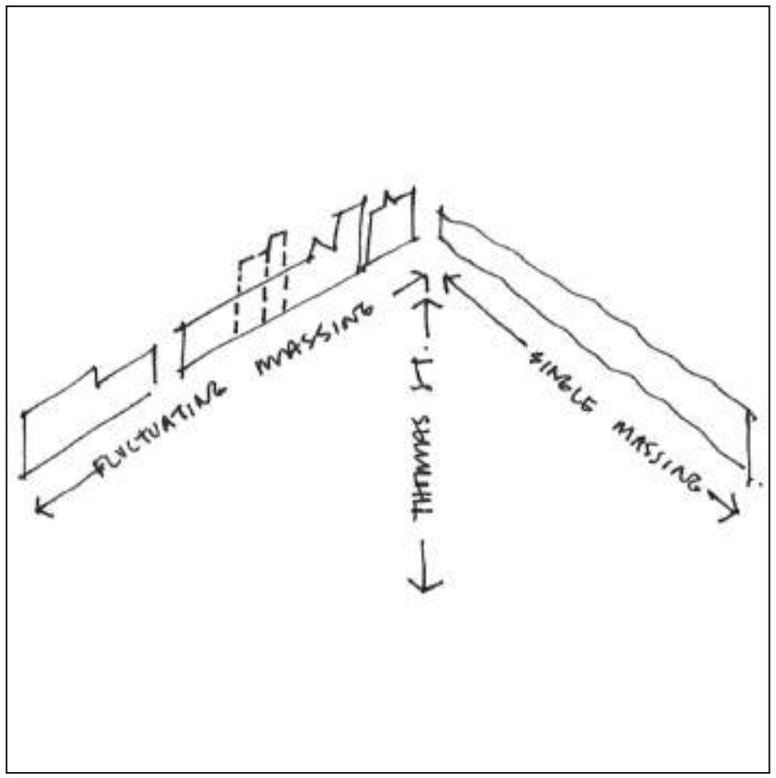


Honest Raw Materials

+ 01. Load bearing brickwork left exposed internally to living spaces and master bedrooms. Removing the need for additional internal finishes.
+ 02. Exposed concrete soffit. Using the structural slab as the internal finish. Capitalising on the thermal mass and natural quality of the material as the finish.
+ 03. Timber windows to soften the strength of the brick aesthetic.

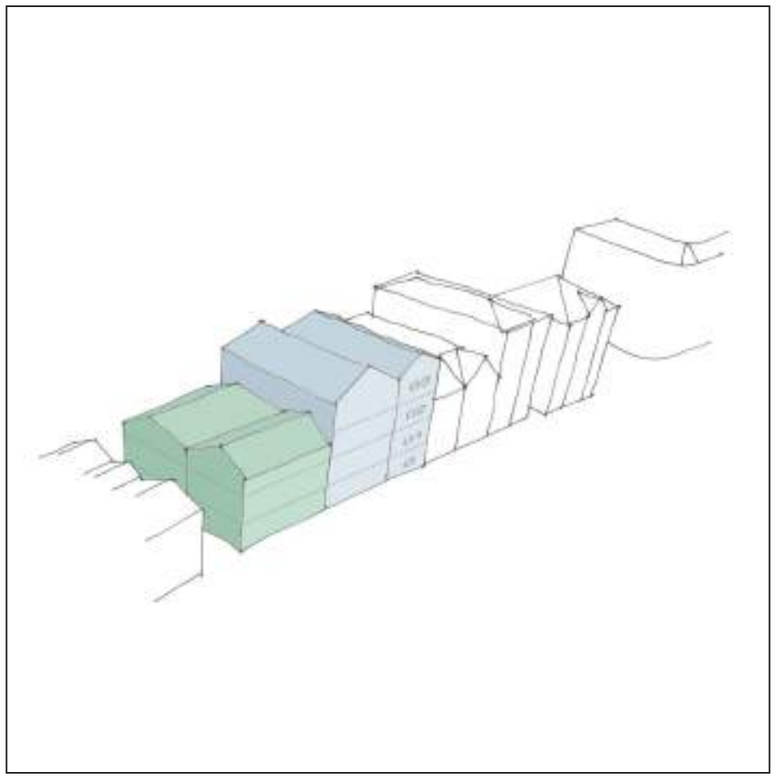
Mixed Use Sustainable Development

+ 01. Large apertures for the base retail elements. Northern Quarter aesthetic of store riser, framed glazing and a signage zone.
+ 02. Smaller apertures to the residential elements.



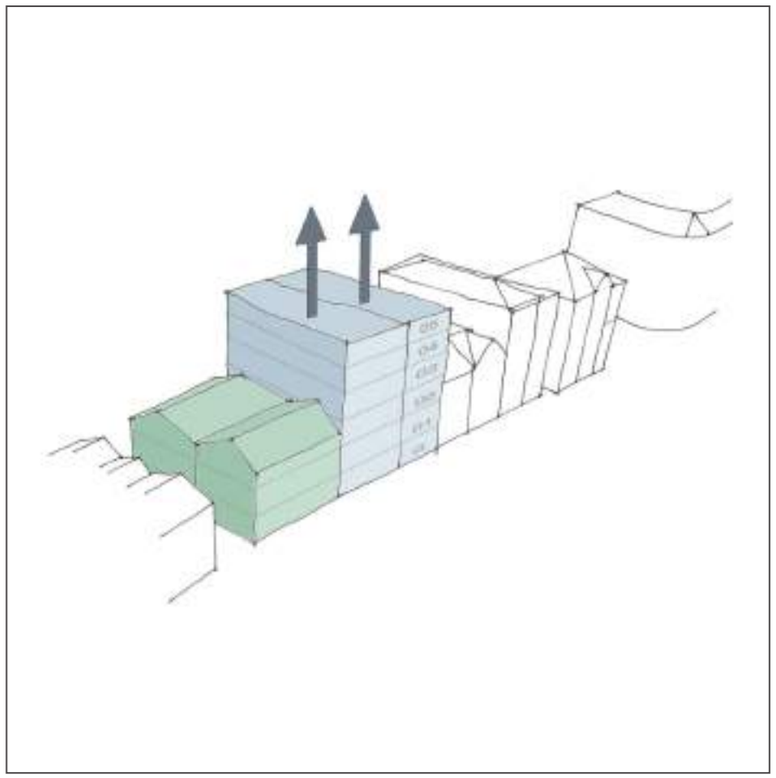
Fluctuating Massing

+ Thomas street North has a low run of continuous 2 storey volumes.
+ Thomas Street South has a different massing profile, with fluctuating volumes creating a varying streetscape.



