02 Understanding the Context

2.1 The History

The history of the site, and the City as a whole, is closely tied to its riverside location. Indeed, the name Belfast is derived from the words Beal Feirste, which means ‘the sandy ford at the river mouth’.

This section considers the history of the site against the backdrop of the evolution of the City.

2.1.1 Straddling the Lagan

The site of Belfast has been continuously occupied since the Bronze Age. Its location in a wide valley, protected by the hills and mountains in the north and south and with easy access to the sea via the Lough, has offered hospitable geography to its citizens down through the ages.

The rise of Belfast, from a small town in the shadow of Carrickfergus in the Middle Ages to the largest city in Ireland by the beginning of the 20th century, is a story that owes as much to its riverside position as it does to the industry and ingenuity of its people.

Memories of the location of the original settlement, at the point where the Rivers Lagan and Farset converge, are still evident within the organic street pattern at the city’s heart, not far from High Street. This was the site of the original Belfast Castle around which a small thriving town developed.

By the late 1700s, Belfast began to expand eastwards across the Lagan, establishing a link with Ballymacarret. ‘Long Bridge’ was the first permanent structure to cross the river, arriving on reclaimed riverside land of which the present Sirocco site forms a part. Expansion continued with the creation of Belfast’s East Bank, physically establishing the city on both sides of the Lagan.

2.1.2 A city of grand scale

During the 19th century, Belfast became a successful industrial centre and with this industrial success came an unprecedented level of growth. The eastern shore was developed in a relatively unstructured manner, dominated by large industrial forms, with the commercial and civic core laid out in a more considered urban manner, on the western shore.

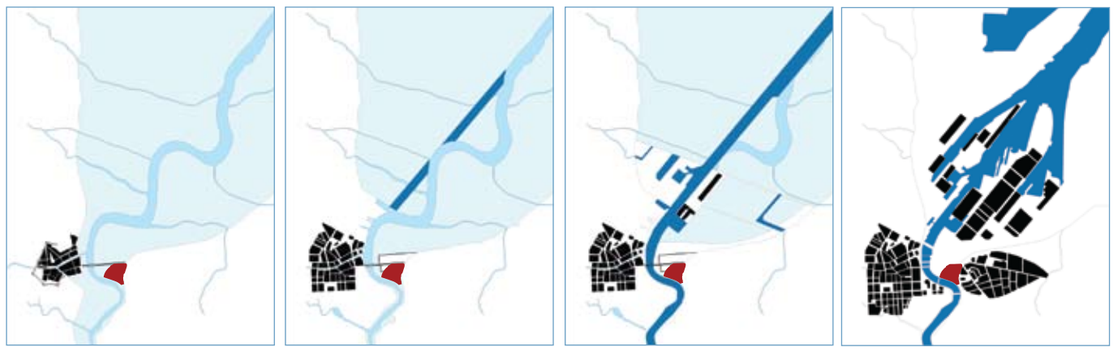
It was between the 19th and early 20th centuries, however, that much of modern day Belfast’s character was established: the grid street pattern, the strategic location of the primary civic buildings, and the strong urban character of the built form.

The result was a city centre with grand proportions, befitting its status, by 1901, as the largest city in Ireland.

During the post-war period, Belfast witnessed a significant scale of building, redeveloping war-damaged sites and buildings. This continued apace until the political instability of the 1970s and 1980s.

Belfast is now witnessing new levels of prosperity with the city once again beginning to welcome exciting development projects that are playing a key role in shaping the future character of the city, energising its people and bringing life to the streets once more.

‘A city of a grand scale’ - Belfast in the 19th century



Year: 1685 | Year: 1833 | Year: 1870 | Present urban riverside structure

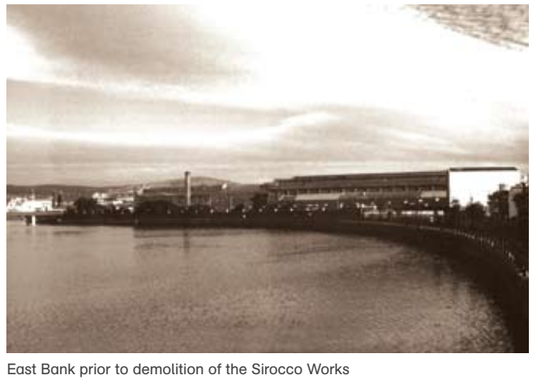
2.1.3 Building on the Riverside

As workshops and factories grew up along the sandy banks of the river, Belfast's industrialists began to see value in reclaiming the foreshore – both to increase land holdings and to create quays for the unloading of raw materials and the loading of goods.

Together with the construction of the docks and the straightening of the route of the river – creating Queen's Island in the process – the works along the Lagan in the 19th and early 20th centuries dramatically changed the character and appearance of the waterside areas.

The Sirocco site lies partly on land that has been reclaimed, with the former shoreline cutting through the site.

Sirocco Works prior to demolition



East Bank prior to demolition of the Sirocco Works

2.1.4 A city on both sides of the Lagan

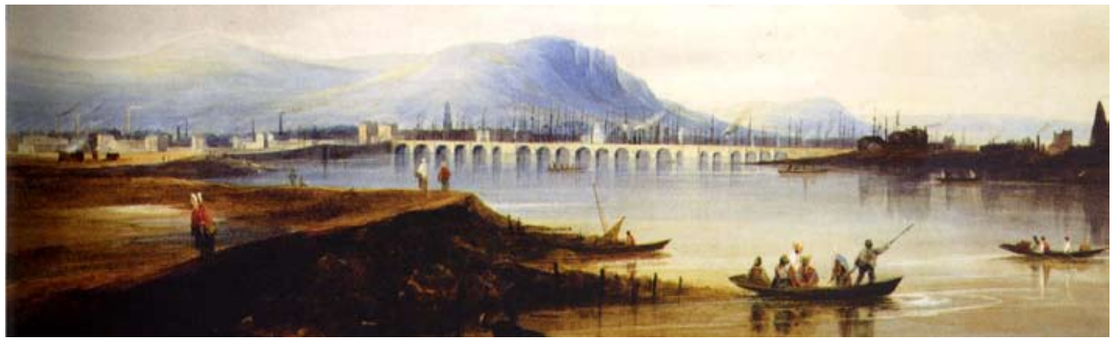
The eastern shore of Belfast has traditionally been associated with manufacturing but small residential communities emerged in the 'shadow' of the large-scale industrial uses. In common with many European cities, heavy industry has been withdrawing from central sites, creating unique development opportunities in the process. The Sirroco site is one such site.

