

WEST BAR///

DESIGN AND ACCESS STATEMENT

An architectural rendering of a vibrant city street scene. In the foreground, a red car is blurred as it moves across the frame. A wide, paved sidewalk with a brick-paved crosswalk is populated with several people, including a couple walking together and a woman carrying a bag. Lush green trees line the sidewalk, and a white delivery van is parked further down the street. In the background, a tall, modern building with a light-colored facade and numerous windows stands prominently. The sky is a deep blue with scattered white clouds. The overall atmosphere is one of a modern, pedestrian-friendly urban environment.

S4

The Masterplan



4.1 The Masterplan



In which we describe the core principles that shape the masterplan. These have remained broadly the same as those in the competition masterplan.

The masterplan retains the essential elements of the competition masterplan. The team are committed to retaining the strength of the masterplan in order to create a strong identity in this part of Sheffield. This is important as part of the marketing of the scheme in order to create demand for office accommodation and housing in the area. The application masterplan involves the following elements.

THE CITADEL

The concept of the citadel has been retained. The plan is a dense collection of buildings of a similar height out of which public space is sculpted. This public space is based around narrow tightly enclosed routes and a central square so that the buildings read as a cohesive group (the Citadel).

THE TOWERS

The citadel is triangular in shape, following the outline of the site. At each of the three points the entrances to the citadel are marked with towers. The three towers are designed to read as a group, the tallest is the south west tower, the south east tower is lower but with a slightly larger footprint and the northern tower is lower still with a larger footprint (Tall and thin to short and fat!). Each of the towers contains a different use and is designed by a different architect. However the architects have been collaborating so that there is a family relationship between the three buildings. The tallest tower (Block 10) is all glass, the middle tower (Block 9) picks up this glazing on its inner skin under a series of rendered bands while the shorter tower (Block 1) has an outer stone framework over its glassy inner skin. This creates a more complex relationship to the citadel that the sentinel towers of the original concept. However Blocks 9 and 10 retain the original idea of the towers standing as sentinels and the entrance to the site is also framed by Block 11 that rises to 11 storeys as origi-

nally conceived. Block 1 by contrast has become much more a part of the citadel, rising like the prow of a ship. This will serve the dual function of reading as part of the composition of towers and working as part of the elevations to Bridge Street and Corporation Street.

GATEWAYS

The plan remains based on four strong gateways to the site to create a sense of arrival and drama. The masterplan is designed to pinch space at the points of arrival to create these gateways (note: these gateways will not be gated, they will be created as full public rights of way).

- The south west gateways passes between the glass tower (Block 10) and the 11 storey Block 9, down a cascade of stairs with views to the square.
- The south eastern entrance tumbles down a dramatic piece of public realm around the tower Block 9 before being directed into the site by the razor sharp edge of Block 6, again with views to the square.
- The northern entrance from Kelham Island enters the site via a tightly enclosed space – Kelham Square which is now marked with a Campanile (as part of Block 1). This is a classic gateway feature which pedestrians pass beneath to enter the site visible also from the main square.

The eastern entrance from the river is also to be marked as a gateway. This will be formed by a footbridge from the car park (Block 3) into the residential core of block 6.

SQUARE

These routes converge in a central square at the heart of the scheme. This is designed as an intimate space, 22m wide on the upper floors and 70m in length. It has been designed to have a 1:1 enclosure ratio – the apparent height of buildings fronting to the square are equivalent to its width. This is achieved with setbacks on the upper floors. All of the buildings around the square have active ground floor uses so that it becomes a lively animated space.

LINKAGES

In addition to the main routes a series of tertiary routes are created to maximise permeability through the scheme. These include three routes from Corporation Street, two of which pass through

the buildings. A route is also created through the courtyard of Block 6 to create further permeability. This will run through an inner courtyard where the ground floor restaurants will be able to put out tables.

PUBLIC REALM

The key to generating a vibrant urban quarter is to concentrate the public realm. The scheme is therefore designed to maximise the footprint of the buildings and to create a tightly-enclosed public realm with main routes 10-12m wide and secondary routes 7-9m wide. This will serve to emphasise the scale of the central square and will contrast with the wide open spaces of the IRR. The section on massing shows the enclosure ratios of the routes through the site which will all be 1:0.5 or greater. The ground floor of the buildings throughout all of the internal routes are animated with retail, café

and bar uses as described in the following section and the public realm scheme developed by Landscape projects is described in Section 5.

DIVERSITY AND GRAIN

The masterplan is based on the concept of creating a unique and diverse part of the city. Each of the blocks is therefore being designed by a separate architect team. These include: Allies and Morrison (Block 1), Chetwood Associates (Block 3), Aedas (Blocks 2,4,5 and 11), different teams from Glenn Howells Architects (Blocks 6 and 10) and Jestico Whiles (Block 9). Separate architects will also be appointed for Blocks 7,8 and 19. The separate development of each of these blocks and the friendly competition between the practices is partly recreating the conditions that exist in traditional urban quarters. The aim is to create a process that generated the diversity and grain found in these quarters.

The team are committed to retaining the strength of the masterplan in order to create a strong identity in this part of Sheffield.





4.2 A Mix of Uses



In which we describe the mix of uses in the scheme including the broad 50:50 split between office space and housing on the upper floors and the active ground floor uses.

An important part of the brief for West Bar was to create a fully mixed use scheme that would be lively throughout the day and into the evening. The scheme therefore places as much emphasis on employment uses as it does on housing and seeks to maximise the amount of active use on the ground floor.

OFFICE SPACE

The scheme has been designed as a major office destination albeit one that is not designed as a business park. Office uses occupy all of the upper floors of the Corporation street frontage on the western side of the site. Blocks 2,4,5 and 11 have been designed so that they could be taken by a single large occupier. Blocks 2 and 4 and 5 and 11 are linked over the tertiary routes that pass through the buildings but each has its own core and entrance so can be let separately. This building has a basement car park and generally takes access from the east west routes coming into the site. The eastern elevations have active ground floors on the main routes through the site. Block 1 provides a second large office building (25,107m²) that can either be taken by a single occupier or let floor by floor. This is accessed from Kelham Square and includes the Campanile.

Live/work: The ground floor space along Bridge Street is proposed to be live/work space (units totalling 855m²). This will include a series of studios set back at ground floor level accessed by a walkway raised above the pavement (and flood level) level. People will be expected to work out of the units and have the potential to create shop fronts if they wish.

RESIDENTIAL SPACE

The residential space is concentrated on the eastern side of the site and in the southern towers. The main residential scheme is Block 6 that will include 339 apartments on seven floors over ground

floor retailing and workshops. The housing is accessed off Bridge Street with two cores (one linking to the car park). The apartments on the western side of the block are accessed from a residential courtyard at first floor level to avoid cores penetrating the retail space. The other main residential building is Block 10, a 30 storey tower over three levels of active uses. This tower has 12 apartments a floor and includes 288 apartments in total (18,563m²).

Student accommodation: Block 9 is proposed as a student block. This includes communal uses (such as common room, cycle storage and laundry) on the ground and first floors with 26 floors of accommodation above. This is arranged in a triangular form around a central core with a group of rooms and kitchen on each side of the

triangle. This provides 413 bed spaces (13,635m²).

ACTIVE USES

The aim of the scheme is to colonise as much of the ground floor as possible with active uses. These will predominantly be A1 uses (retailing) and A3 uses (bars, cafes and restaurants) although other A3 uses would be acceptable in small quantities. The largest retail unit is under the car park in Block 3. This will be a 'local' supermarket. The units under Block 6 are likely to be mainly cafes and restaurants exploiting the opportunity to put tables out into the square. On the western side of the square there are also

The scheme places as much emphasis on employment uses as it does on housing and seeks to maximise the amount of active use on the ground floor

opportunities for bars and restaurants although the units are shallower and would also suit retailing. Block 5 and Block 6 also animate the routes

into the site from the south. These are smaller units and so are likely to be local retailing of coffee shops. Blocks 7 and 8 are proposed as a hotel (see below) that will have a restaurant, bar and reception that will be used to activate its ground floor. The western end of Block 7 is proposed to be an Urban Studio. This was part of the competition scheme and is intended as a city centre home for Sheffield Architecture School. Block 10, the residential tower also has an active base. This is likely to be A3 use and operates on three levels.

Hotel: Block 7 is proposed as a hotel. This would total 5,856m² and there has already been some interest from hotel operators in the site. However the courts have some concerns over this use and the planning application seeks to retain the flexibility to develop these blocks as residential or office space.





GROSS EXTERNAL AREA FIGURES (GEA)

USE	BLOCK											TOTAL M ²	TOTAL sqft
	1	2,4	3	5,11	6	7	8	9	10	12			
Active Uses													
A1 Retailing	599		1,761		2,197		581			1,653		6,791	73,102
A3/4 Restaurants, cafes and Bars		673		876		804		114	1,591			4,058	43,677
Total Active	599	673	1,761	876	2,197	804	581	114	1,591	1,653		10,849	116,779
Employment													
B1 Business	24,508	29,526		22,227			4,878					81,139	873,369
C3 Small business at home					955							955	10,280
C1 Hotel						5,052	*3					5,052	53,379
Total Employment	24,508	29,526		22,227	955	5,052	4,878					87,146	937,028
Residential													
C3 Residential					24,471				16,972			41,443	446,092
Student Accommodation								13,635				13,124	141,265
Total housing					24,471			13,635	16,972			55,078	592,860
Estimated number of units *4					339			413	288				
Parking													
Multi-Storey (spaces)			702							372			1,074
Basement (spaces)		58		49									107

- Notes:**
- The Planning application is based on total floor areas, the floor areas for each block are illustrative, based on the illustrative plan and may vary up or down as a result of detailed design work.
 - Numbers are rounded so that columns may not total exactly.
 - The use of Blocks 7 and 8 is either hotel or offices the figures for these units are therefore either or.
 - The number of retail units shown is illustrative - final numbers may vary up or down depending on the final mix of the scheme.
 - The student unit numbers shown refers to bed spaces.

4.3 Heights and massing

In which we describe the massing of the scheme and the rationale behind the heights of each of the buildings.

One of the central concepts of the original masterplan was the idea of a triangular citadel with a tower at each corner. To achieve this effect the main body of buildings on the site needs to be of a similar height and the routes between them sufficiently narrow so that the whole citadel reads as one, as opposed to being a collection of individual buildings. Each of the three points of the citadel is then to be marked with taller buildings designed so that in views where all three towers can be seen, they read as a group. In order to achieve this the buildings of the scheme and the space between them have been carefully modelled to ensure that we create the citadel while maintaining a good quality of public space. This raises a number of issues that are dealt with below and on the following pages:

- The height of the buildings
- The sunpath impact
- The enclosure of streets
- The scale and proportion of the main square
- The visual impact of the tall buildings

BUILDING HEIGHT

The height of each of the buildings is set out on the table below. This is based on the illustrative masterplan and has been used to set the height parameters in the Planning Framework. The heights are dependent on the ground level and the nature of the ground and upper floor uses. The heights are therefore shown in number of storeys, height from ground and height above sea level (AOD). These heights exclude plant although the visualisations of the illustrative scheme include plant rooms. The Planning Framework includes rules for the accommodation of plant and machinery on top of buildings.

To achieve the citadel effect the main body of buildings on the site needs to be of a similar height and the routes between them sufficiently narrow so that the whole citadel reads as one

BLOCK NUMBER		No. of Storeys *2	Ground Floor Level AOD (M)	Height (M) *3	Top of building AOD (M)
BLOCK 1	A	G+M+12	+49.3	57.5	+106.8
	B	G+7		37.7	+87.0
BLOCK 2,4,5,11	2	G+8	+49.3	37.7	+86.3
	4	G+7	+49.3	33.0	+82.3
	5	G+7	+49.3	33.0	+82.3
	11	G+11	+49.3	53.0	+102.8
BLOCK 3		G+8	+49.3	28.05	+77.35
BLOCK 6		G+8	+49.3	30.0	+79.3
BLOCK 7+8		G+6	+49.3	23.5	+72.8
BLOCK 9		G+26	+48.87	82.0	+131.0
BLOCK 10		LG+G+M+25	+54.8	86.5	+135.8
BLOCK 12		G+6	+54.8	22.35	+77.15

Notes:

1. These heights are based on the Illustrative scheme. The parameter heights are described in the Planning Framework

2. Floor to floor heights vary by use. Generally residential floor to floor heights are 3m, offices are 4m, car parking is 2.85m and active ground floor uses are 5-6m.