Contextual Massing

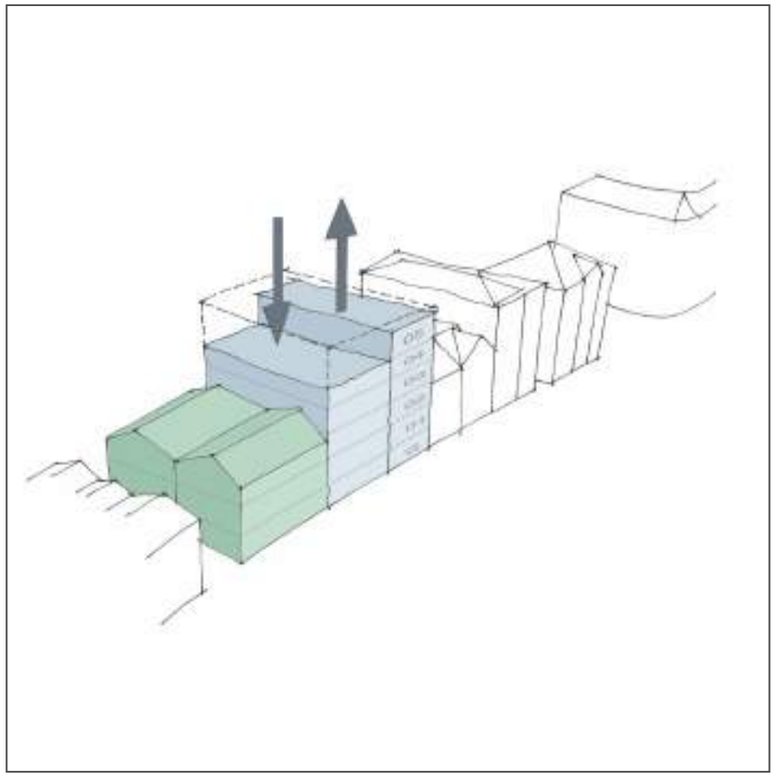
+ Respects the street context
+ Doesn't meet the program requirements



Program Massing

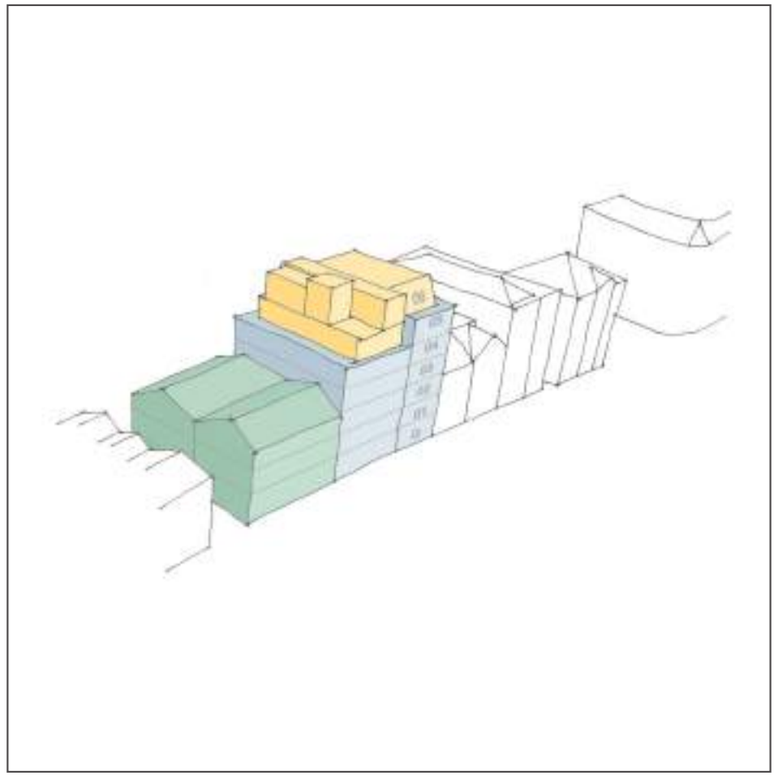
+ Meets the economic need of the development
+ Doesn't Respect the streetscape