In contrast, the City to the west of the river is thriving with an increase in intensity and levels of activity building on the traditionanl commercial and civic heart of the city.

The combination of the thriving west bank and the vacated sites like Sirocco on the east bank, a major opportunity is presented to create a true riverside city. At last Belfast can have a centre with a river through it rather than beside it.

Sirocco site today

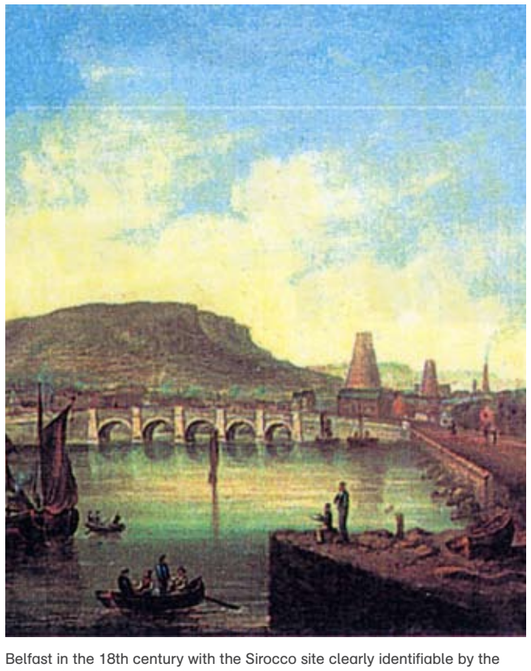
East Bank and the Sirocco site today



The Long Bridge by A.Nicholl

2.1.5 The History of the Site

The Sirocco site, originally part of the tidal mud flats, sits in part on reclaimed land. It was a centre of glass making from the 18th Century, the site of the earliest known industrial glass works in Belfast (1776). History records that the glassworks kiln was the tallest structure in the British Isles in its time, proudly signifying the gateway to the city from the east.



Belfast in the 18th century with the Sirocco site clearly identifiable by the Kiln marking the gateway to city from the east.

Glass production continued here until 1868 when the site was developed for Engineering works. These works originally included a foundry and paint manufacturing activities, though the site later came to international prominence with the manufacture of the world's first air conditioner. Sirocco also achieved fame through its production of fans for the industrial drying of tea.

The railway viaducts, on the eastern bank of the Lagan, are Industrial Heritage Sites – including that which abuts the northwestern boundary of the site.

2.1.6 The Site Today

The site is currently an undeveloped waste ground. Part of the northern section of the site is used as a temporary car-park.

Due to decades of manufacturing and industry, the land has become contaminated, awaiting the remediation that is to come with the site's regeneration.

The only visible remaining structure is a scheduled Industrial Heritage Monument in the form of a substantial brick chimney located adjacent to the waterfront on the south-western boundary. But important archeology is present beneath the soil.

2.2 The People

Belfast's story is of course more than just about bricks and mortar. The people who live there and the way they live there lives in the City are just as important to the success of the city as are its buildings, streets and squares that form the backdrop to their lives.

2.2.1 The way we used to live in Belfast

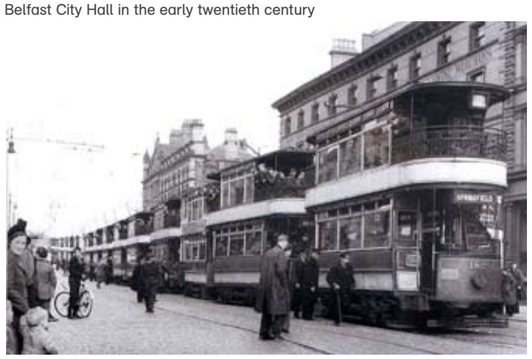
Belfast witnessed an unprecedented growth in its urban population during the industrial revolution. People moved to the city from Scotland, England and rural Ireland, giving rise to new communities in the vicinity of the factories, works and warehouses. Whilst there were areas that would in time come to be less desirable, many central residential areas were vibrant, convenient, safe and pleasant places to live.

People who moved to the City did so not just for employment, but also to seek out opportunities to 'better themselves' - through culture and education, and to enjoy the many benefits of urban living.

As people made use of the opportunities that the city offered to grow more prosperous, educated and cultured, so they increasingly sought a 'better life' by moving away from the increasing pollution that came to detract from the many positive aspects of city centre living.

The Lagan 1923

Belfast City Hall in the early twentieth century



Tramcars on Anne Street 1948

2.2.2 Suburban Sprawl and the 'hole in the centre'

By the early 20th Century, Greater Belfast was the largest city in Ireland having experienced a population explosion from around 25,000 in 1808 to 349,000 in 1901. Since much of that growth was in the latter half of the 19th Century, the majority of the housing stock was located in relatively high-density Victorian suburbs that now form part of the inner urban area.

However, as the city expanded into the surrounding fields, many with the means to do so chose to move out to housing that was more recognisably suburban in character.

A number of factors contributed to this process: living conditions in the city centre became increasingly cramped and prone to the spread of disease, the building stock deteriorated; and improved transportation became available into and out of the centre.

This 'movement to the edge' was of course not confined to Belfast. Rather it was part of a long term trend in many European city dynamics, the effect of which was particularly pronounced in Belfast where the city centre saw a marked decline in population from 73,000 in 1901 to 27,000 by 1971. Those who were left behind found social infrastructure disintegrating, and significant social costs arose.

Major issues arose also from suburban expansion in the form of road and infrastructure costs and traffic pollution Low density development has had a negative impact upon the relative cost and accessibility of services and facilities, retail and leisure and employment. In Belfast, the impact of low density sprawl is particularly noticable in the reliance on the private car, so much so that the region holds the dubious record for the highest levels of car dependency in Western Europe. This also correlates with a drop in the use of public transport, for example, in 1966, 48% of all work trips were made by bus but by 2001, this had dropped to only 17%. Today, low density suburban form is widely recognised as being a socially and environmentally unsustainable model for future development.

Typical suburban sprawl

2.2.3 Rediscovering City Life

There would appear to be a resurgence in the demand for inner city living as a new generation seeks to take advantage of the associated benefits – close to places of employment, shops and cultural facilities as well as the potential for experiencing high levels of sociability.

Many former industrial sites, like Sirocco, are now able to make an important contribution to the renaissance of Belfast City Centre. Their strategic riverside location is a wonderful asset which can help to further enrich and animate Belfast.

