

WALKING NEIGHBOURHOOD



WALKING BATTERSEA



Formalities

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ABSTRACT

This thesis is concerned with reclaiming the existing structure of the first railway bridge in London, the Grosvenor Bridge, as the backbone for the future cultural site of Battersea Power Station, the riverside landscape of the Thames and its neighbourhoods.



PREFACE

The WALKING NEIGHBOURHOOD master thesis has its point of departure in the post-industrial context of London and will show how to transform, integrate and reuse the functional structure of Grosvenor railway bridge, as part of the urban landscape. The growing hybridization of landscape design with urbanism and architecture has added pressure to the functional obsolete spaces, the results of massive infrastructural interventions in the contemporary city.

Thus this thesis will answer questions such as how to break through the physical barrier of infrastructure, onto becoming an architectural element of the city landscape. In time, the urban fabric gets thicker layers with every representation of a certain period in time, so how can the designer adaptively reuse a product of the industrial era, as an integrated component of the city?

TABLE OF CONTENTS

ABSTRACT	3	VICTORIA NEIGHBOURHOOD	50
PREFACE	5	BATTERSEA VIEW	54
METHODOLOGY	8	BATTERSEA VIADUCTS	58
		CONCLUSIONS	62
INTRODUCTION	10	REFLECTIONS	63
THEORETICAL FRAMEWORK	14	REFERENCE LIST	66
SITE INTRO	26	APPENDIX	68
CONTEXT MAPPING	28		
VISION	38		
STRATEGY	39		
CONCEPT STORYLINE	41		
MASTERPLAN	44		
PROGRAMMING	46		
DESIGN STORYLINE	48		

METHODOLOGY

This chapter describes and clarifies the process of the thesis project.

Starting with the theoretical narrative on urbanized landscape, this will become the base for the design proposal and overall reflection upon the topic.

This is explained with contemporary and past theories helpful in understanding how a designer can digest the complex urban landscape of today, and how to respond to the need of change.

The theoretical framework has been used as an active tool to develop the concept storyline of the masterplan. By understanding the landscape as a surface that is evolutionary, productive, performative, hybrid and connective, I have been able to develop a complex platform that will respond to all of the discovered interpretations of landscape in the theoretical part.

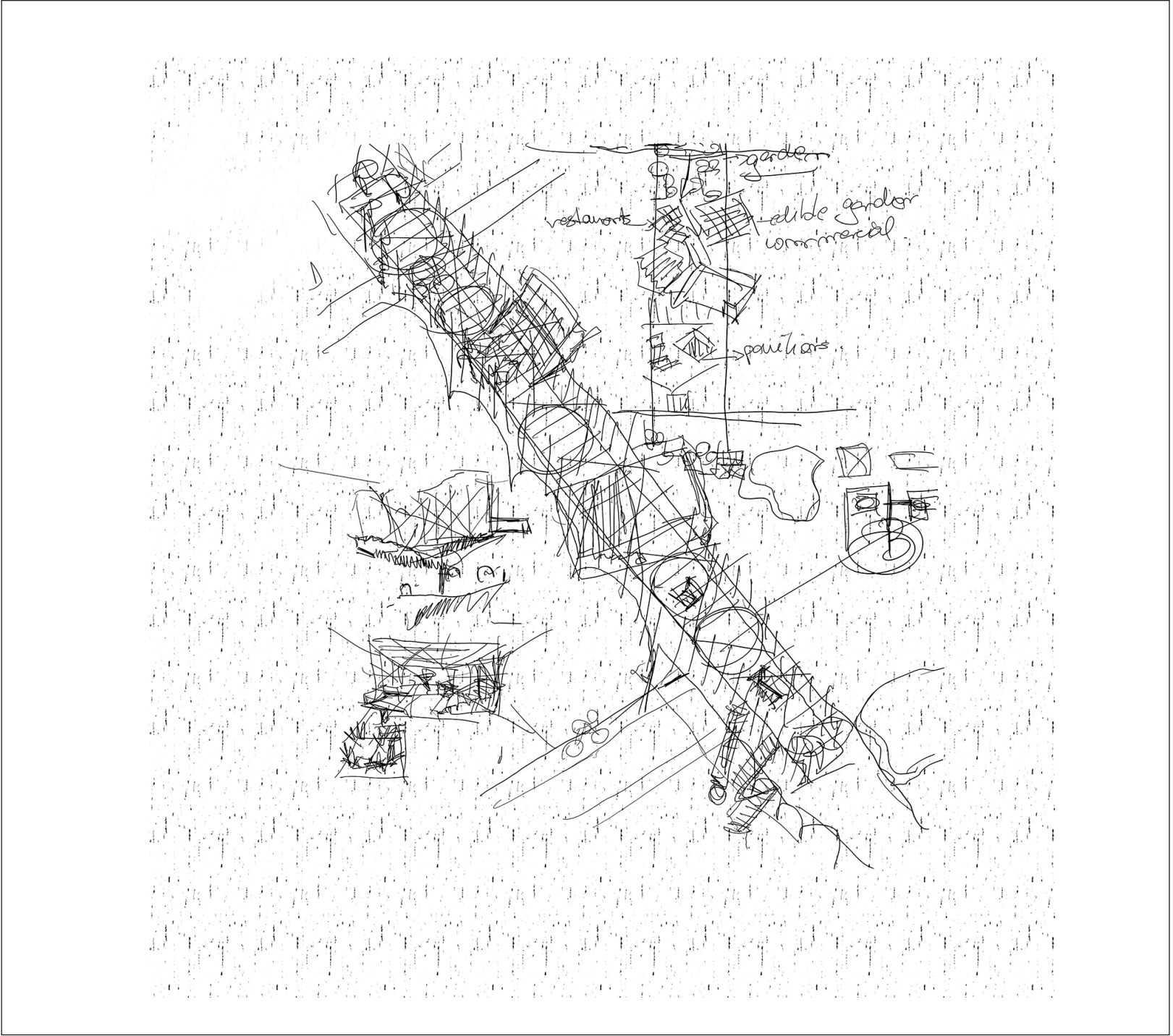
There are different approaches to the scale of this project, to the masterplan level and the detailed zones.