4.2 Design Sketches



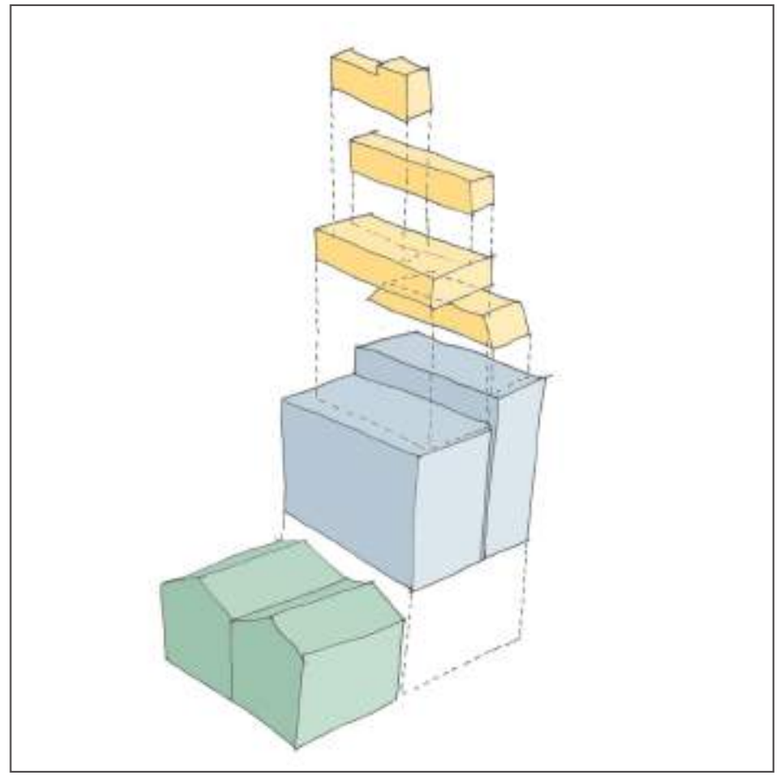
Stepped Massing

+ Stepping the blocks reflects the fluctuating nature along Thomas Street South
+ Doesn't meeting the program requirements

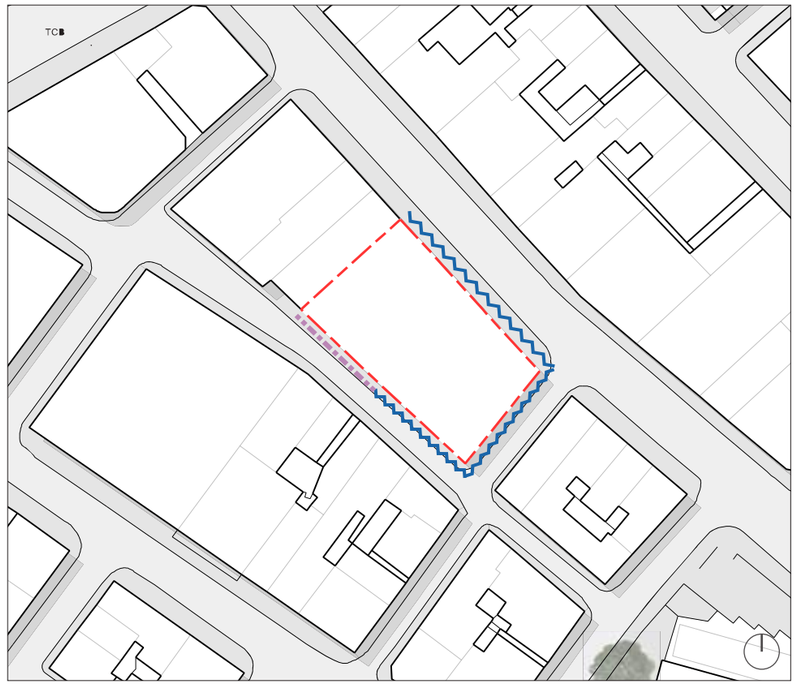


Stepped Form with Roof Pavilions

+ Respects the streetscape along North Thomas Street
+ Recessed roof pavilions reflect the neighbourhood character of the Northern Quarter
+ Meets the economic need of the development



Exploded View



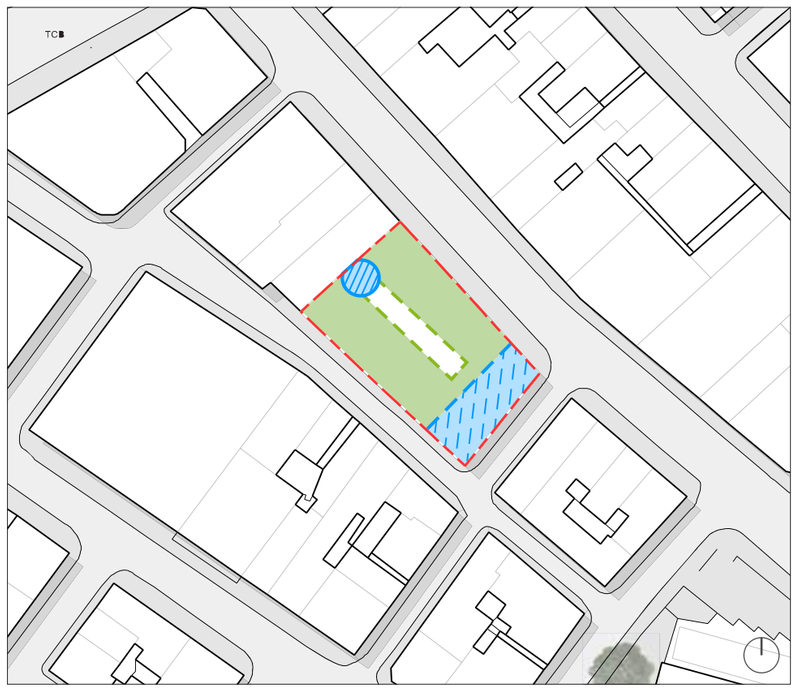
Active Frontages

Key

Active Frontage

Service Frontage

+ Maximise active frontage to the scheme.
+ Create a visual link between Thomas Street and Back Turner Street
+ Limit the serviced elevational zone
+ Give Kelvin Street use and purpose