Urban living is an increasingly popular lifestyle choice, exercised by the young and childless, the empty nesters, the retired and, in increasing numbers, by families. As well as simply being a part of the hustle and bustle of city life, the benefits that urban living can bring also include the following:

Live/work
The benefits derived from living near work can be significant. Suburban sprawl has strained the resources available to public transport and Belfast's roads are increasingly congested by private cars during peak times. Faced with protracted commuting times and rising transportation costs, many people are opting to live within walking distance of their place of work, thereby saving time and money.

Movement
As well as shortening the regular journey to work, many people opt to live in the centre to enjoy easy access to the diverse range of facilities and leisure pursuits. Being able to walk to work and leisure facilities is, for many people, a key quality of life determinant. Additionally, city centre living makes public transport facilities, including the main bus and train stations, easily accessible.

Culture and leisure
When living close to the city's cultural facilities and its shops, bars and restaurants, people's leisure time is increased by saving on time that would otherwise be spent commuting.

Perhaps most importantly, cities are repositories of a rich and varied culture that takes in art galleries, theatre, concert venues and many other branches of the arts. To have these facilities on your doorstep is indeed one of the great bonuses of city centre living.

Sustainability
Many people also choose urban living for the environmental benefits that it can bring. City centre living enables people to live more sustainable, low energy impact lives by being able to walk and use public transport in preference to the car. Their presence also boosts the city centre economy, thus further attracting investment.

2.3 The Place

The Sirocco site is currently the largest brownfield site in the City Centre, making it an exceptionally exciting site, with great potential to contribute to the regeneration of Belfast.

Location of Belfast in Northern Ireland

Location of Belfast City Centre in Greater Belfast map

2.3.1 A City Centre Site

The Sirocco site is of strategic significance to Belfast and to Northern Ireland. The scale of regeneration required of this major site presents an extraordinary opportunity for the capital city to reassert its self-confidence in its own future and to follow in the footsteps of other similar sized European cities, fostering a sense of pride amongst its citizens and presenting a symbol of transformation to a globalized world.

The site presents the opportunity to create an urban quarter that supports the city's ambition to secure high levels of investment in business and cultural activities and, in particular, in delivering new opportunities for high density urban living options.

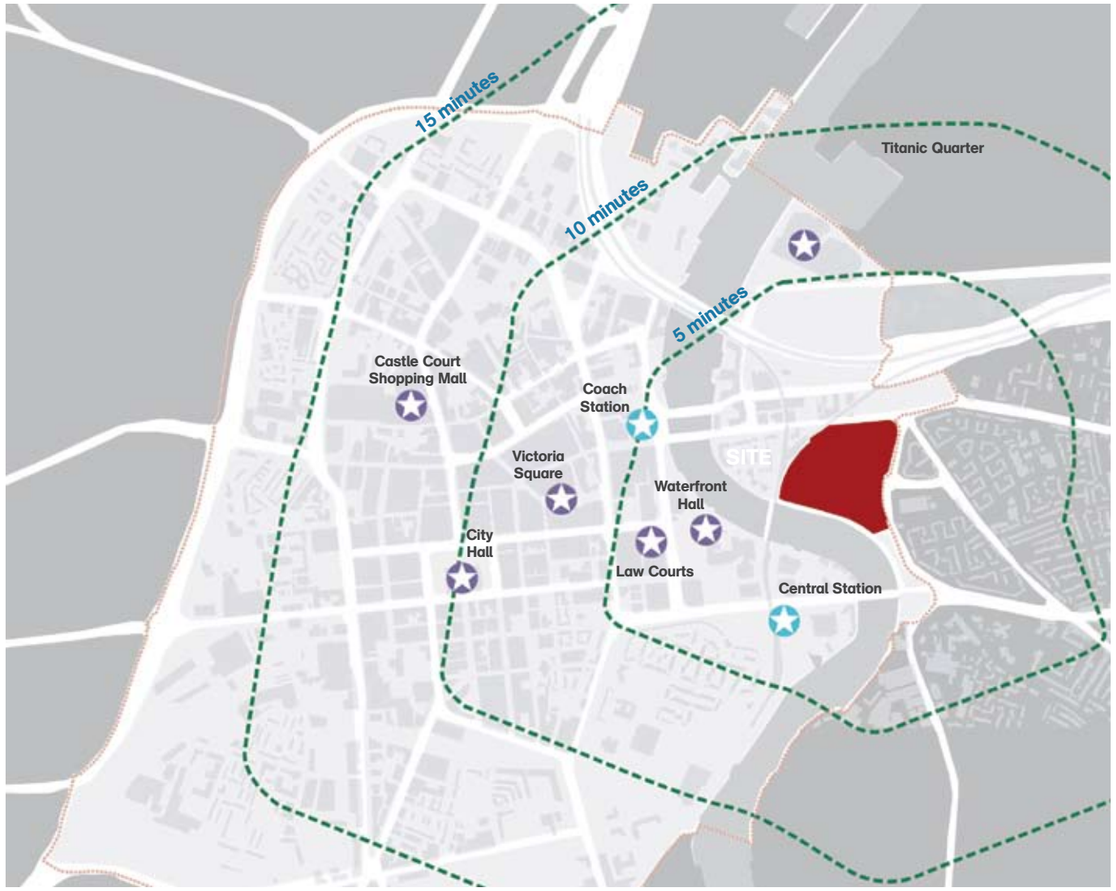
The Sirocco site is well positioned to provide access to:

- The Central Station within 5 minutes walk (the site is located within the dBMAP Central Station Accessibility Zone)
- The Laganside Bus Station within 5 minutes walk, serving local and regional routes
- Immediate vehicular access to the M3, A2, A20, A23
- The Belfast Retail Core within 5 – 10 minutes walk
- The Belfast Office Core (4 – 12 minutes walk)
- City Centre leisure, cultural and social services within 5 – 15 minute walk

This further emphasises the importance of developing sustainably on the Sirocco site, with levels of density and intensity that make best use of the high levels of accessibility afforded by the sites location.

Figure 2.19: View of site from Lagan River

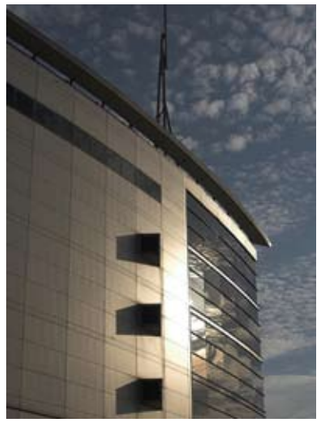
Figure 2.20: Aerial photo of site today



City centre walking distances from the Sirocco site

Donegall Quay showing approved development

'Big Fish' public art opposite the Lagan Weir



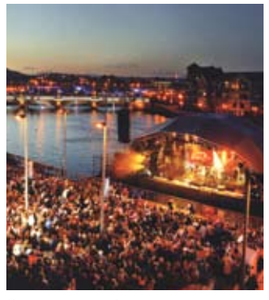
Odyssey Arena

Custom House Square

Lanyon Place

Residential development on East Bank

Waterfront Hall



Summer concert on Lagan

The waterfront towers across the river from the Sirocco site

Regeneration of the city centre stretch of the Lagan Waterfront

2.3.3 The City Waterfront

The waterfront has witnessed a dramatic transformation since the early 1990s. Belfast has reorientated itself towards the Lagan through a number of large-scale regeneration projects along the riverbank.