3. The height of the building excludes plant. The parameters for the accommodation of plant are set out in the Planning Framework

Block 1: This is planned as a 12 storey office scheme over a double height ground floor. The ground floor is planned as active uses and has a floor to floor height of 5.5m. The mezzanine is 4m as are each of the office floors giving a total height of 57.5m. This is the short/fat tower in the original concept and while it is no longer freestanding it will create a ship's prow to the citadel and in its design and lighting will relate to the other towers.

Block 2,4,5,11: The series of office buildings along Corporation street are the most visible element of the citadel. They will be designed to read as four buildings, each separated by a route into the site. The two central buildings will be ground plus 7 storeys of offices creating the roof datum for the citadel. At either end the buildings rise to meet the towers. Block 2 rises by just one storey to hold the northern end of the square. Block 11 however rises to double-height ground plus 11 storeys as part of the original concept to create two gateway towers at the main entrance to the site.

Block 3: Eastern side of the citadel is 3-4m lower than the Corporation Street frontage. This is because the floor to floor heights are less than the relationship to Bridge Street and the square. The car park includes a retail ground floor at 5.25m with a ramp up to eight levels of parking. The top layer is however on the roof so that the total height of the building is 28.05m.

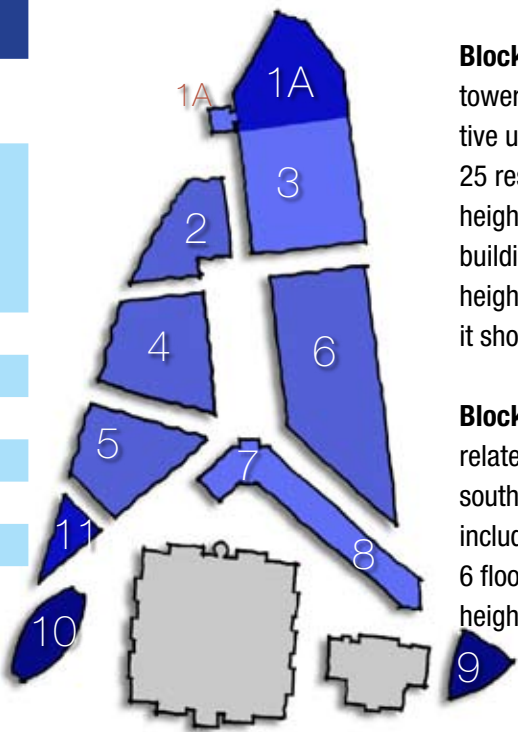
Block 6: This is a residential scheme with an active ground floor at 5.5m with 8 residential floors above this. The ground level drops between the square and Bridge Street allowing for a floor of workshops and a floor of flats to be accommodated in the height of the retail space.

Block 7 and 8: This block which will be ground plus 6 storeys with a taller element facing the square. The total height of the block is 23.5m, lower than the predominant height of the citadel in order to maximise light penetration into the square.

Block 9: This has been developed as a student tower and includes ground floor plus 26 residential floors. This gives a total height of 82m.

Block 10: This is the main residential tower and will include three floors of active uses at its base totalling 14.5m and 25 residential floors. This gives a total height of 86.5m. As described in the tall building study, the main limiter on the height of this block is the need to prevent it showing over the roof of the Cathedral.

Block 12: This is a lower block that relates to the massing of buildings on the southern side of West Bar. The scheme includes a 5.25m retail ground floor and 6 floors of parking above giving a total height of 22.35m





4.4 Enclosure of space



In which we describe the scale and proportion of the public routes and spaces within the scheme

As described in the previous section, the scheme has been designed to create a series of tightly enclosed public spaces within the citadel. The level of enclosure on the streets is therefore designed to be medieval in proportion and a great deal of work has been undertaken to explore the nature and character of these spaces. This includes a review of streets with similar proportions to get a sense of the feeling of the space. The photos to the right are taken from this study and show streets in Manchester with similar proportions. The picture to the right is part of the Timber Wharf scheme by Urban Splash and shows a new street very similar to the ones that we are proposing. The conclusion is that streets can create attractive spaces when they are really very narrow - similar to the streets of a medieval town pictured below. The sections to the right show the proportion of each of the main routes through the site:

Section A: Relates to the main square and is dealt with in the following section.

Section B: This is the gateway to the site from the south west and is the most dramatic of the sections. It is however between two towers and Block 10 is a curving form so that this section will not be experienced as a street. The section has rather been designed as a gateway into the site and will feed into a wider space at the base of the tower and thereafter into a 12m wide street. The proximity of the courts means that this can only be enclosed by a small section of Block 7.

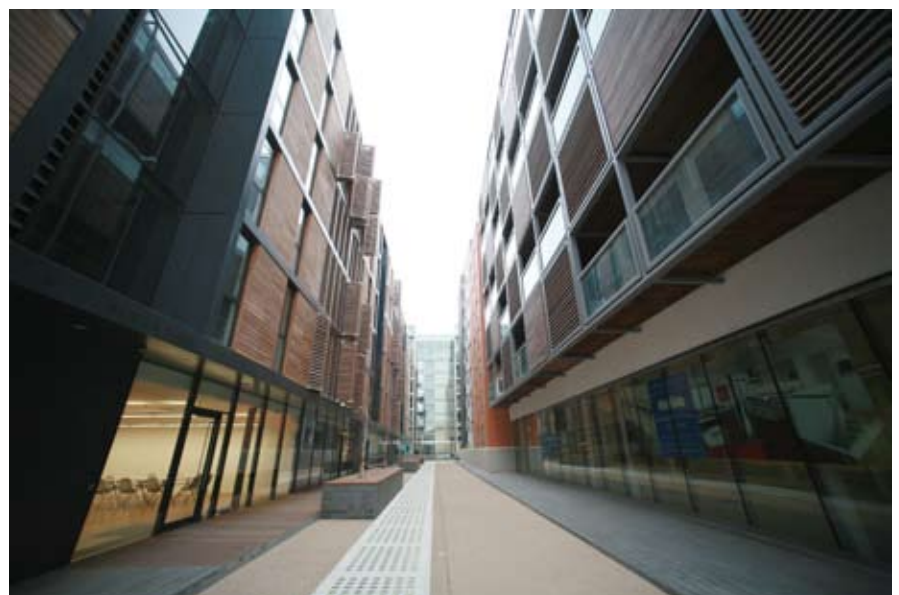
Section C: This shows the main route into the site from the south east. This is also 12m wide and will create a ratio of 1:0.5 (the street is half as wide as the height of the buildings). The picture at the bottom of the opposite page shows a street of similar proportions.

Section D: This shows the route to the river and is designed to be 8m wide with a setback on the retail frontage of Block

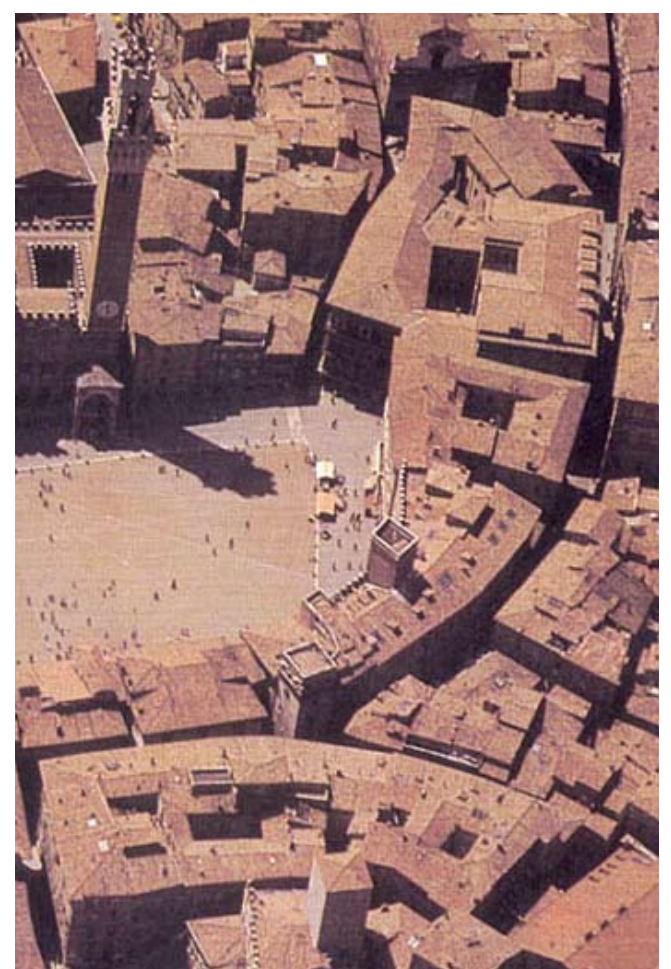
3. This route is also likely to be bridged to create a gateway to the site.

Section E: This is the main route to the north and has been tightened up to maximise the enclosure of the main square. Space is therefore created for pedestrians by setting back both of the ground floor frontages to create a 12m wide route. The enclosure of the main space is in excess of 1:0.3.

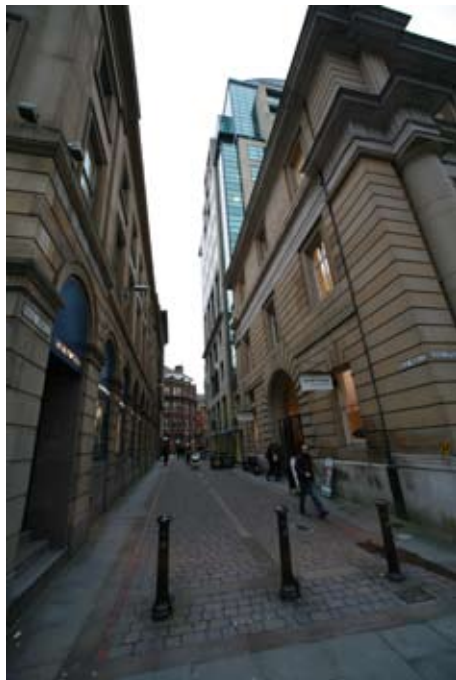
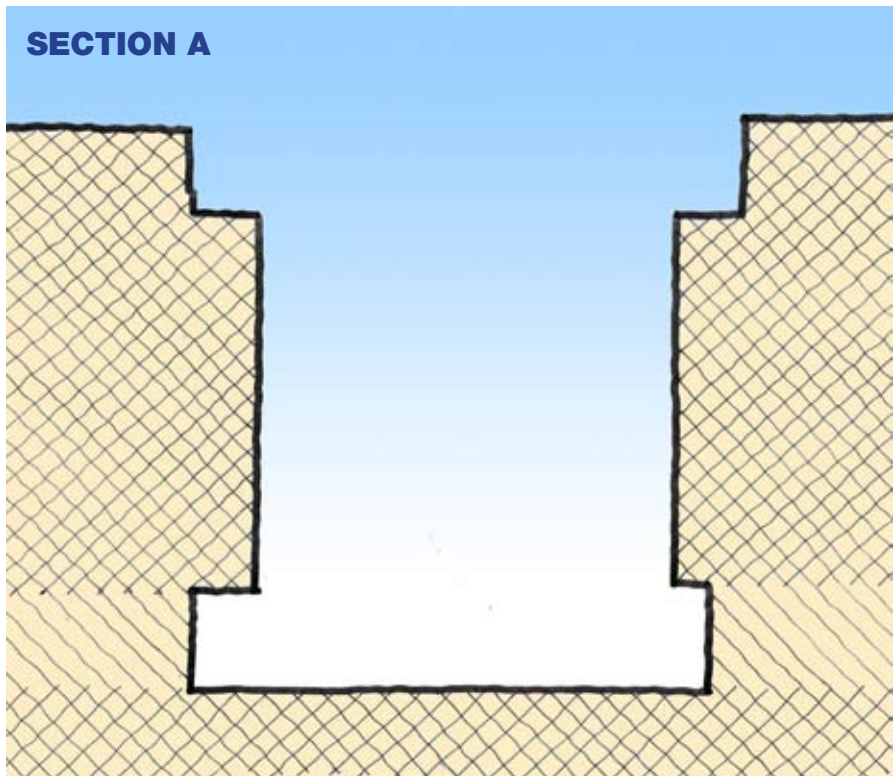
The level of enclosure on the streets is designed to be medieval in proportion and a great deal of work has been undertaken to explore the nature and character of these spaces



Two views on the route to the south west from Glenn Howells Architects (**above**) and Landscape projects (**left**) showing the scale and nature of the space.