The design proposal has been developed with model testing, on-site visits, sketching and research on similar sites with bridge structures on the Thames riverfront. The latter has been done in order to understand the character of the waterside.

It has taken me to the conclusion that in London, in spite of its complexity and cultural diversity, there is a sense of unity in being next to the river bank, and close to other strangers. One can say that the Thames has the power of creating a riverside neighbourhood.

The masterplan development has been proposed to serve just that, a riverside neighbourhood that reclaims its Thames.

The 3 detailed areas of the masterplan have been chosen in order to explain which kind of neighbourhoods will be developed in the proposed spaces and how will they use the space. Starting from the North side of the Thames and reaching the reconverted Battersea Power station, the mechanism proposed of the entire masterplan will ensure various experiences, from intimate gardens to open view perspectives over the river to the underground level.



● Early concept sketch of the bridge structure transformation.

INTRODUCTION

RECLAIM INFRASTRUCTURE

Due to the rapid growth of the modern city, the urban landscape has become a complex apparatus of enclaves and armatures.

The latter has been a monument for mono functional use (1).

It is clear that the existing links that flow inside the structure of the city need to sustain a larger agenda.

The question of how can the designer bring existing armatures to the architectural scale of a specific site comes to mind, and how can it be transformed from a single-minded connection to a open-minded one.

Infrastructure creates links, thus it has such diverse uses and potentials for social life. Taking the structure of a railway bridge as starting point and iconic armature element, this thesis will plead for a landscape-approach to the bridge, as integrated part of city landscape.

In this thesis, the ends of a bridge become more important than the structure itself, and the linked parts will define the connection, rather than the other way around.

With the idea that architecture not only forms, but performs in the urban scale, these new hybrid links in the city do more than just connect the user from A to B (2), they engage the user into a programmed integrated part of the city.

This is a contemporary challenge that urban designers and architects alike are obligated to answer.

TOPICS

There are several topics that will be addressed, and have the role of introducing the design proposal into the theoretical discourse of landscape architecture and urbanism:

- The theoretical approach and role of landscape architecture and landscape urbanism in shaping the global city.
- The turn from landscape as static image to a production mechanism, founded on the writings of architect and theorist James Corner.

- The concept of integration of the built infrastructure and open spaces where the urban landscape operates as the integrator of new structures and flows.

- The bridge, as an important element of infrastructure, that has been a symbol to mono-functional use starting the 18th century.

- Discussion on the bridge concept, in the 21st century city, that must and will sustain a larger agenda on a social and cultural layer.