The Sirocco site forms the greatest single outstanding component to a fully revitalised city waterfront. It presents an opportunity to bring a sense of coherence and connection to the urban elements along the Lagan whilst establishing a new waterfront environment on the Eastern Bank, animating both sides of the river within the city centre with new levels of life and activity.

As well as the benefits derived from a waterfront location, the Sirocco site is particularly blessed by its position on this part of the Lagan, with long views across the widest stretch of the water and an outlook that is predominantly southwest. As a result of its orientation, the development of the site affords opportunities to create a vibrant and lively frontage along the sunniest bank of the river that has the potential to be a real amenity for the whole City.

2.3.3 Views and Orientation

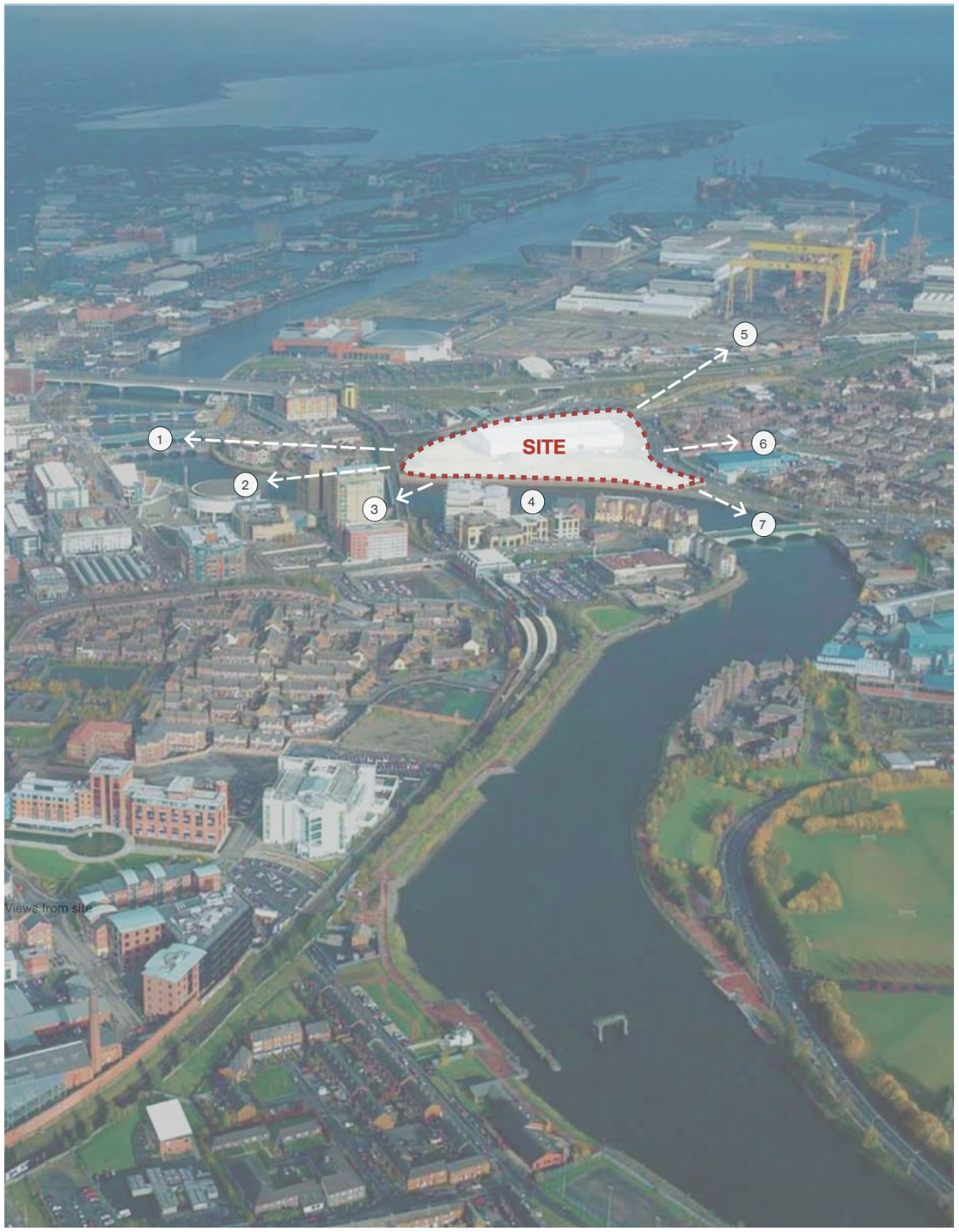
The site benefits from unrivalled views out towards the Waterfront Hall and its regenerated riverside as well as the historic Harland and Wolff cranes and the residential neighbourhoods of the Short Strand and Templemore Avenue.

The location on the northern bank of the Lagan affords panoramic views of the riverside that include the broadest stretch of the river across the Albert Bridge.

View 1 - Queen's Bridge and the Belfast Hills (high view)

View 2 - Waterfront Hall (high view)

View 3 - Hilton Tower, BT Tower



Aerial view locating views from the Sirocco site

View 4 - Lagan River

View 5 - Harland and Wolff Cranes

View 6 - Church spires along Templemore Avenue

View 7 - Albert Bridge

2.3.4 A severed City

For all the positive attributes and possibilities presented by the location of the Sirocco site, its regeneration must also address the fact that it is located in an undeveloped, fragmented and physically severed part of the City Centre.

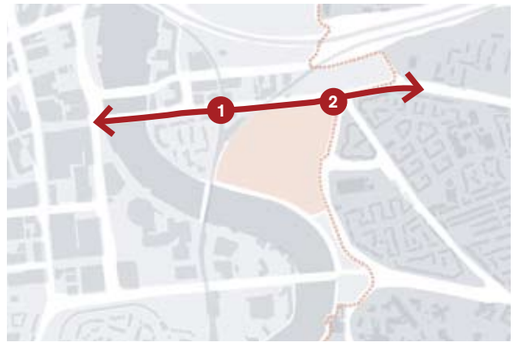
The eastern bank of the River Lagan is bisected by large-scale transport infrastructure that divides adjoining neighbourhoods.