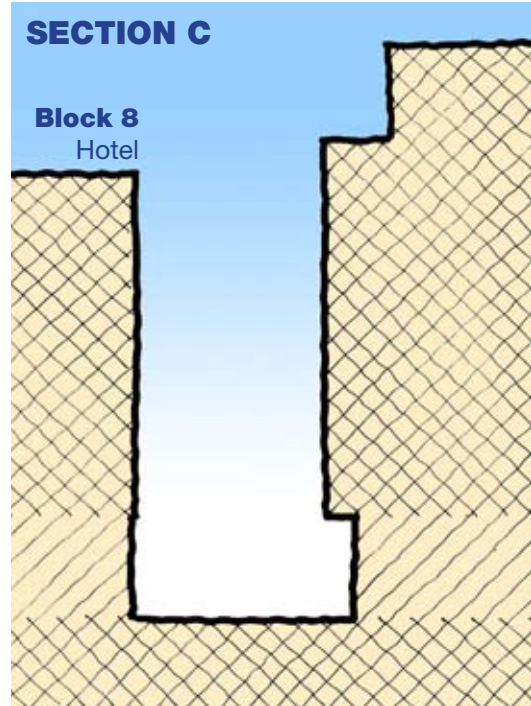


SECTION A



SECTION C

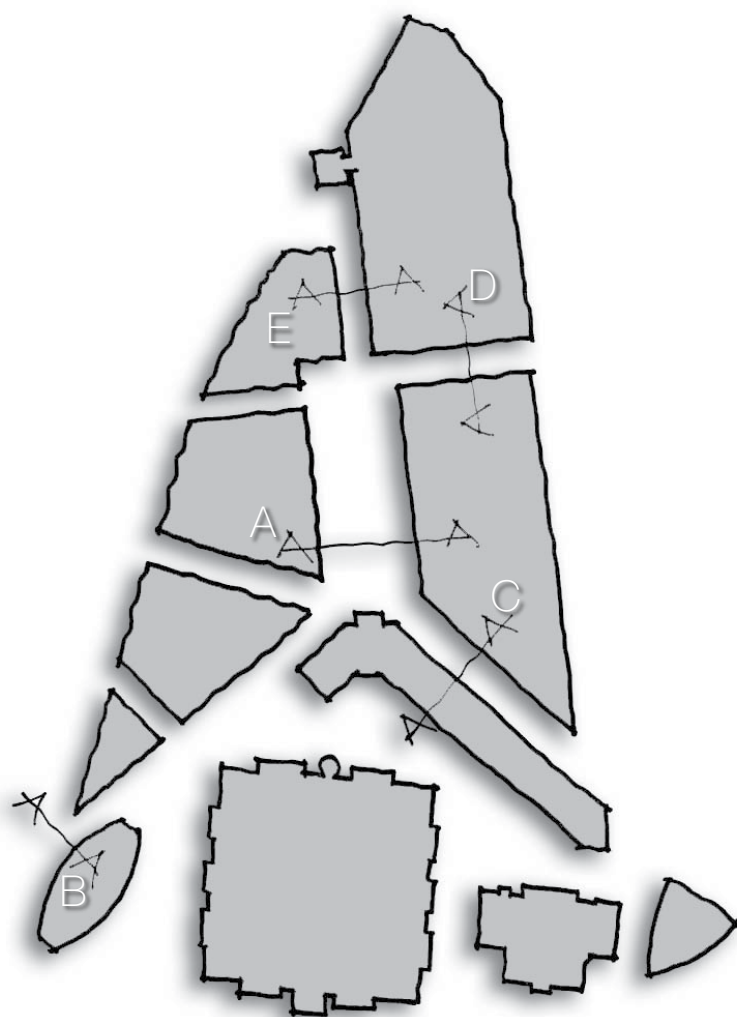
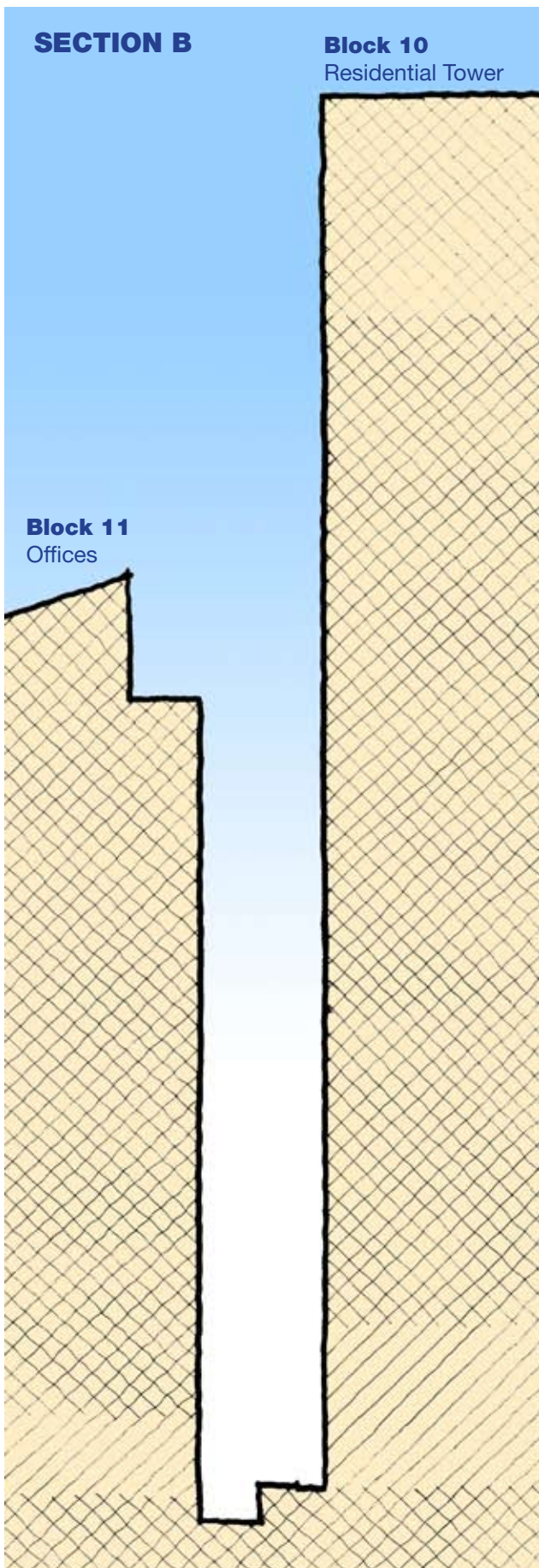
Block 8
Hotel



SECTION B

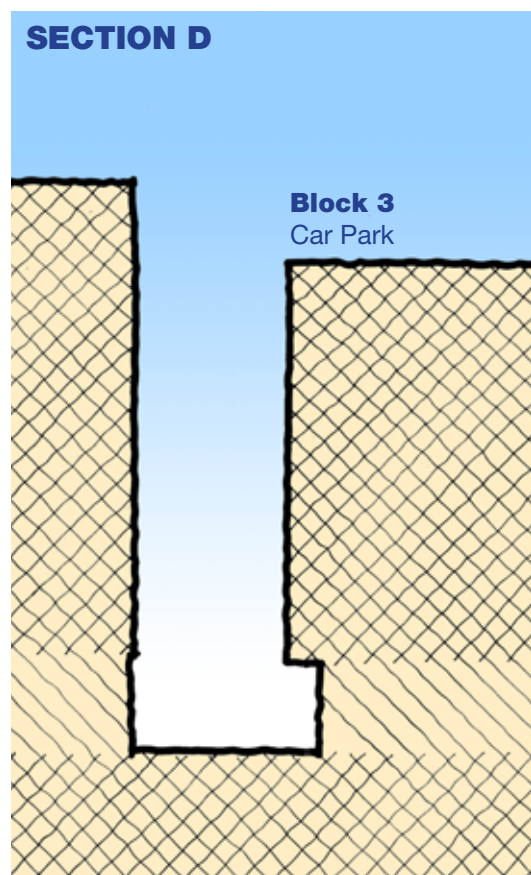
Block 10
Residential Tower

Block 11
Offices



SECTION D

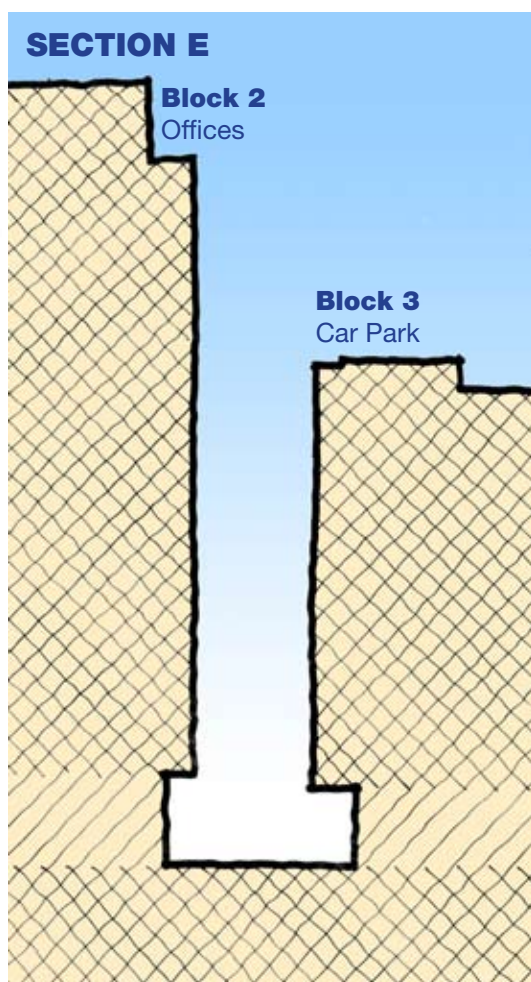
Block 3
Car Park



SECTION E

Block 2
Offices

Block 3
Car Park



4.5 Shadow and wind studies



In which we described the results of the shadow and wind studies and their effect on the buildings and public spaces of the scheme.

An important aspect of the scheme modelling has been the potential impact of shadowing and wind. A shadow study has been undertaken by URBED as part of the masterplanning process (the results are shown on the facing page). A wind assessment has been undertaken by Buro Happold as described below.

SHADOW STUDY

An assessment has been made of the impact of building heights on shadowing. This is shown in the attached panel at 8am, 12noon and 5pm in the middle of Winter, mid Summer and at the Spring and Autumn Equinoxes.

These studies show that the site benefits from being a citadel. The space around the site means that the accommodation around the edge of the site gets good levels of daylight. The residential block 6 gets good morning sun and the offices to the west will get the evening sun. The western side of Block 6 also faces onto the main square so that

the apartments benefit from afternoon and evening sun for much of the year. In terms of public spaces the streets within the site are in shadow for much of the time, as you would expect streets of such tight proportions. However the main square is oriented north/south and therefore gets lunchtime sun for most of the year. This is the ideal orientation for a café area because it gets the sun when people appreciate it most at lunchtime. The space will, of course also operate in the evenings – however here activity is likely to be more internal.