Core Arrangement

Key

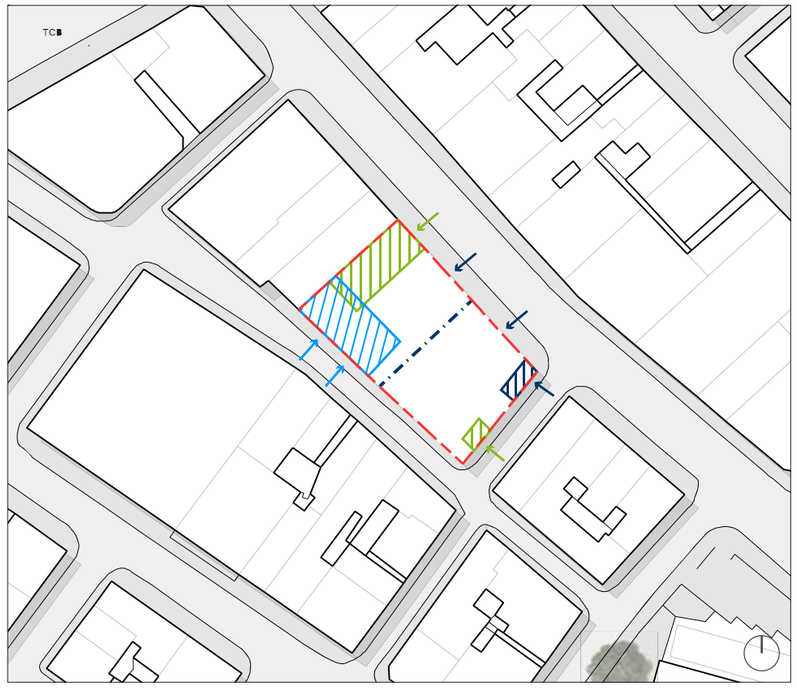
Residential Core

Independent Cores Within Unit Demise

7m Residential Zone

+ Core Located in the depth of the plan
+ Core location creates 7m residential zone
+ Duplex arrangement along Kelvin Street with internal stair arrangements
+ Centralised circulation to plan

4.3 Design Principles



Entrance Location

Key

- Retail Entrance
- Service Entrance
- Residential Entrance
- Service Zone
- Residential Ground Floor Foyer
- Basement Retail Foyer

+ Main development and retail provision entrances are located off Thomas Street
+ Entrances to the duplex residential and basement retail located along Kelvin Street
+ Fire escape, plant and service entrances located along Back Turner Street
+ Entrance arrangement provides interest along Kelvin Street, with the basement entrance located in the list structure



Demolition Strategy

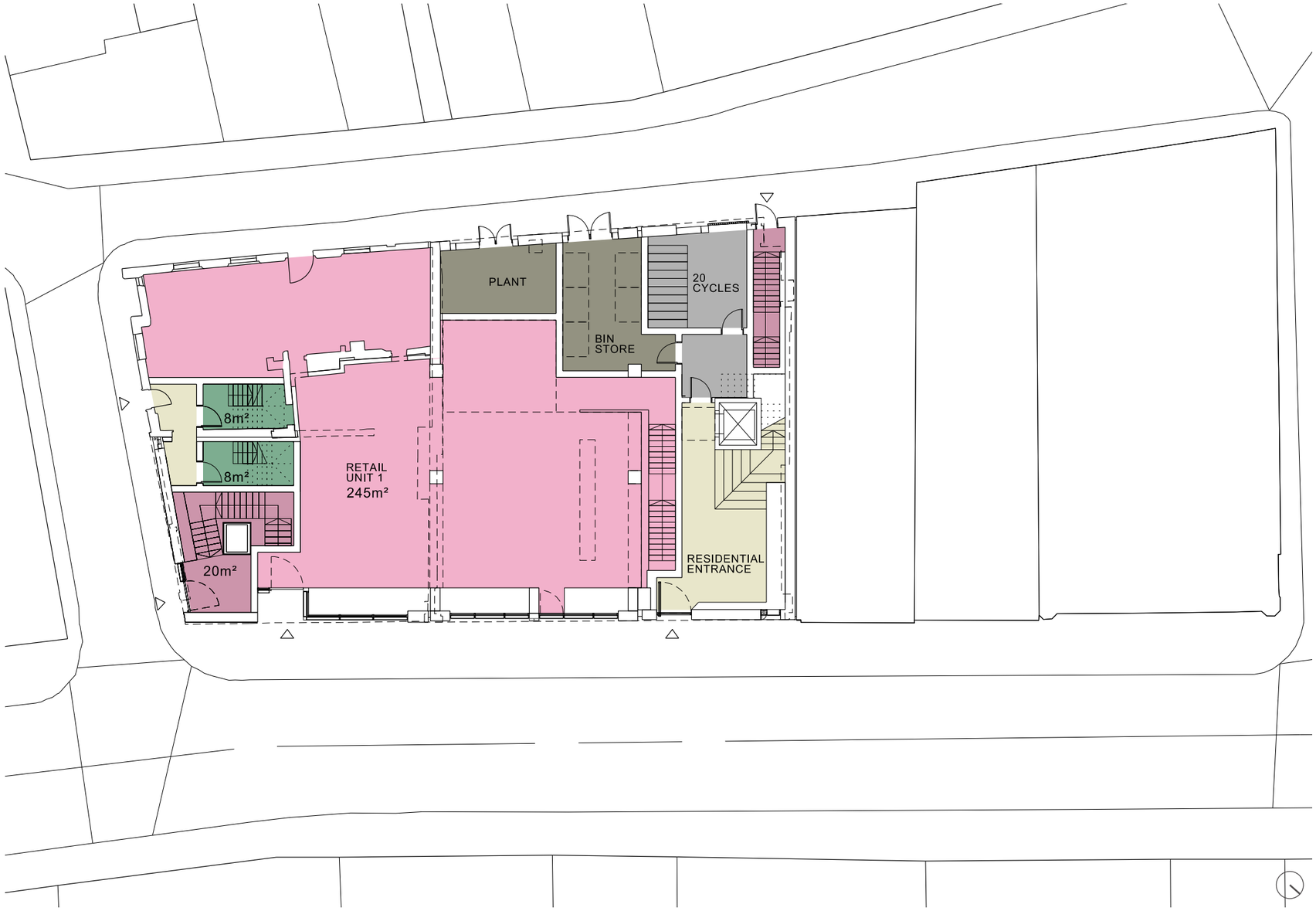
Key

- New Build Element
- Listed portion of the site.
- Demolish due to disrepair, rebuild retaining existing proportions but with new window arrangements

+ Retain and rebuild the listed portion of the site, 6 Kelvin Street.
+ Demolish adjoining property 48 - 50 Thomas Street, due to disrepair and replace respecting the buildings overall proportions but with new window arrangements and sizes.
+ Demolish 42 and 46 Thomas Street. Replace with New build development.