The Sirocco site itself is presently “trapped” by infrastructure – major arterial roads and an elevated railway line that sever the site from its immediate context. These physical barriers also serve to dislocate East Belfast from the City Centre, furthering perceptions of ‘separateness’ between the two banks of the Lagan.

Additionally, at a more local scale, the Sirocco site itself has operated as a large, impenetrable fenced block which has served to cut off the residential neighbourhoods along Short Strand and Mountpottinger Road from the waterfront and the City Centre.

The development concept for the Sirocco site addresses these constraints and establishes safe and attractive movement routes that reconnect the centre and the inner eastern suburbs.

Bridge End

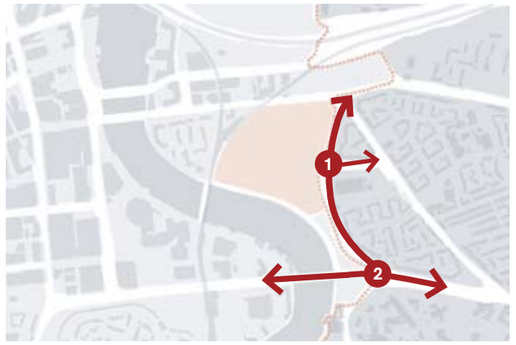


A pedestrian walking across Queens Bridge to the eastern bank of the Lagan finds that an attractive bridge quickly turns into an unpleasant experience. The journey proceeds along a dangerously narrow pavement and beside car dominated traffic junctions which create a hostile environment for those on foot.

The Eastern Bank of the Lagan

The high wall that forms the riverside boundary to the former Sirocco Works results in an inactive waterfront, without natural surveillance. This in itself has attracted antisocial behaviour to this part of the City Centre which in turn dissuades use by others.

The Short Strand & The Albert Bridge

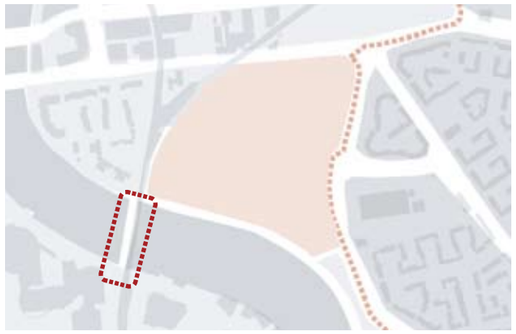


The main alternative pedestrian route to East Belfast from the centre is across Albert Bridge. Once across the bridge, the pedestrian is faced with over-scaled road junctions designed for fast moving traffic and without any consideration for people not in a car. Thus the alternative movement route presents an extremely unpleasant experience for pedestrians and cyclists.

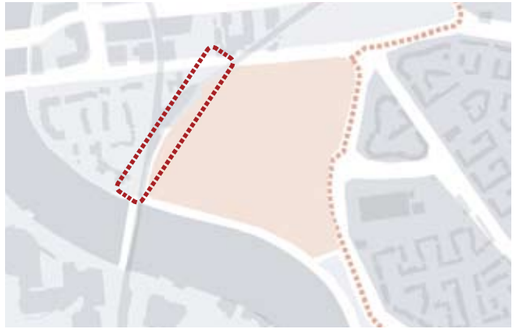
2.3.5 Site Constraints: Poor Connections Explored

The immediate constraints of the Sirocco site form part of the many problematic urban conditions that typify this part of Belfast. Major infrastructure, empty brownfield sites, poor crossing points and an unpleasant pedestrian environment all collude to sever East Belfast from the centre and prevent the Sirocco site from realising its potential as a key part of the City Centre.

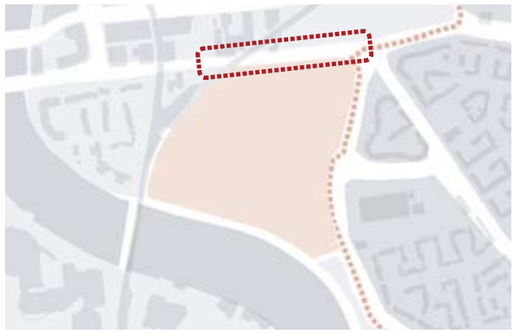
A pedestrian footbridge attached to the railway bridge is potentially the most direct pedestrian route from the centre of Belfast to the east bank of the River. This route is currently underused by virtue of poor connections on the eastern bank resulting from the lack of permeability through the Sirocco site. The main pedestrian route from Chichester Street runs along a good quality public realm in front of the Waterfront Hall and the footbridge itself offers good views across the bend in the River towards the Queen's Bridge.



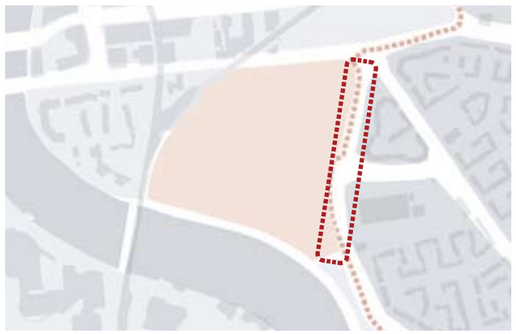
1 The pedestrian bridge alongside the railway line currently provides for an unsafe and unattractive crossing point as a result of its poor connections on the eastern side and it is consequently little used.



2 An elevated railway inhibits permeability and generates noise pollution that currently penetrates the entire site.



3 Bridge End functions as a heavily trafficked collector circle for the M2. The consequent pedestrian experience is unpleasant and the road contributes to the noise pollution



across the Sirocco site.

4 Short Strand is unfriendly to pedestrians as it is designed as a fast arterial route with junctions that give priority to cars over those on foot.

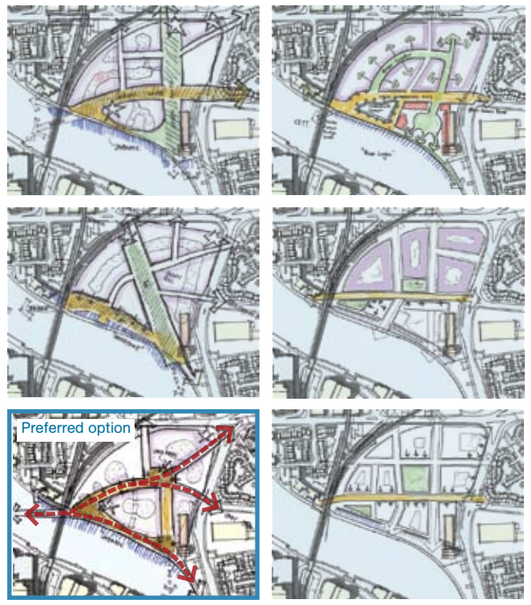
2.4 Preparation of the Masterplan

This section explains the design development process of the masterplan including the impact on the design of the consultation process.