The towers inevitably cast long shadows. However they are like sun dials in that

The main square is oriented north/south and therefore gets lunchtime sun for most of the year

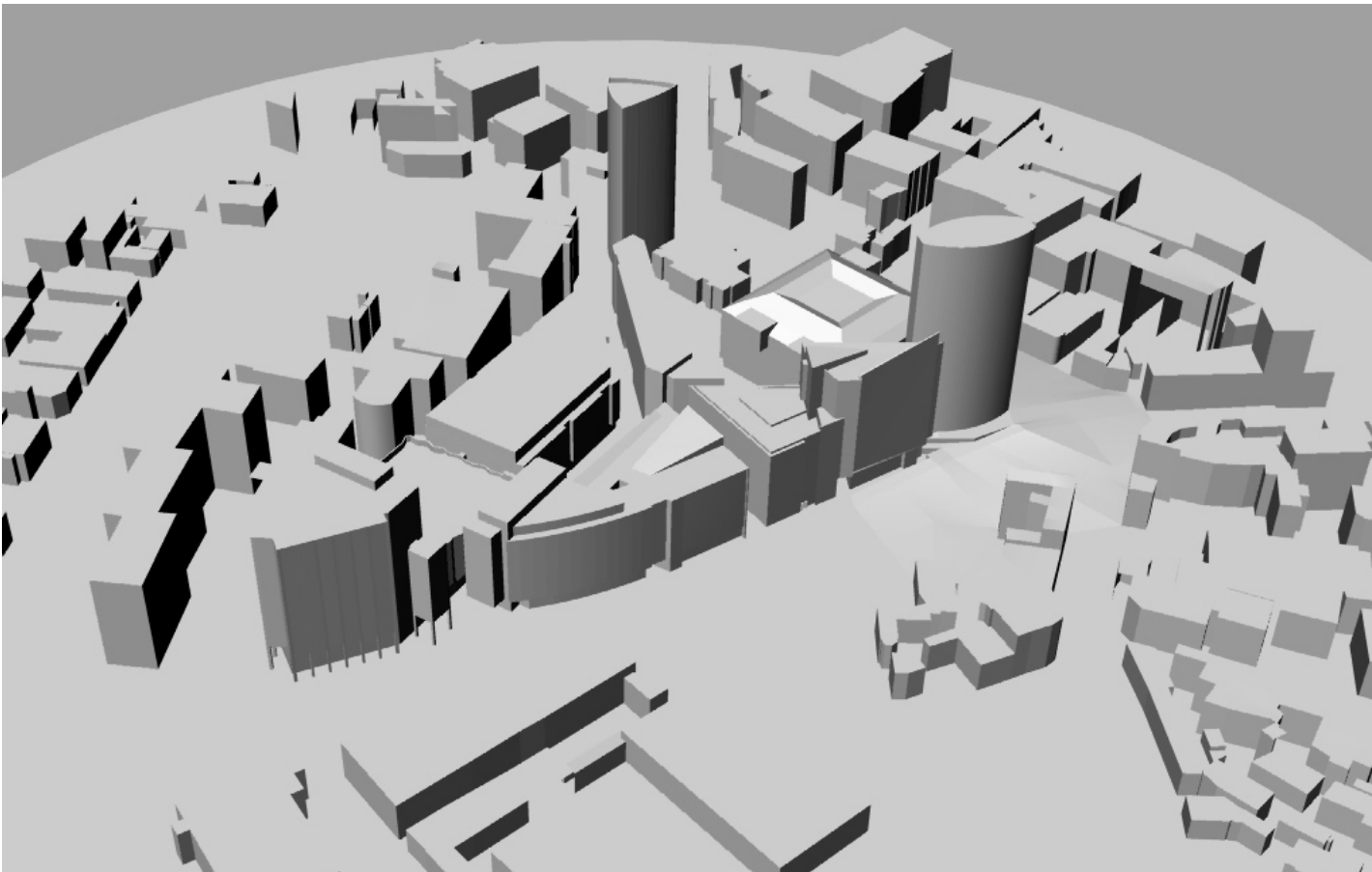
they track across the surrounding areas and because the structures are quite slim any area is only in shadow for a short amount of time. The tallest tower casts its shadow for much of the day on Corporation Street and the IRR and the Block 1 tower likewise casts its shadow for much of the time on the roadway.

WIND MODELLING

A detailed computational wind engineering (CWE) analysis has been performed for the West Bar Development, examining the effects of building massing and landscape features on site wind conditions. The methodology was approved by Sheffield City Council Planning Department.

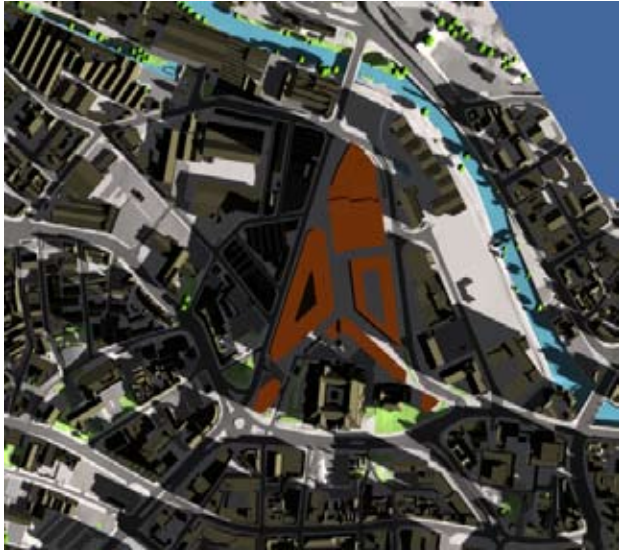
The West Bar Development is likely to reduce wind speeds towards the east of the site when compared with current conditions. However some areas are likely to be adversely affected by the introduction of the new development, as indicated below. All areas are expected to be suitable for the intended activity.

- Surrounding areas to the west of the site show an increase in wind acceleration, but the inclusion of mitigation measures to the perimeter of the site reduces this impact. The inclusion of mitigation measures (hard and soft landscape) helps to minimize the residual effects on the Western perimeter of the site.
- Courtyard areas of the new development were shown to present favourable conditions for sitting.
- The areas surrounding Plot 10 showed wind acceleration but conditions were judged to be tolerable for the intended activity (business walking), with the use of mesh screens.
- Windy conditions are expected at times in the passages under Plot 5 and 2, but conditions are expected to be tolerable for the intended activity (business walking).