The diagrams opposite describe and illustrate the key attributes of the preferred design proposals.

Diagrammatically they explain the workings of the scheme and its responses in relation to its surrounding context, whilst also illustrating the fundamental principals of the internal configuration.



Ground Floor

The overall form of the building has been carefully designed to maximise the potential of the site, while limiting the overall impact on the conservation area. The ground floor provides retail units, the main residential, basement retail and duplex unit entrances, and a number of ancillary spaces.

The retail unit forms the heart of the scheme creating active frontages along both Thomas Street and Back Turner Street. Level access will be provided from Thomas Street. Toilets and other ancillary spaces will be located at the basement level.

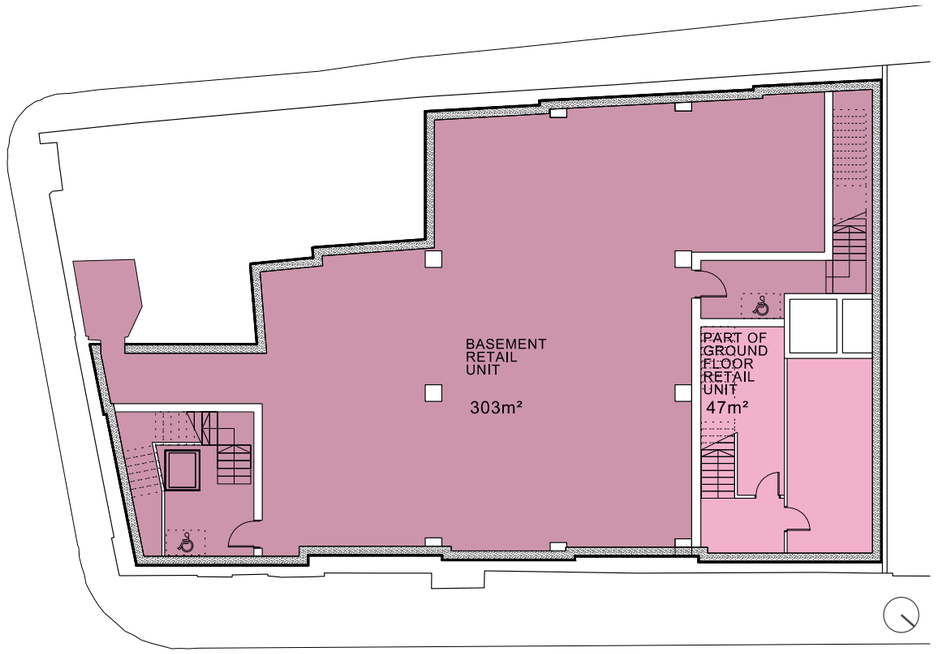
The main residential entrance is located at the east corner of the plan with direct access from Thomas Street. The entrances will be discreet, providing privacy to the occupants once they step over the threshold, creating a distinct difference from the hustle and bustle of Thomas Street behind. The interior design for the foyer is fundamentally the expression of the building parts, with a stripped back, raw aesthetic. Residents will have access to the lift, stair, bike store and bin store from the foyer.

Along Kelvin Street, the duplex units share the existing entrance in the listed portion of No.7 Kelvin Street. Behind the new timber door, within the existing aperture, two newly created entrances with give access to the duplex units. Storage for bikes and prams will be provided at this level.

To the corner of Thomas and Kelvin Street a new basement entrance has been created, providing stepped and lift access to the basement retail unit. The door will be unassuming with a simple slot window beside the door, again to create privacy for the usage below.

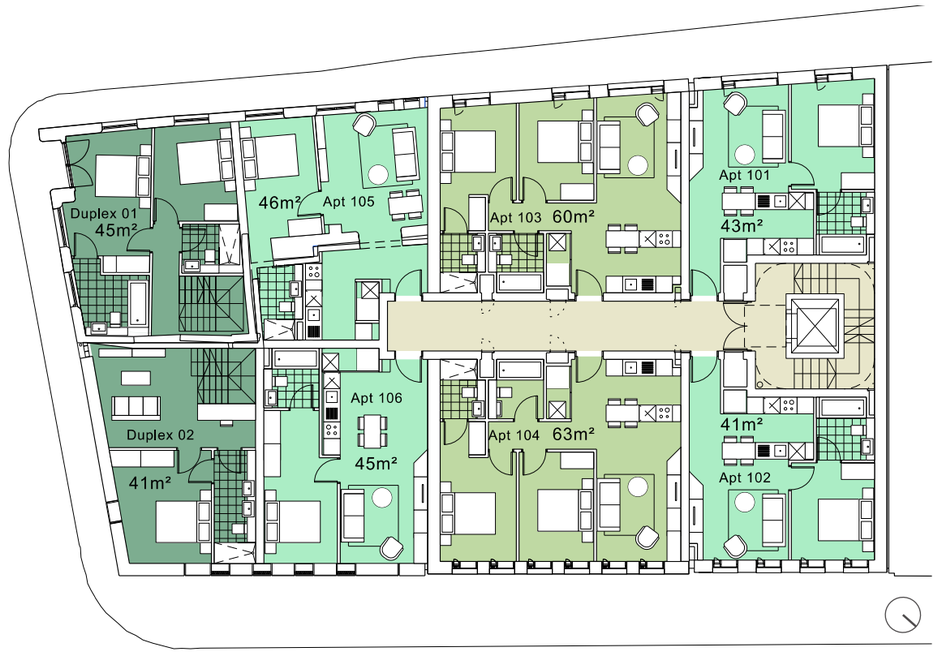
Along Back Turner Street the retail unit will provide active frontage, utilising the existing windows and doors to No. 7 Kelvin Street. The rest of this elevation is dedicated to refuse storage, plant and bike storage, which are contained within the new build elements.