2.4.1 Establishing the guiding principles through early consultation

Early sketch proposals responded to the expressed desires and concerns raised by consultees at the start of the design process. These included the desire for an integrated development that addressed the poor physical connections throughout the immediate area and in particular the fragmentation that characterise the east bank.

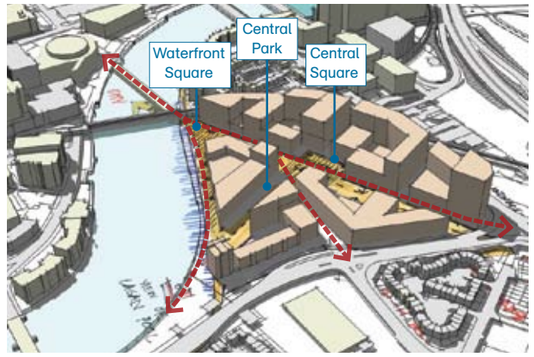
In response, a series of preliminary design concepts structured new movement routes across the site, forming legible and logical connections between the adjoining communities, the riverside and the city centre. In particular, the design concepts responded to the identified need for a new pedestrian bridge across the river to improve accessibility between both sides of the city centre, and to the communities of East Belfast.



Preliminary design concepts. The preferred option includes a central square with routes radiating out to the City and to the communities of the East

Illustrative render of a possible design for the new Lagan footbridge

These ketch proposals also reflected the role of the site as a key component of the city centre with an urban response. The design sought to parcel the site into a series of development blocks, which reflected the form and scale of the traditional Belfast city centre blocks was the first step in the design process to responding to this over arching objective, along with the recognition of the need to supplement the building blocks with a fine configuration of public spaces.



Preferred preliminary option creating a series of riverside public spaces and a central community square

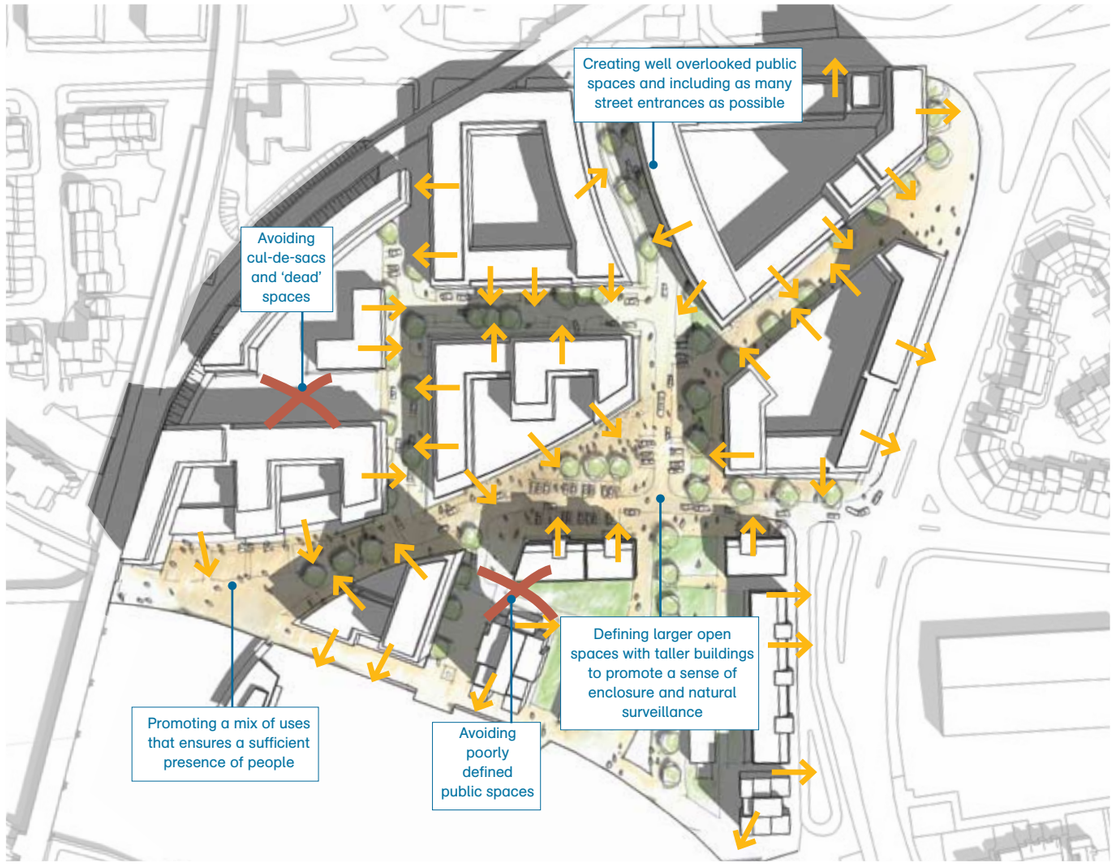
2.4.2 Structuring a lively and safe environment

Through the design and consultation process, special attention was paid to creating an environment in which people feel safe and secure. The response was one of creating a lively mix of uses, particularly at ground floor level, in order to facilitate high levels of street activity, a 'safety measure'.

This was complemented by ensuring that the public realm was further protected through high levels of overlooking from the surrounding buildings, as well as the creation of a legible movement structure and urban form. For example, publicly accessible spaces will be well overlooked, with residential apartments providing an outlook along the perimeter edge of every block and taller buildings appropriately addressing larger parks and squares.

The design also created frequent and regular residential entrances onto the street and introduced a raised ground floor section to improve surveillance of the street from within the building.

Consideration of the long term management and maintenance of the area was a driving force from the start, recognising that well managed and maintained places help to discourage crime and anti-social behaviour.