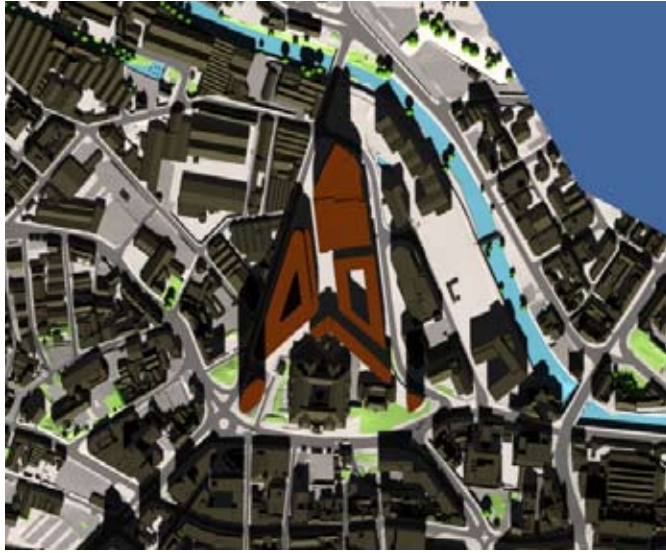


March

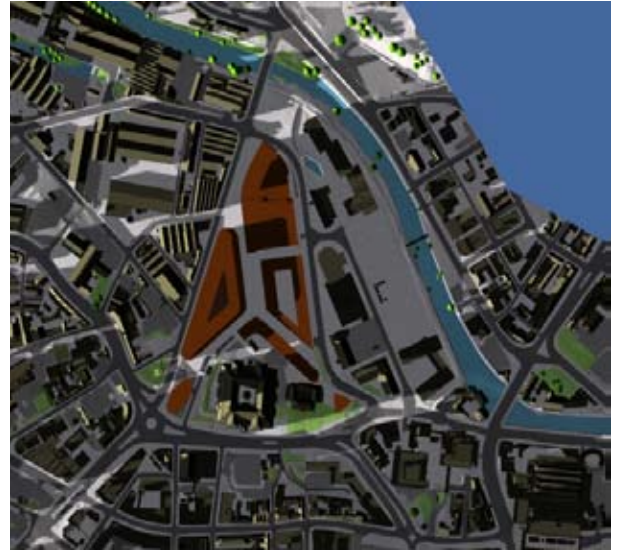
8am



12noon



5pm



June

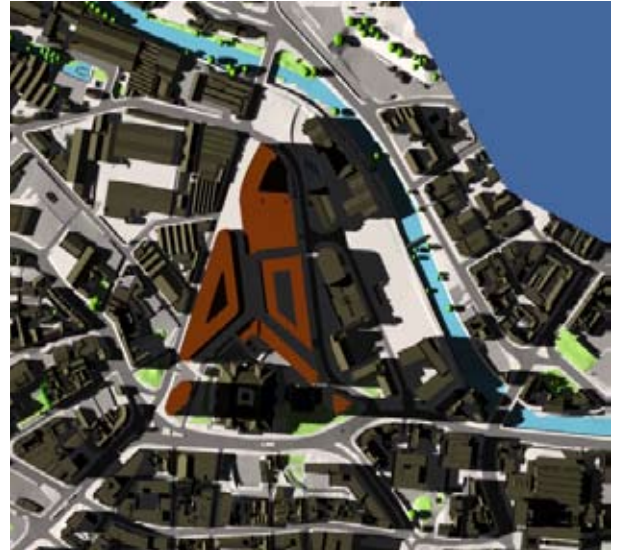
8am



12noon

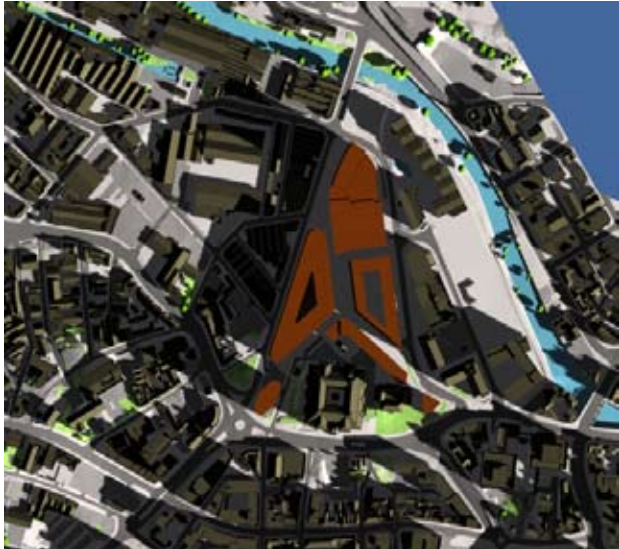


5pm

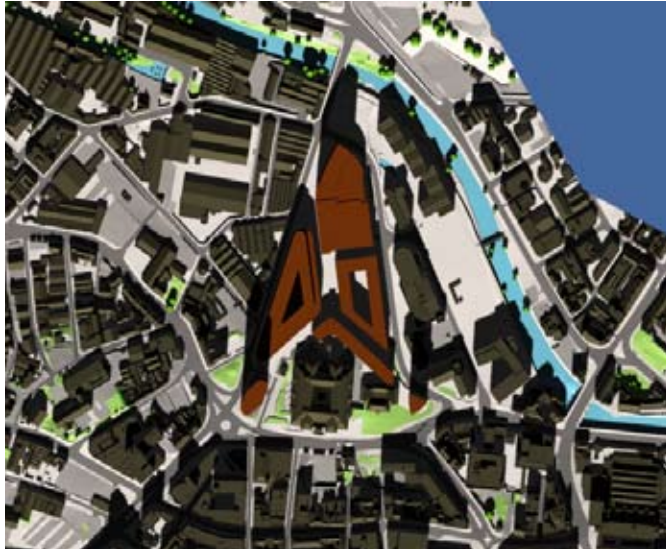


September

8am



12noon

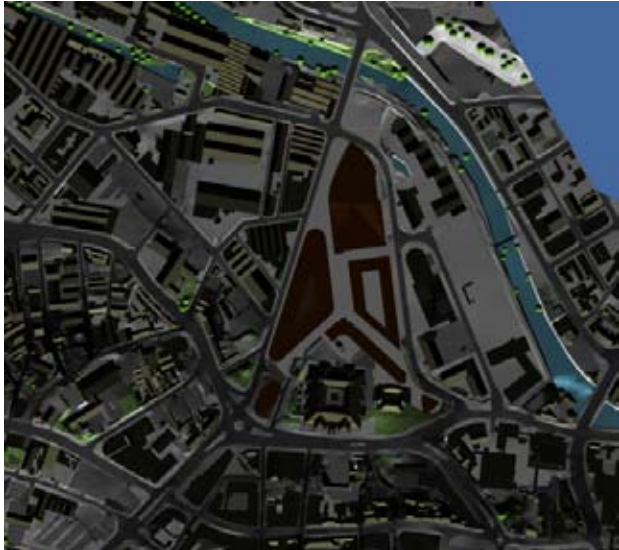


5pm

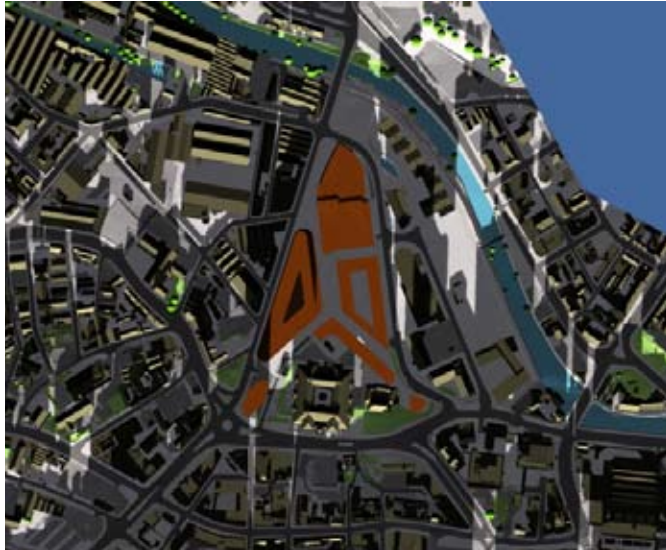


December

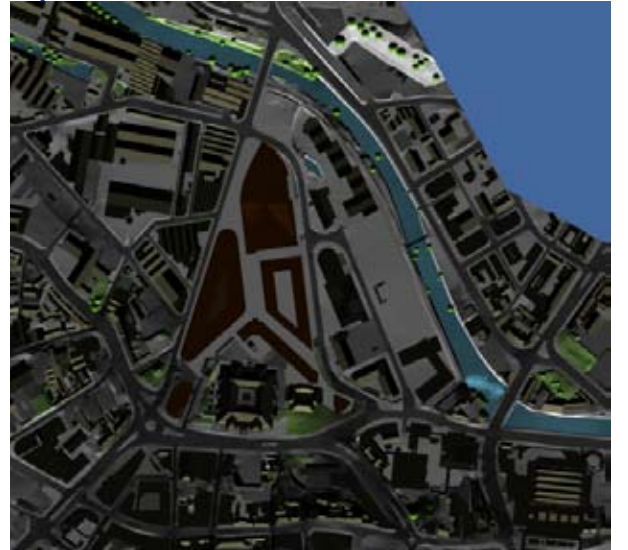
8am



12noon



5pm



4.5 Enclosure of space (The Square)



In which we describe the work that has been done to develop the scale and proportion of the square at the heart of the scheme with reference to existing squares.

One of the concerns expressed in the development of the masterplan has been the scale and proportion of the central square. This was purposely made into a tightly enclosed space to create the feeling of enclosure. The space is 22m wide by around 70m long and there was concern that this would be too narrow. However the masterplanning team took the view that many modern spaces are over scaled and that most successful squares are actually much narrower than is assumed. In order to test this a detailed precedent study was undertaken of a series of squares to understand their dimensions. A selection of these are reproduced on the facing page.

St. Anne's Square in Manchester was one of the most relevant examples. The main part of this square is 27m wide by 89m long. This is enclosed by 4 and 5 storey buildings giving an enclosure ratio of 1:1.4. However the western part of the square narrows and is just 18.5m across with taller buildings. This gives an enclosure ratio of 1:0.4.

In Sheffield we looked at a number of examples, however perhaps the most relevant is the newly created Millennium Square behind the Winter Gardens. While the space is complete, the enclosure is not yet finished because

two of the buildings are yet to be completed. However the width of the space at its widest point is 22.3m and the buildings around it (excluding the tower) will give it an enclosure ratio of around 1:1.

The square proposed in West Bar is 22m wide and is therefore comparable to Millennium Square. It is narrower than the main section of St. Anne's Square but 3m wider than the narrow section by the Royal Exchange and with a lesser enclosure ratio. This section of St. Anne's Square feels generous and gives us confidence that the scale of the West

Bar is correct.

One of the elements that gives drama to the experience of the space is the enclosure of the streets leading onto the square. In St. Anne's Square many of the streets are very tight (6-7m wide) so that entering the square gives a feeling of space. The West Bar Square will have the same effect with the tightly enclosed streets opening into the square, emphasising the feeling of space.

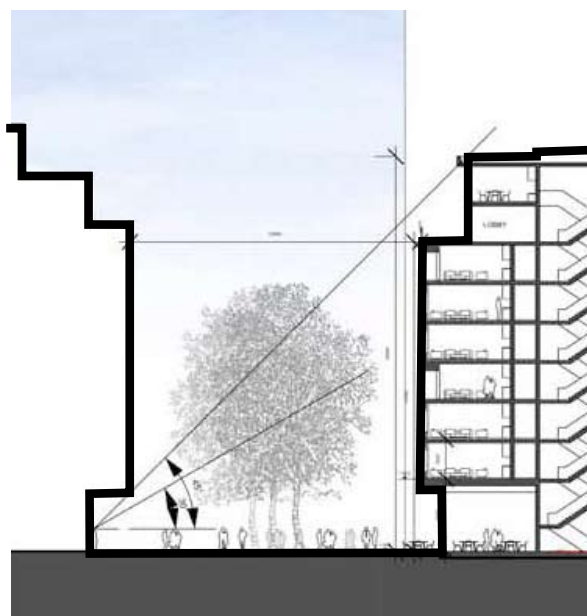
The other aspect of the character of the space is the height of the buildings. We came to the view that many of the best spaces are a 1:1 enclosure ratio, i.e. the width of the space is the same as the height of the buildings. The square has therefore been designed with set backs on the upper floors of the adjacent buildings. These are set back to the extent that the upper levels of the

buildings cannot be seen from ground level in the square.

It is also important that the square be lined with active ground floor uses. This is true of every side of the square. The ground floor frontage is set back on either side of the square to increase the space at ground level and to provide some weather protection for outdoor tables and chairs.

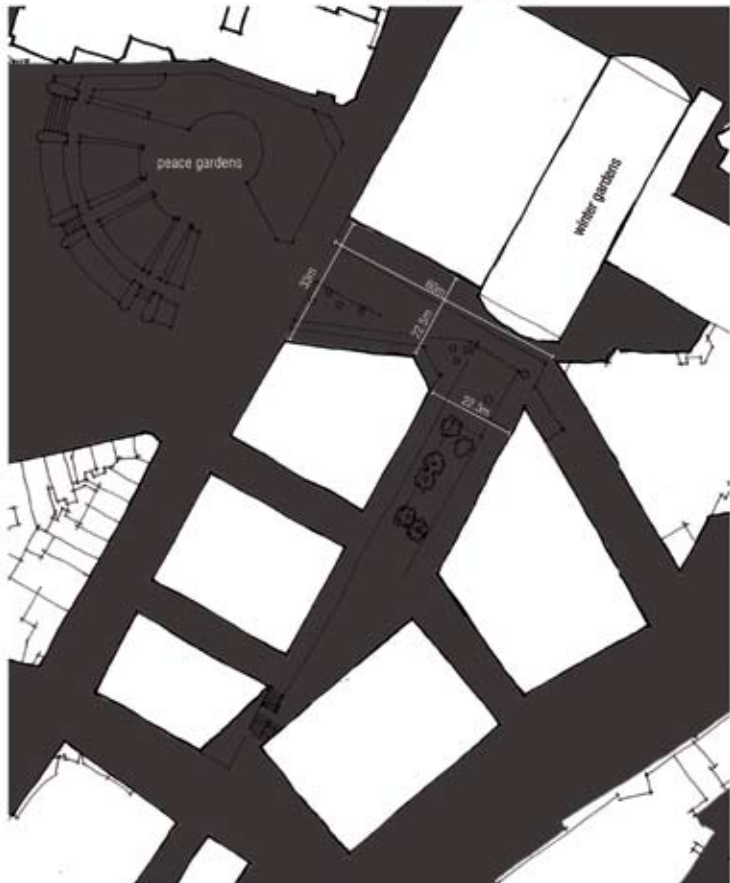
The space is therefore designed to maximise the intensity of experience of the space and to create a fitting focus to the scheme.

The masterplanning team took the view that many modern spaces are over scaled and that most successful squares are actually much narrower than assumed