4.4 Plans



Basement Floor

To maximise the viability of the scheme, a full basement has been proposed. The scheme will provide 364m2 GIA to a shell and core level. The proposal is to keep the existing basement walls, underpin and lower the level of the existing basement to create usable retail space. The basement will not continue under the front portion of the listed structure. Fire exits will be provided at either end of the space; this will limit the number of occupants, as outlined in the fire engineer's report.

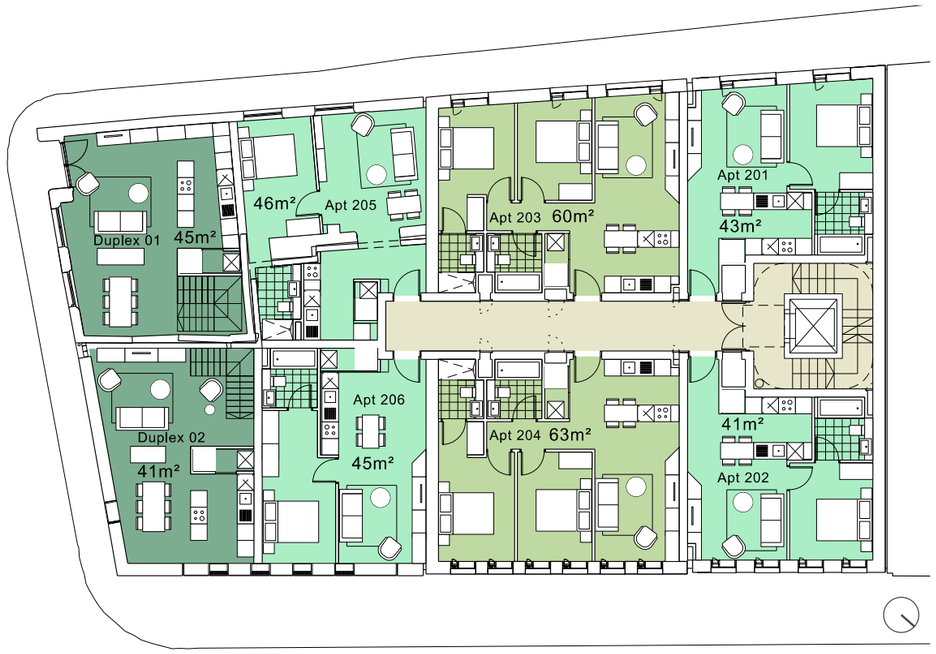


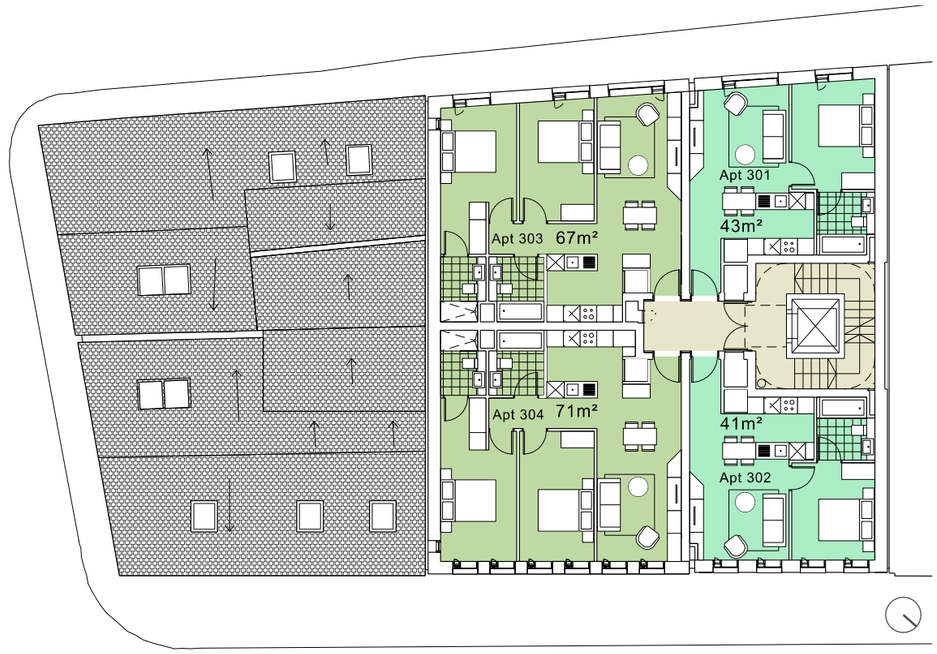
First Floor Plan

The typical floor plan between 1st and 2nd floor can be split into two, one half with the duplex units and the other with the 1-2 bed units. The duplex units are access from Kelvin Street via the ground floor. The first floor level provides the sleeping quarters for the units. Contained within the No. 7 Kelvin Street, Duplex 01 will retain as many of the existing features as possible within the dwelling. Exposed brickwork and floors will add to the loft aesthetic. Duplex 02 will be within the reconstructed weaves cottage; even though it is new, the scheme seeks to retain as much of the character as possible.

The rest of the floor plate is accessed from the main residential entrance via the lift or stair. The stripped back aesthetic of the foyer will continue along the circulation, exposed brick walls and simple elegant doors to each apartment. This floor will provide 4 x 1 bed and 2 x 2 beds apartments. Each apartment will characterised by exposed brickwork and concrete soffits.