Preliminary design concept exploring the design mechanisms which help to foster a safe and secure environment

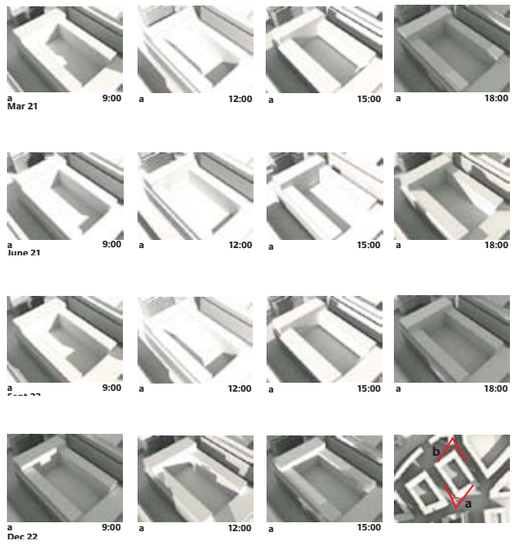
2.4.3 Addressing the micro environment

Daylight

The building massing maximises sunlight and daylight penetration into the scheme and was informed by detailed studies of day-light patterns across the seasons. The production of advanced three dimensional computer models enabled the design team to adapt and evolve the masterplan configurations in response to predicted sunlight conditions.

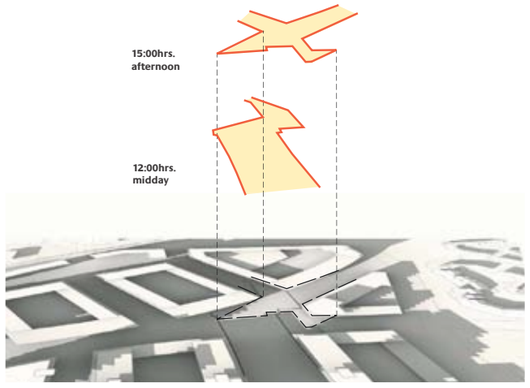
The design response not only reflects an awareness of the environmental damage caused by the excessive use of fossil fuels and the acknowledgment that such sources of energy are finite, but as importantly, recognised the less tangible aspects of good levels of sunlight and daylight penetration which relate to positive impact on the human spirit and quality of life.

As a direct response of these studies, the heights of the southern elevations of the development blocks were reduced to improve daylight penetration to the internal garden courtyards and the residential units, while the shape, layout and height of the buildings that surround the parks and open spaces were moulded to improve the conditions of the public realm. Computer renders of the expected daylight conditions of the final design are included in Appendix C.



Daylight studies of internal courtyards to determine expected conditions for internal elevations

Daylight studies of the waterfront



Daylight studies of the Central Square showing afternoon sun penetration

Daylight studies of the Crescent Park demonstrating the expected afternoon environment

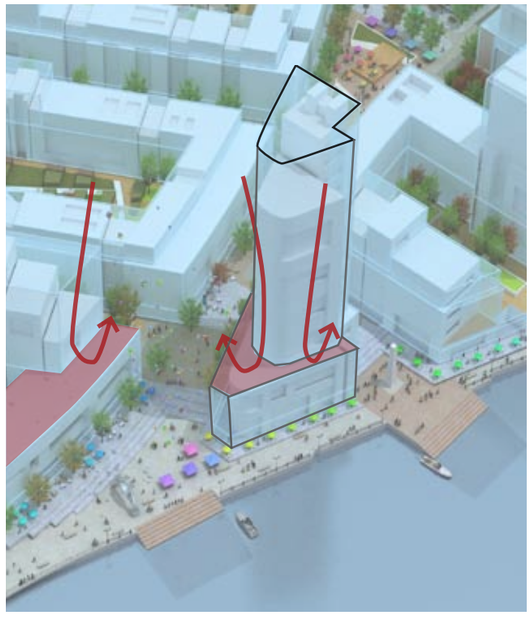
Wind

During the design process wind mitigation measures were applied to improve the comfort for pedestrians.

These included:

- Arranging buildings into development blocks of a sufficient dimensional scale to enable sheltered internal courtyards.
- Providing substantial tree planting along all major access routes.
- Introducing setbacks and podium massing configurations for all taller buildings to mitigate possible downdrafts.
- Creating a layout which includes a distorted grid that helps to reduce the likelihood of wind funnelling.
- Sheltering the perimeter of the site and the large open spaces with continuous building frontages

The design also sought to ensure that buildings include canopies and projecting balconies and that the public realm includes carefully considered planting in order to further improve the environmental conditions of the Sirocco Quays development



Design proposals for taller building setbacks and podiums to mitigate potential downdrafts

Noise

Noise can have a highly detrimental impact to the quality of life. An ambition of the masterplan form the start has been to provide a high quality sustainable development ensuring excellent living conditions for future inhabitants. The majority of the facades will be protected from the major noise sources by the building mass. Where possible those units which have facades overlooking the roads and railway lines will be dual aspect. This will ensure that at least one façade of these units is protected and screened from noise sources, providing effective respite for the residents.

Computer generated noise study

The aim is to ensure that all the private external amenity spaces are exposed to significantly lower noise levels than the optimum standard ‘target’ levels in order to provide areas for relaxation and relative tranquillity for such an intensive city centre development. The majority of the public opens spaces will be exposed to noise levels less than 55 dB LAeq which are comparatively low for open spaces in this context. In particular, the study reveals that the waterfront spaces of the Chimney Square and the Central Park will be amongst the quietest of the public spaces, helping to produce an outstanding riverfront destination.

2.4.4 Learning for best-practice

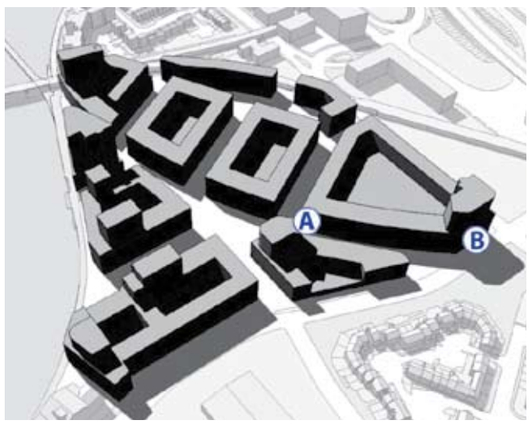
Representatives from local communities accompanied the professional team on a study tour to France, visiting a number of elegant and successful French cities to learn about best-practice approaches to creating beautiful environments and safer pedestrian orientated streets and public spaces. As a result of the tour it was decided that the roads within the development would not be 'adopted', ensuring that the design of the streets and spaces employs the highest quality materials and delivers a genuine pedestrian priority public realm that equals the best of European cities and urban quarters.