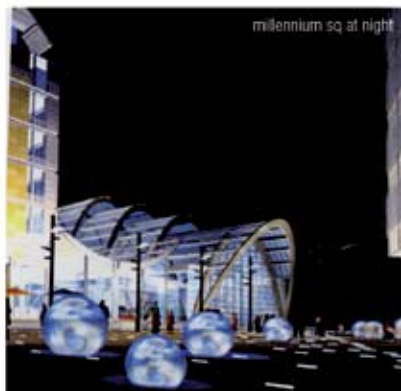


MILLENNIUM SQUARE, sheffield

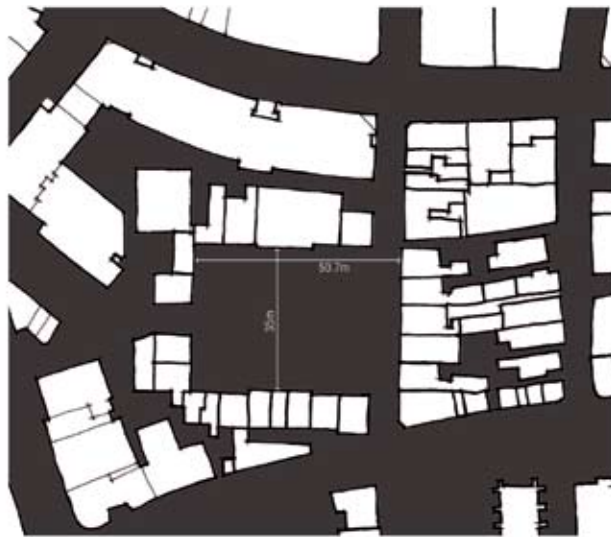


0 5 10 20M

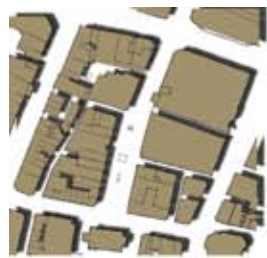
ht to width ratio 1:1 / 1:1.3



PARADISE SQUARE, sheffield

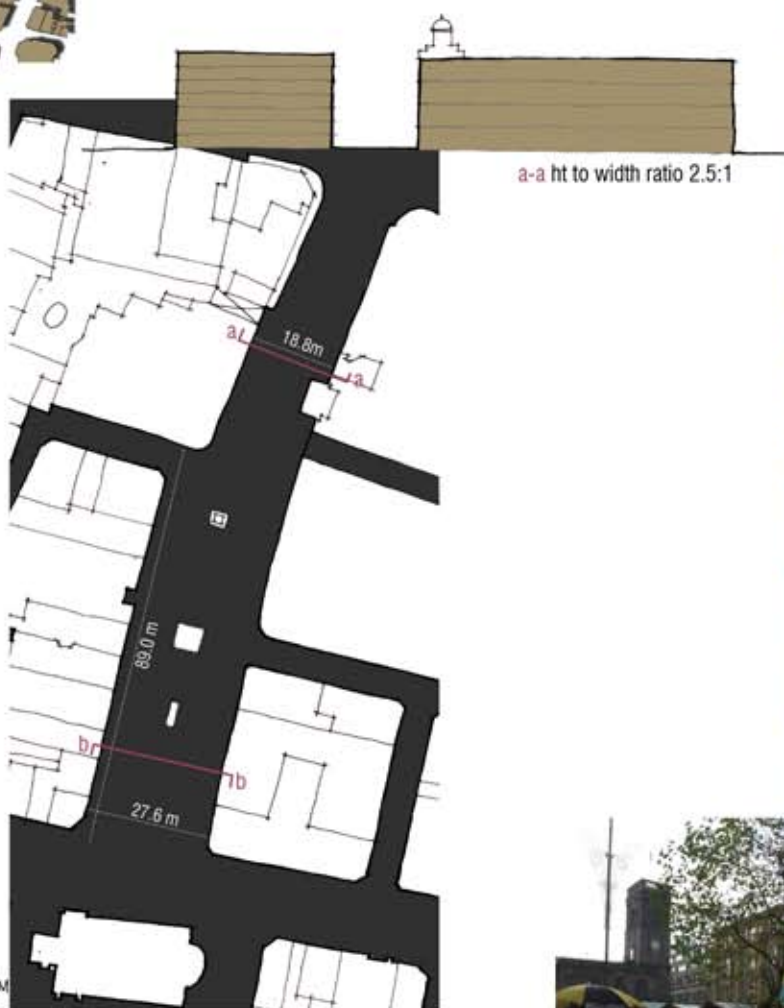


ht to width ratio 1:2 / 1:3



St. ANN'S SQUARE, manchester

urb2d



a-a ht to width ratio 2.5:1



0 5 10 20M

b-b ht to width ratio 1:1.4



4.5 Tall Buildings (Views)



In which we describe the assessment that has been undertaken of the effect of the tall buildings in the scheme on key views within Sheffield

The view assessment has been based on 12 views agreed with the planning authority on the basis of those identified in the Urban Design Compendium. The assessment for each of these views have involved three stages; a) a photograph was taken from each view point b) a computer projection of the scheme was taken within the verified Z Mapping 3D model of the city centre c) The existing buildings in the render were lined up with the buildings in the photograph to verify that the projection is accurate. The existing buildings were then removed to allow the scheme to be overlayed on the photograph. The table shows the views selected and the impact of the scheme. A full set of photographs, renders and projections are included in Appendix 1.

View 1 Norfolk Park: Grade II listed Norfolk Park is one of Sheffield's 'jewels' as the Duke of Norfolk's hunting grounds, converted to a public park in the mid 19th century. The park is designed to create a rural illusion with a series of sweeping prospects across the city centre. This is therefore a sensitive view and is seen by a reasonable number of people. There is however only one point within the park where the scheme is not obscured by mature trees. In this view the West Bar scheme sits well to the 'right' of the frame, and remains below the horizon line set by the hills beyond the city centre.

View 2 Parkwood Springs: This area of scrubland to the north west of the city centre offers striking prospects across the city centre. It is not a formal public open space but provides occasional recreation amenity for local people. The panoramic views show the gritty, urban character of the city with a foreground made up of commercial sheds and the middle ground dominated by office buildings. The view is therefore not particularly sensitive and is not experienced by a large number of people. The modelling shows the West Bar scheme seen in the centre of the view stepping up the rising ground of leading the eye towards the centre of the city. The height of the towers at the base of the hill is not out of context with other built or proposed towers nearby, and does not break the horizon line.

View 3 Penistone Road: This is one of the main approach roads to the city centre from the north west. The spire of the cathedral creates a focal point from this route although there are few other buildings of architectural distinction along the route. The view is therefore of 'medium' sensitivity but is experienced by a large number of people. West Bar will be very visible from this route and all three towers will be visible in the view. It will provide a clear edge to the city centre without competing with the prominence of the Cathedral.

View 4 Crookesmoor: This panoramic view is enjoyed by the Crookesmoor community to the west of the city centre. There are no routes through the area so that the number of people affected is limited. The West Bar scheme will make a noticeable but limited impact on the skyline from this distance. It cannot be seen from the park, being obscured by trees, only from the apartment blocks where they present a noticeable cluster in the centre of the panorama, rising slightly above the horizon line. Relative to the wider skyline, their impact is modest.

View 5 Broad Lane: This is a busy city centre street approaching the West Bar roundabout from the south-west. It is lined with mid-rise buildings, mainly from the 1960s with little architectural character. A number of new buildings have been completed and others are planned so that the street is in a state of transition. The sensitivity of the view is therefore rated as 'medium' even if its current character may not justify this. The traffic on the road also means that a lot of people experience the view in which the West Bar will be prominent. Block 10 will punctuate and partially close the vista down Broad Lane acting as a striking focal point. The curved profile of the tower and its position will also allow a view into the site linking the central square to the street. The scheme will therefore have a major impact on this view but hopefully a positive one.

The view assessment has been based on 12 views agreed with the planning authority

View 6 South Street: This area of informal greenspace affords views across the city centre from the Park Hill flats. Park Hill is undergoing regeneration and will continue to be an important presence on the skyline of the city. As the population of the estate increases the number of people experiencing the view will also. The West Bar scheme will have a significant but not dominant presence in the panorama from Park Hill. The three towers are visible to the right of the view stepping up in height from right to left leading the eye towards the spires of the city centre without obscuring or exceeding them in height on the skyline. The visual impact will therefore be important but the overall effect will not be damaging on the view.

View 7 A57 Sheffield Parkway: The A57 is a near-motorway standard route from the city centre to the M1. There is little of architectural or townscape value along its route. However it creates an unfolding view of the city centre to approaching traffic marked by the towers of City Hall and the Cathedral. The view is therefore of medium sensitivity but with a large number of receptors.



The towers of West Bar will appear to the right of this view rising above the roof tops of the low-rise office buildings that line the parkway. They mark the northern edge of the city centre adding interest to the view without affecting the view of the city centre spires.

View 8 Spital Hill: This view is one of the original routes into the city centre from the north east passing under the railway viaduct and over the River Don creating a memorable gateway to the city. The built form along the street has been damaged over the years but it still retains a good deal of character. It also has good views of the cluster of buildings on top of the hill in the city centre so that the sensitivity of the view is medium but it has less traffic than Parkways so the number of people experiencing the view is medium. The West Bar scheme will be seen to the right of the view well away from the sensitive spires and town hall tower. This view shows the triangular arrangement of the towers to good effect which should enhance the views along the street.

View 9 Inner Ring Road: The route is nearing completion so is not historically sensitive. However it will be a very busy route and views of the city from the road will help define the image of Sheffield. For this reason the council has developed plans to improve the stock of buildings along the route, West Bar being the most important of these. The view is therefore rated as sensitive and something that will be seen by a large number of people. The scheme will have a major impact in this view, removing a fragmented and nondescript group of buildings and creating a major landmark on the route and an imposing elevation along Corporation Street.

View 10 Paradise Row: Paradise Row is an ancient medieval street leading downhill towards the river from the Cathedral which is now characterised by Georgian property especially around Paradise Square. The view down the street is highly sensitive architecturally and historically and is seen by significant numbers of pedestrians. Block 10 sits precisely at the focal point of the perspective down Paradise Street, giving it a powerful presence. The view is of the tower at its slimmest. The gradient of the street also means that it looks down on the tower so that it does not overwhelm the Georgian blocks. Indeed a building of the quality of Block 10 should be a significant improvement on the current view from the street.

View 11 Cathedral Square: The view of the Cathedral is one of the most important in the city. The view is one of the most historically and architecturally sensitive as well as being seen by a large number of people. Initial analysis of this view showed that Block 10 appeared over the roof of the Cathedral. This was considered unacceptable and the height of the tower was reduced so that it has no impact on this view.

View 12 Castlegate: The view along West Bar from the east is changing. At present the view terminates on the side of the Courts and the industrial buildings on the site. This is a historic street and the form of the street remains intact even if its character has been undermined by poor quality buildings in the past. It is also experienced by a lot of people, although the amount of traffic will fall when the IRR opens. The sensitivity of the view is rated as medium and the number of receptors high. This view will be dominated by Block 9 that will provide a strong landmark in views along the street. It will be important that this Block is a high quality design to contribute positively to this view.

VIEW		DISTANCE FROM SITE	SENSITIVITY OF VIEW	VISUAL PRESENCE	RECEPTORS, NUMBER AND TYPE	OVERALL IMPACT
	1. Norfolk Park	Far	High	Low	Number – Medium Type - Pedestrians	Low
		Far	Low	Medium	Number – Low Type – Occasional Visitors	Low
		Far	Medium	High	Number – High Type - Motorists	High
		Far	Low	Medium	Number – Medium Type - Residents	Low
	5. Broad Lane	Near	Medium	High	Number – High Type – Motorists and Pedestrians	High
	6. South Street	Medium	Medium	Medium	Number – Medium Type - Residents	Medium
	7. A57 Parkway	Medium	Medium	Medium	Number – High Type - Motorists	Medium
		Medium	Medium	Medium	Number – Medium Type – Motorists, some pedestrians	Medium
	9. Inner Ring Road	Near	Medium	High	Number – High Type – Motorists and Pedestrians	High
	10. Paradise Row	Near	High	High	Number – Medium Type – Pedestrians	High
	11. Cathedral Square	Near	High	None	Number – High Type - Pedestrians	None
	12. Castlegate	Near	Medium	High	Number- High Type - Motorists	High

4.5 Tall Buildings (Design)



In which we describe the mix of uses in the scheme including the broad 50:50 split between office space and housing on the upper floors and the active ground floor uses.

Just as important as the visual impact of the towers is their design. The CABE-English Heritage Guidance sets out nine criteria by which the design of tall buildings should be judged as discussed below. A key aspect of the guidance in the past is the advice that tall buildings should not be addressed in outline applications. This has been amended in the current draft guidance as follows:

'Proposals for tall buildings should not be supported by local planning authorities unless it can be demonstrated through the submission of fully justified and worked-up proposals that they are of excellent architectural quality and in the appropriate location. For this reason CABE and English Heritage consider that outline planning applications are appropriate only in cases where the applicant is seeking to establish the principle of a tall building as an important element within a robust and credible masterplan for an area to be developed over a long period of time. In those cases, it is critical that the planning authority makes the principles established in the design and access statement a condition of planning approval to ensure that high quality can be achieved through proactive control of reserved matters.'

This application has been framed to meet this guidance. This addresses the nine criteria in the guidance as follows:

Relationship to context, including natural topography, scale, height, urban grain, streetscape, built form and skyline: Guidance in Sheffield suggests that tall buildings should be positioned above the 70m contour so that they exaggerate the hills of the city rather than filling in the valleys. The towers of West Bar are below the 70m contour but the view analysis shows that they do not fill the valley (unlike many of the large horizontal 1960s buildings). The towers build in height towards the hill of the city and, unlike towers on taller ground do not compete

with the Cathedral and Town Hall tower or break the skyline.

The effect on the whole existing environment, including the need to conserve important views, conservation areas, listed buildings, rivers and waterways etc: The view analysis in the previous section shows that the towers do not have a significant impact on any of the key views in the city.

The relationship to transport infrastructure: West Bar lies on the edge of the city centre and is therefore well served by public transport. It is only a short walk up the hill to the tram stop next to the Cathedral.