- Circulation
- Retail
- Basement Retail
- 1 Bed
- 2 Bed
- 3 Bed
- Duplex
- Cycle
- Plant/Bins





Second Floor Plan

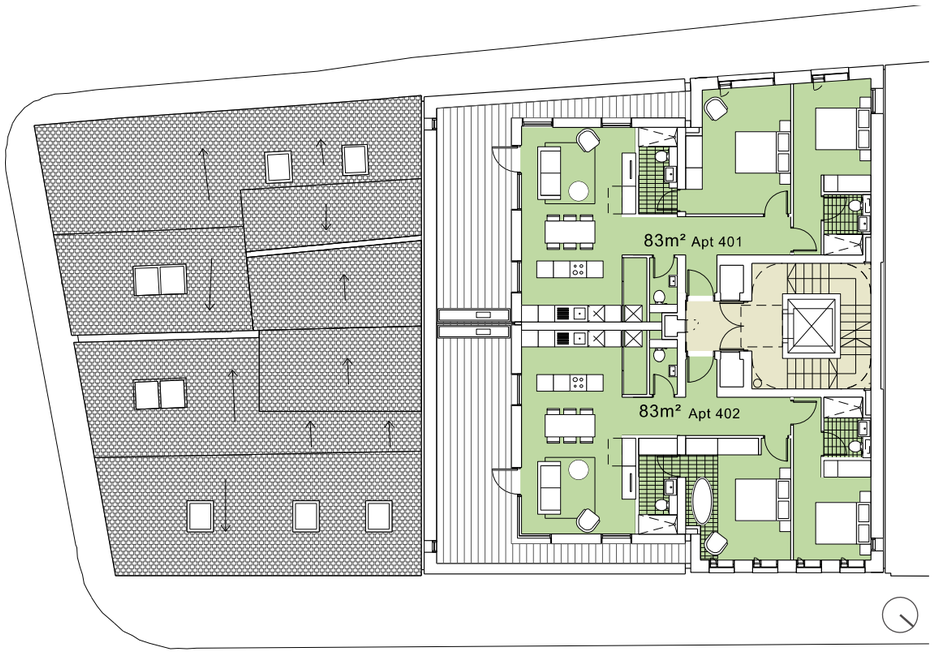
Similar to the first floor plan the 2nd floor can be split into two. Providing identical 1 and 2 bed layouts, unit numbers and internal aesthetics.

In relation to the duplex's this level provides all the living usages, kitchen, dining and lounge. Duplex 01, which is located in listed No. 7 Kelvin Street, will again retain as much of the existing structure and heritage as possible. A large exposed roof joist dividing the space and the restored lifting equipment will characterize the living room located above the restored loading bay doors. The doors will be usable with a plate glass screen providing the external wall beyond the doors. The existing cathedral ceilings will be retained providing a unique living experience within the city. Duplex 02 also has its living rooms at this level. Within this rebuilt block we seek to retain the character of the existing building while providing creature comforts like insulation. Again to match the existing the cathedral ceilings will be retained.

Third Floor Plan

This is the first level where the building form starts to reduce. The floor provides two 1 beds and two 2 beds. The layouts, unit numbers and internal aesthetics are similar to levels 1 and 2, apart from the 2 bed unit increasing in size to capitalise on the reduction of the main circulation route. The roofs to the duplexes and other units will be slate to match the existing building. Existing roof lights will be retained and new roof lights will be introduced into the rebuilt portion.

4.4 Plans



Fourth Floor Plan

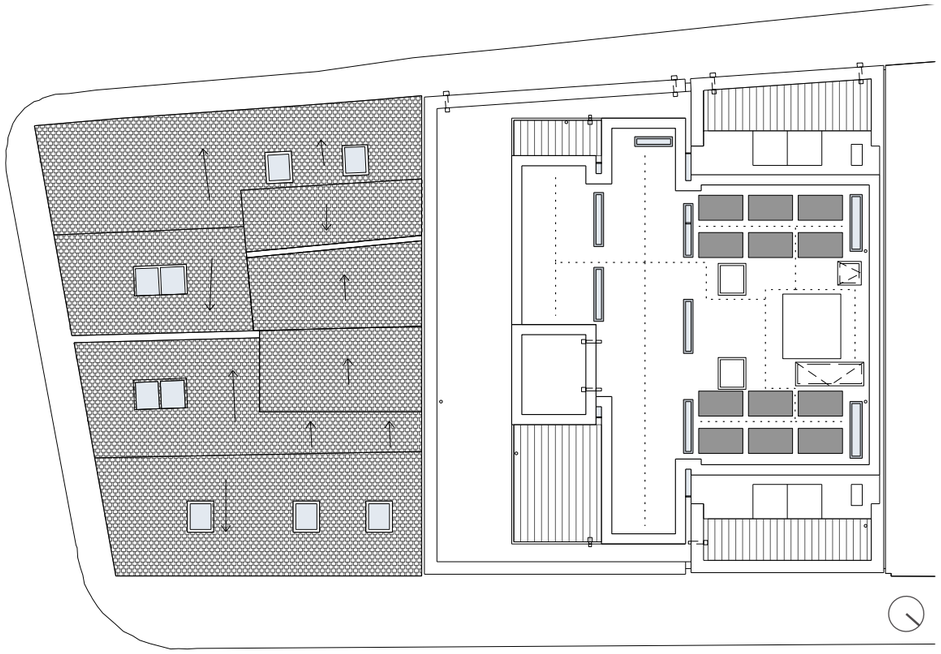
The plan dramatically changes at this level, providing two large 2 bed units with external terraces, capitalising on views down Thomas Street towards Stevenson Square. The materiality has also changed; half of the apartments will have the stripped back aesthetic of the lower floors with exposed brickwork etc, while the remainder of the apartments will be plasterboard with zinc externally. The brickwork from below extends upwards to form the balustrade, minimizing the overall mass of the zinc roof pavilion.



Fifth Floor Plan

The penthouse has a unique position, with views across the Northern Quarter from numerous terraces. The large 3 bed unit has dedicated lift access straight into the apartment, which is controlled from the ground floor. The unit capitalizes on light and views, with terraces from each room and large expanses of glazing to maximise natural light into the space. The tall ceilings and roof slots further emphasize this over the living space and across the apartment. The stripped brick aesthetic continues into the space, but the lightweight roof doesn't provide a concrete soffit.