2.4.5 Innovations in design of the supermarket

The conventional supermarket design typically consists of a large shed surrounded by a expanse of tarmac parking, which has a poor impact on the quality of the visual and physical environment and results in an alien configuration. The Sirocco masterplan ensures that the supermarket is well integrated into the urban form, occupying part of the ground floor of a city block with residential on the upper floors and parking and servicing confined to basements levels. Vehicular access is via Short Strand ensuring that car penetration into the site is minimalised as a result of the supermarket.

Proposed supermarket cross-section

The consultation undertaken as part of the Ethnographic Survey identified that a Supermarket will play an important role assisting to create 'shared city centre space'. It was established that locating the supermarket entrance at position B (as indicated in the diagram below) might result it being perceived as belonging to a single community, while locating the entrance at position A would help to ensure it is of benefit to all. Its location and opening on the Central Square' furthers this inclusiveness.



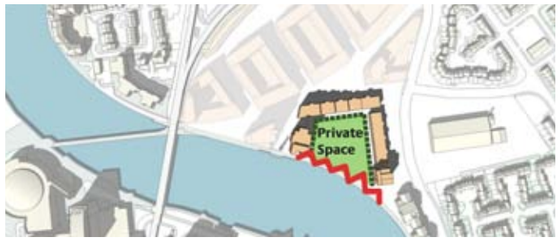
Supermarket entrance options

2.4.6 Revisiting previous site proposals

There is an existing planning consent affecting the site which has a number of significant drawbacks. Specifically it creates private space along the waterfront, removing the opportunity to animate and celebrate the river for the benefit of all.

By contrast, the masterplan provides a new riverside park, off which are positioned sizeable public spaces that penetrate into the heart of the site, defined by two development blocks, with multiple pedestrian connections that result in a more permeable public riverside edge.

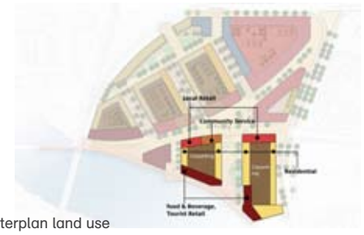
Furthermore, the existing planning consent scheme has residential at ground floor along the waterfront, which further 'privatises' the area, and confines pedestrian movement to a river-walk, while the masterplan creates a mix of uses with active ground floors to facilitate an animated the public realm, fronted by restaurants and cafes on the waterfront and local retail on the square. In contrast to the visual barrier created by the layout of the buildings of the existing consent which blocks off views of the river, the masterplan defines a view corridor of the southern stretch of the river, opening the public realm to the waterfront.



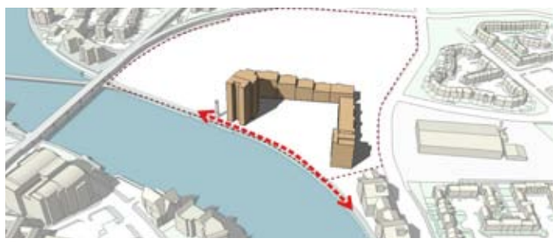
Existing consent open space

Proposed Masterplan open space

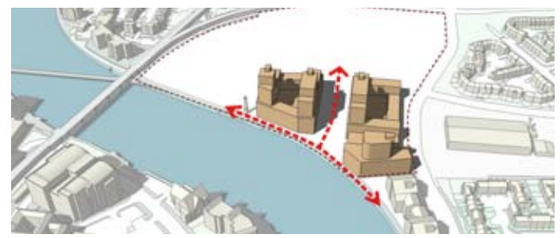
Existing consent land use



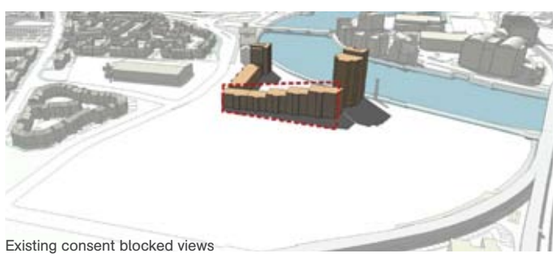
Proposed Masterplan land use



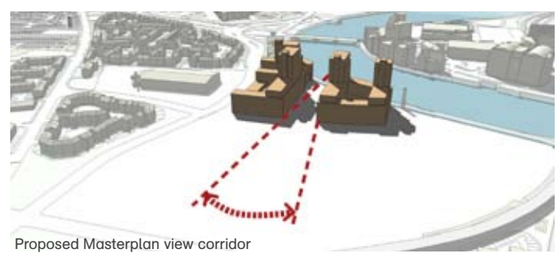
Existing consent permiability



Proposed Masterplan permiability



Existing consent blocked views



Proposed Masterplan view corridor

2.4.7 Guiding principles in response to context

The principles of connectivity and creating an urban environment identified by the early consultation events were thoroughly endorsed by the professional design team, other guiding principles included the treatment of 'height' within the city and this site, the need for a strong and urban landscape structure, and designing an appropriate response of future development form to the opportunities and constraints posed by adjoining the adjoining large scale river, railway and roads. Each of these primary issues are addressed below:

Height

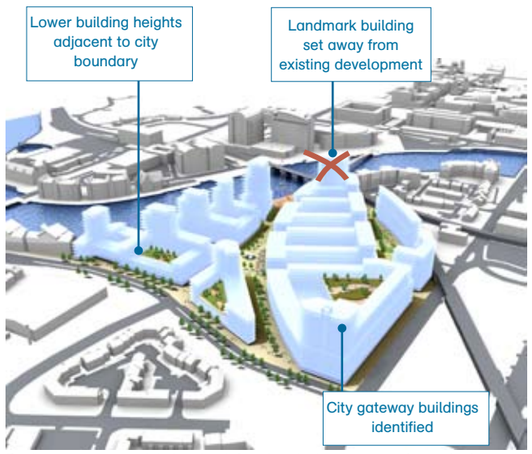
The storey height ambient varies across the site with a lower ambient positioned on those edges that abuts the existing smaller scale residential communities, rising in height as the site adjoins less sensitive edges with the tallest buildings located in landmark and gateway positions, specifically alongside the river front and on Short Strand signifying arrival into the city centre.

Landscape

The need to respond to an urban environment required big, bold landscape moves with larger looser spaces located alongside the river, a major space to reflect the heart of the development itself and a duality of road surfaces which promote a pedestrian priority environment. A clear differentiation between public and semi private space was also important.

Response to river, railway and roads

The scale of the urban infrastructure and the water demanded a varying urban response of a scale and form commensurate with the scale of this infrastructure.



Design progress model showing informing design response to context

Design development models and computer renders exploring building massing configurations in response to context

Watercolour sketch design of the Sirocco Quays Masterplan