Architectural quality, particularly the top of the tall building: Each of the towers has a distinct architectural quality designed by leading architectural practices. The architectural solution of each will be of the highest quality and each building responds to its unique internal use and location. Final material selection will be robust and timeless with an emphasis on high quality.

The contribution to external and internal public spaces, and especially the interaction with the surroundings at street level, which should contribute to diversity, vitality, social engagement and sense of place: The towers have all been designed with active ground floor uses to include cafes, restaurants and bars.

The effect on the local environment, including micro-climates, overshadowing, vehicle movements and the amenity of those in the vicinity: The towers have been subject to a shadow study and a wind study. The wind study shows a potential impact of the

two larger towers because of their curved profile and mitigation will be designed accordingly. The wind modelling shows that the profile of the towers means that they cast a narrow shadow that passes across the surrounding public realm but does not leave it in shadow for long periods.

The contribution to permeability, opportunities to offer improved linkages on foot, and the opening up/closure of views as appropriate to improve legibility of the townscape: The towers play a crucial role on the masterplan, marking the entrances to the site and allowing pedestrian routes to flow around the two southern towers.

Function and fitness for purpose: The three towers have different uses and their form and design reflects this. Block 1 is an office scheme and the floor plates have been designed to be efficient for office use, making it ideal for the shorter 'fatter' tower. The Student block 9 is based on groups of rooms around a central core and so becomes triangular in form while

Block 10 as a residential block is oval allowing a central core to serve a variety of apartments. The uses are also reflected in the elevation of the towers as described below.

Broad physical, social, economic and environmental sustainability based on whole life costs and benefits: The towers have been subject to the sustainability strategy described in the next section.

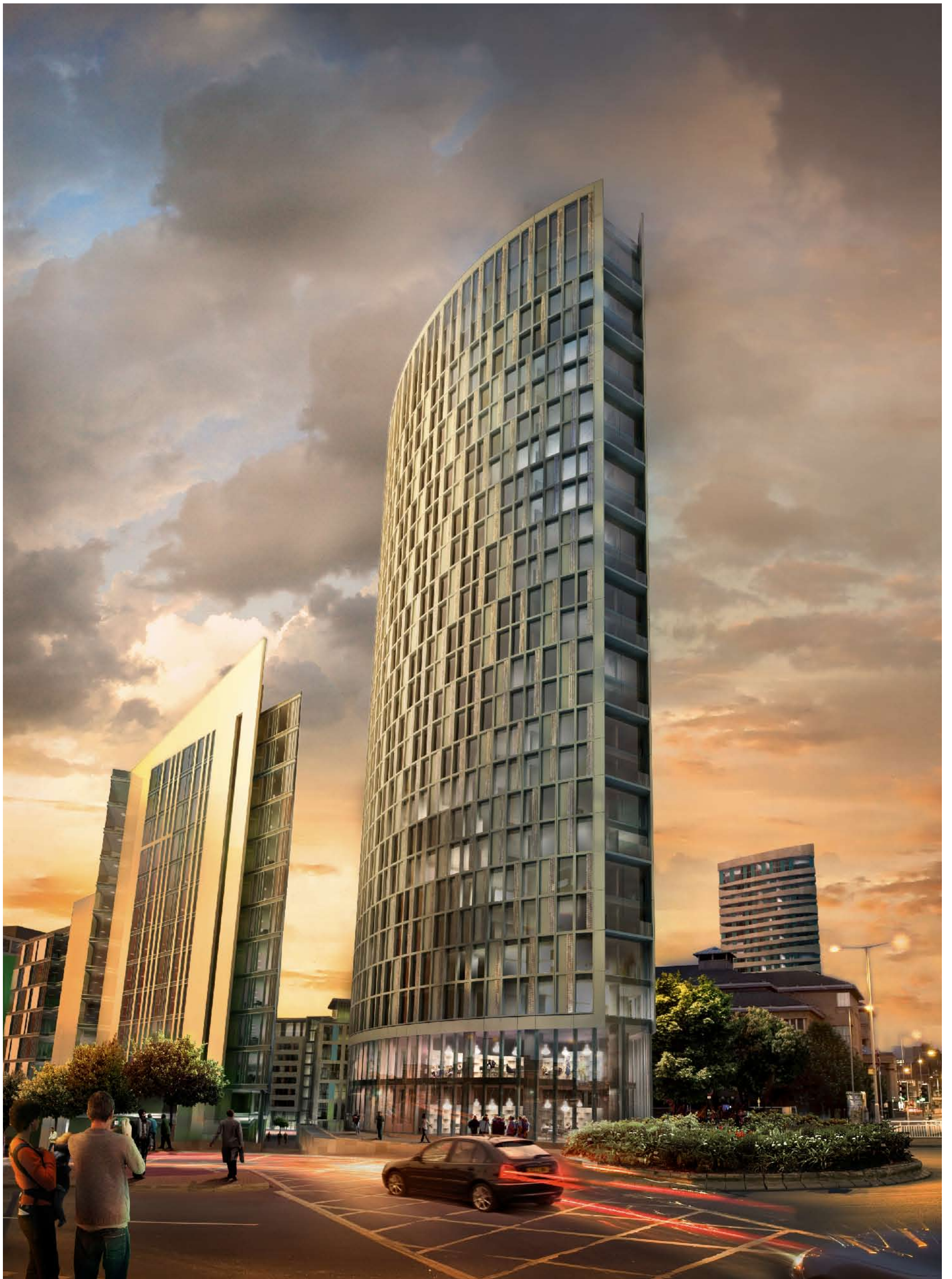
THE FAMILY OF TOWERS

The original citadel concept included the idea of three towers with a family relationship – tall and thin to short and fat. This has evolved through the design process so as a result of detailed work on the buildings. The current arrangement is of two towers in the southern part of the site – a dominant tower (Block 10) and a slightly smaller second tower (Block 9). Block 1 is a good deal lower and acts more like the prow of a ship pointing northwards. It is however still seen in many longer views as one of a group of three.

The family relationship between the three towers has been explored by the three practices working on them. This is likely to be picked up in the detailing of the glass façades of the towers. In Block 10 this façade is fully exposed, in block 9 it is set behind a series of horizontal panels and in Block 1 it creates an inner skin of the building behind a masonry frame. There is also the potential to pick up the family relationship with the lighting of the towers.

The towers play a crucial role on the masterplan, marking the entrances to the site





4.6 Sustainability



In which we describe the sustainability strategy for the site developed by Buro Happold.

A sustainability strategy has been prepared by Buro Happold. This is described in detail in their sustainability report that is available separately. The report looks at sustainability in its widest sense as set out in Sheffield's policy. It covers the following headings:

ECONOMY

The masterplan is designed to provide a balance of employment space and residential accommodation. It will thus help to regenerate the economy of the city as well as reducing travel to work by allowing people to live and work in the area. The retail provision will provide for the needs of people living and working on the site without competing with existing retail centres.

NEIGHBOURHOOD AND COMMUNITY

The masterplan has been designed to link together the existing Cathedral Quarter neighbourhood with Kelham Island and the Riverside area. It will thus promote the regeneration of this part of Sheffield by knitting together and repairing the urban fabric of the area. The masterplan area will include a mix of uses so that there will be people around at all times overlooking the public areas so that they feel safe and secure.

BIODIVERSITY

The public realm of the scheme will be an urban environment and will not therefore create significant biodiversity resource. However the landscaping will make use of drought tolerant and native species and opportunities will be taken to encourage biodiversity. In particular work has been undertaken on the provision of green roofs. Blocks 2,4,5,11 and Blocks 7 and 8 have been identified as opportunities for green roofs.

Emissions of CO2 will be at least 18% less than required by Part L of the 2006 Building Regulations

RESOURCE EFFICIENCY

The scheme is making use of a brown-field site and the development will be planned to reuse the maximum amount of demolition materials and to minimise waste from construction. A pre-demolition audit of all buildings will be undertaken and at least 70% demolition arisings will be reused using ICE Demoli-

tion Protocol. A Site Waste Management Plan will be in place on all sites which will also be registered under Considerate Constructors Scheme. All timber will be obtained from a sustainable source (FSC) and no peat or natural weathered limestone will be used. All materials will be selected from A or B options in the BRE Green Guide to Specification and construction materials will have at least 10% recycled content (by value); audited using WRAP Recycled-Content Toolkit. The scheme will also avoid materials that deplete the Ozone layer and that contribute to global warming.

ENVIRONMENTAL PERFORMANCE

The building will meet the following environmental performance targets: The office and commercial space will achieve a BREEAM Rating equivalent to "Very Good". The new housing will achieve a 2* rating at least on the Code for Sustainable Homes.

ENERGY & CARBON EMISSIONS:

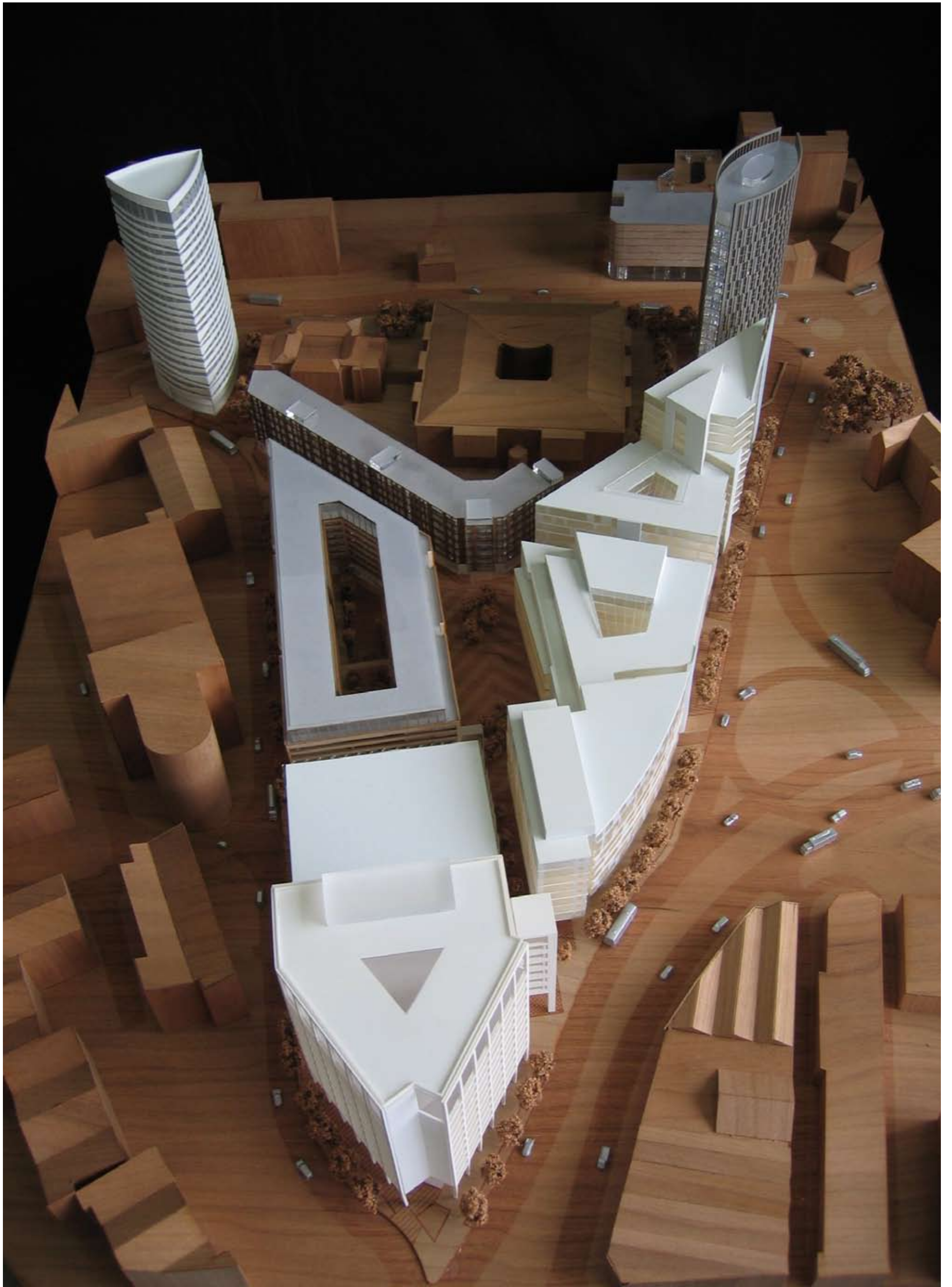
For residential buildings, emissions of CO2 will be at least 18% less than required by Part L of the 2006 Building Regulations. The scheme will be linked to the Sheffield District Heating system that will provide the heat to all buildings on site.