- Circulation
- Retail
- Basement Retail
- 1 Bed
- 2 Bed
- 3 Bed
- Duplex
- Cycle
- Plant/Bins



Roof Plan

The roof plan provides PV arrays, roof lights and maintenance access. A hotmelt roofing system has been used to minimize the amount of down pipes and give a hard standing for the PV array. Roof lights provide shafts of light into the penthouse below.

- Circulation
- Retail
- Basement Retail
- 1 Bed
- 2 Bed
- 3 Bed
- Duplex
- Cycle
- Plant/Bins

4.5 Scheme Area Schedule

Level	Gross Internal Area (GIA)		Net Internal Area (NIA)* - Residential Unit		NIA/GIA Ratio	Residential Unit Types		
	SQM	*SQFT*	*SQM*	*SQFT*	*%*	*1 bed*	*2 bed*	*3 bed*
Basement	364	3,918	**350**	**3,767**	**96%**			
0.01 Basement Retail			303	3,261				
1.01 Ground Floor Retail			47	506				
Ground	465	5,005	**394**	**4,241**	**85%**			
1.01 Ground Floor Retail			245	2,637				
1.02 Basement Retail			27	291				
1.02 Communal Residential Entrances			41	441				
1.03 Duplex Entrance 01			8	86			X	
1.04 Duplex Entrance 02			8	86		X		
1.05 Plant			15	161				
1.06 Bin Store			23	248				
1.07 Cycle Store			19	205				
1.08 Lobby			8	86				
First	466	5,016	**384**	**4,133**	**82%**			
2.01 Duplex 01			45	484			X	
2.02 Duplex 02			41	441		X		
2.03 Apt 101			43	463		X		
2.04 Apt 102			41	441		X		
2.05 Apt 103			60	646			X	
2.06 Apt 104			63	678			X	
2.07 Apt 105			46	495		X		
2.08 Apt 106			45	484		X		
Second	466	5,016	**384**	**4,133**	**82%**			
3.01 Duplex 01			45	484			X	
3.02 Duplex 02			41	441		X		
3.03 Apt 201			43	463		X		
3.04 Apt 202			41	441		X		
3.05 Apt 203			60	646			X	
3.06 Apt 204			63	678			X	
3.07 Apt 205			46	495		X		
3.08 Apt 206			45	484		X		
Third	265	2,852	**222**	**2,390**	**84%**			
4.01 Apt 301			43	463		X		
4.02 Apt 302			41	441		X		
4.03 Apt 303			67	721			X	
4.04 Apt 304			71	764			X	
Fourth	200	2,153	**166**	**1,787**	**83%**			
5.01 Apt 401			83	893			X	
5.02 Apt 402			83	893			X	
Fifth	151	1,625	**127**	**1,367**	**84%**			
6.01 Apt 501			127	1,367				X
Total	**2,377**	**25,586**	**2,027**	**21,819**	**85%**			
Residential Unit Totals						**10**	**10**	**1**
Total Number of Residential Units								**21**

The area schedule adjacent breaks down both the net and gross internal areas per floor. The total net internal area for the residential scheme is 1,405m2 and the total net internal for the retail is 622m2.

The strategy for the basement emergency exhausted is to vent through the façade at ground floor. This detail makes a band of retail area which could be classed as usage for a seat / display along the Thomas Street. At present the area has not be illustrated as usable in the NIA opposite. If considered usage then the additional area would be 14.5m2 to the ground floor unit.

5.0

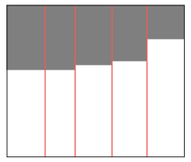
Elevations

5.1
Elevation Rhythm









Key

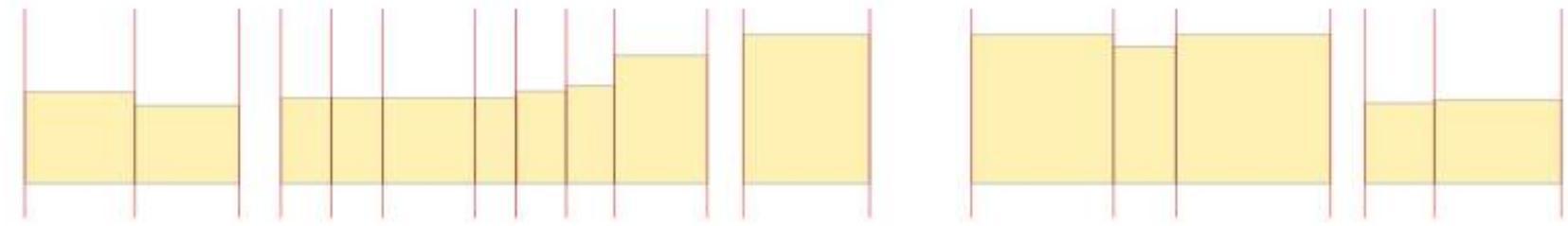
Red lines indicate Rhythm

Yellow blocks indicate massing

Dark grey indicates street skyline



Street Rhythm



Street Massing



Streetscape

Thomas Street has developed organically over time with economic need, creating a varied streetscape, as discussed earlier in the document. The rhythm of the street has a strong vertical emphases broken down into a number of terraced buildings. The width of the terraces varies along the length of the street with single fronted terraces alongside double and triple bay buildings. This creates a varied and unique building rhythm that the scheme seek to recreate in its approach to the building massing.

The streetscapes has a strong tripartite order, with base, middle and top. The retail element creates a strong and individual base order. The regular and ordered window arrangement makes an elegant middle section with various roof forms and window apertures creating the top element. The ordered approach to the windows across the streetscape has been reinterpreted in a modern way in the final design of the scheme.

The yellow blocks illustrated on the graphic opposite highlight the individual massing of each building made up of varied widths and heights along the street. It also illustrates that this side of Thomas Street can accommodate height along its length. Due to the number of properties in the streetscape at the higher level with the application site actually the anomaly in the streetscape at a lower level. The Street undulates tapering down and then rising up again. Beyond Thomas Street the height continues and becomes grander along Hilton Street and towards Stevenson Square.