WATER EFFICIENCY

Water use in residential buildings will be less than 120 litres per person per day. A Sustainable Urban Drainage Strategy (SUDS) will achieve a 20% reduction in the rainwater runoff rate, as agreed with the Environment Agency.

TRANSPORT STRATEGY

A Framework Travel Plan will help ensure maximum use of all alternatives to private cars. Good pedestrian access is provided through the site and through links to surrounding areas. The site is adjacent to the Sheffield City cycle route and has good access to public transport (bus, tram and train).



4.7 Architectural strategy



In which we describe strategy for using different architects within the masterplan and the way in which their work has informed the final masterplan

The aim of the masterplan is to create an authentic piece of city, rather than an artificial, sterile environment. Too often masterplans are realised in a single architectural style and therefore lack the interest and diversity of a traditional city area that has grown up over time with buildings erected by a variety of architects and developers over many years. The Sheffield West Bar scheme will be developed over a period of 5-6 years by a single developer. The strategy has therefore been to introduce variety and interest by employing a range of architects with distinct approaches and design aesthetics. Combined with the variety of uses this should create a much more natural feel to the scheme. The architects selected are as follows:

- Block 1: Allies and Morrison
- Block 2,4,5,11: Aedas
- Block 3: Chetwood Associates
- Block 6: Glenn Howells Architects
- Block 7,8: Architect to be selected
- Block 9: Jestico Whiles
- Block 10: Glenn Howells (a different team to Block 6)
- Block 12: Architect to be appointed by competition
- Public Realm: Landscape Architects
- Public arts: A range of artists to be curated by Insite Arts.

The masterplan has been developed from an initial concept developed by URBED. This has evolved through a collaborative effort of all of the architecture practices coordinated by URBED. The masterplan has therefore shaped the individual buildings as well as being shaped by them as they have been developed. This means that the plan has been tested and is more robust than is normally the case with an outline planning application.

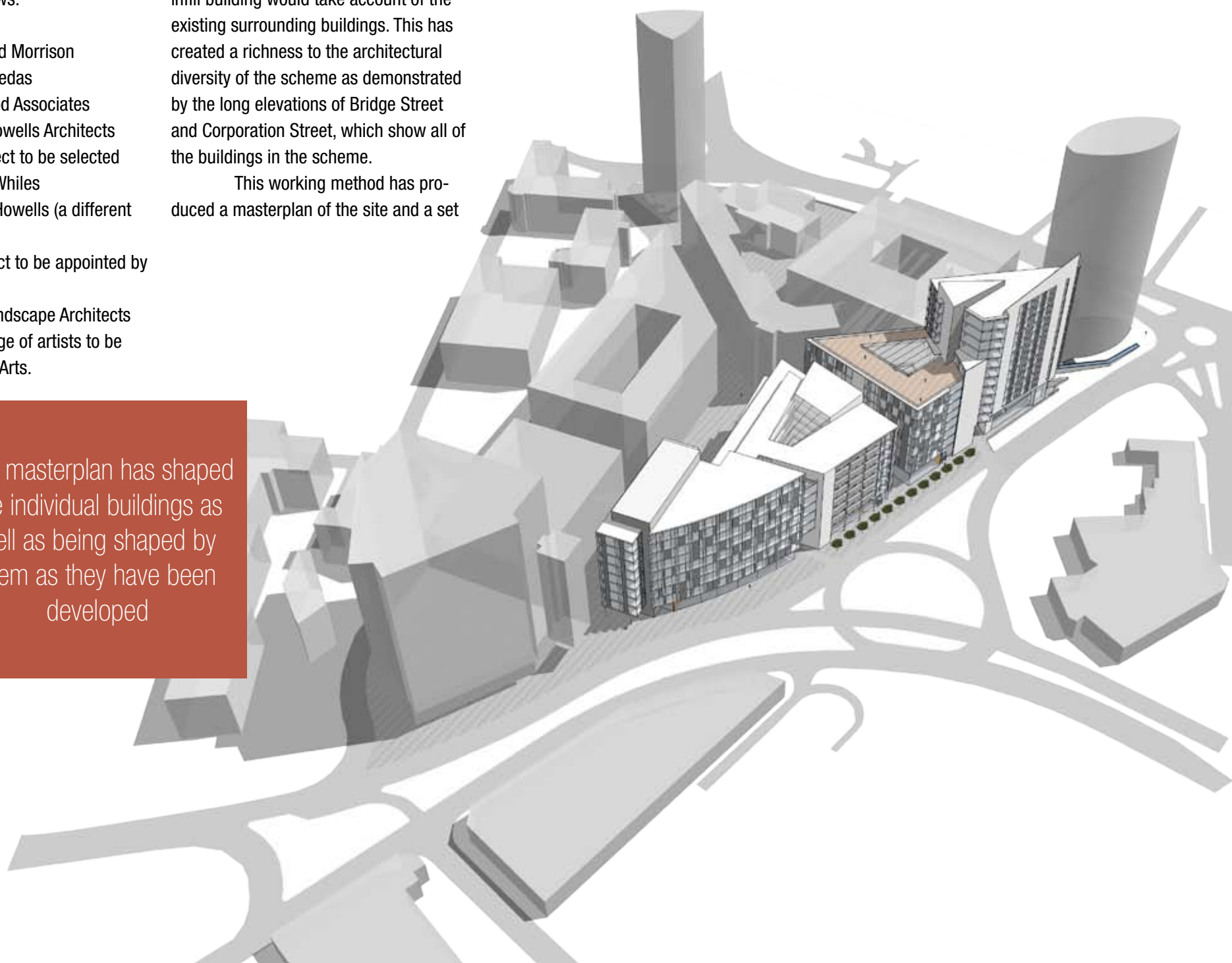
This diversity of architectural approaches will create the unique character of the scheme. However care has needed to be taken to ensure that variety does not become clutter and confusion. Each building has therefore been developed in collaboration also with adjacent practices, just as the design of an infill building would take account of the existing surrounding buildings. This has created a richness to the architectural diversity of the scheme as demonstrated by the long elevations of Bridge Street and Corporation Street, which show all of the buildings in the scheme.

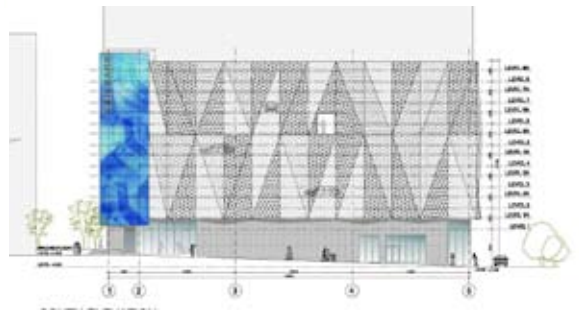
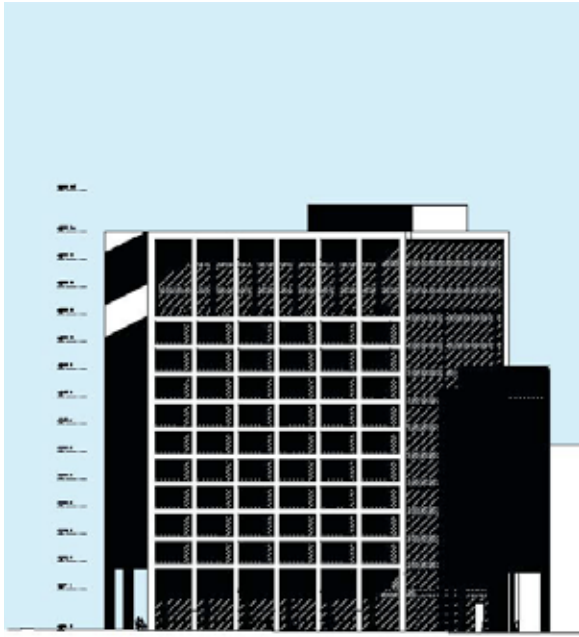
This working method has produced a masterplan of the site and a set

of designs for each of the buildings. The brochures produced by each of the architects is included as Appendix 2 of this document. This work represents the current intentions of the developer for these sites and the work on the early stages will feed directly into reserved matters applications. However this work is not part of the current application. In Section 6 we therefore pull out the key design parameters for each of these buildings as part of the regulatory plan for the Outline Consent.

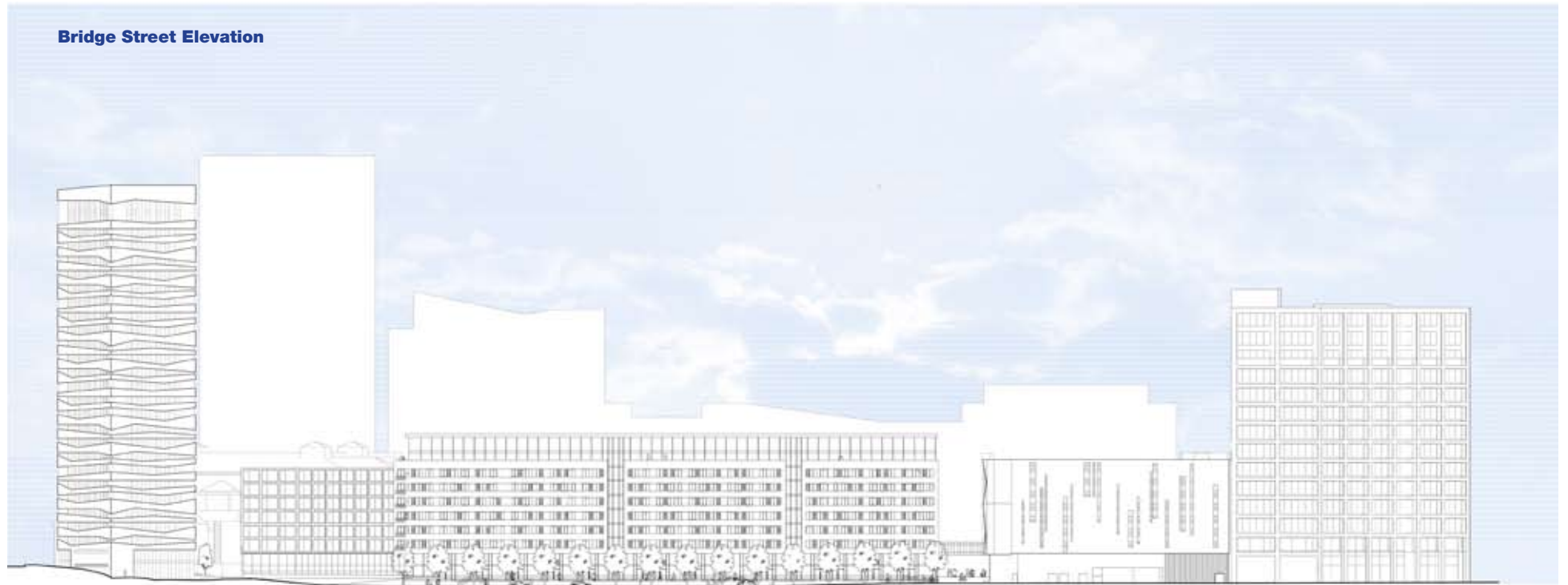


The masterplan has shaped the individual buildings as well as being shaped by them as they have been developed





Bridge Street Elevation



Corporation Street Elevation