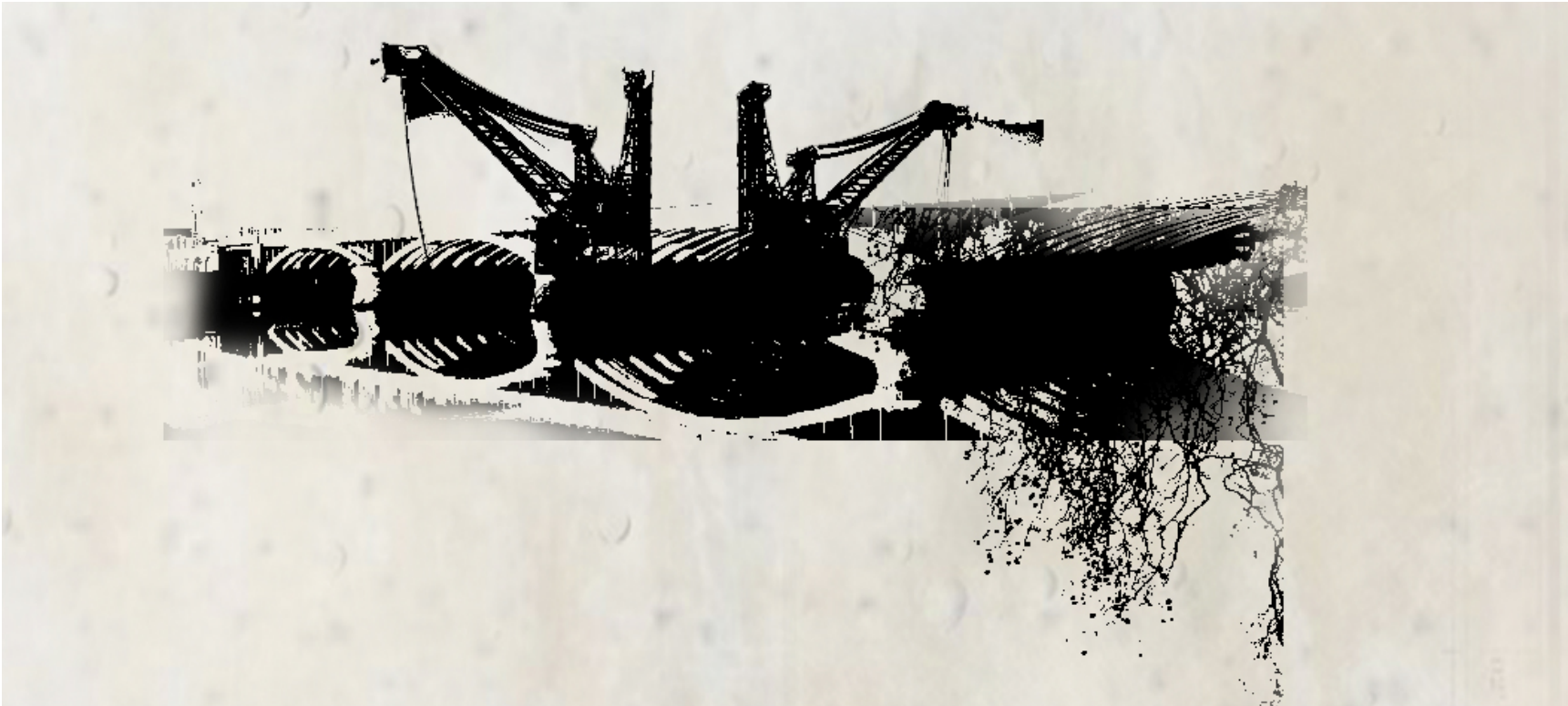
EXPECTATIONS

What will the purpose of this thesis be?

To illustrate a way of understanding the contemporary landscape at a global city scale.

Considering the post industrial context of London, this thesis will show an example of using a cultural response of a past community, and help serve the next one.

THESIS QUESTION



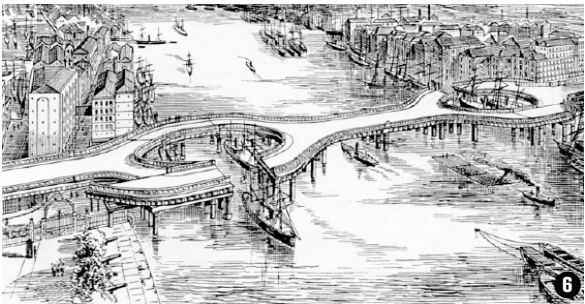
To research and rethink the mechanism of the contemporary bridge, as part of the post-industrial landscape.
How can the iconic armature define a sustainable community in a post-industrial urban context?

THAMES LANDSCAPE

The city of London, capital of Great Britain and Northern Ireland, is known as one of the world’s largest growing cities. Its location on the Thames River Bank has been a key element in developing the city, and helped it become one of the leading global cities to date. The industrialization era has had a crucial significance for the urban development of the capital. Having London as the world’s largest city from about 1831 to 1925 (3) and with its popularity and population on the rise, the first urban rail network was developed (4) at the end of the 19th century. As a result, large scale brick factories and power stations became a distinctive feature of London. The need for new connections, for transportation, became one of the triggers for more bridging infrastructure in the city. The many bridges over the Thames River in London are great examples of how different needs of transportation, railway, pedestrian crossings, are answered through great structures. In addition, the last important project to be developed on the riverside of the Thames will be the Nine Elms area, which will have a high impact on the riverfront landscape of London.

TOWER BRIDGE

Tower Bridge was designed to reconcile the conflicting interests of road and river traffic, in the period when London was the biggest city in Europe. (5)
At the end of the 19th century, the municipality started a proposal competition which ended with the final design by Horace Jones and James Wolfe Barry in 1885, as we know it today. (6)



The bridge competition is relevant to show the perception, in that period, of this type of infrastructure, as a purely transportation machine.



THE BRIDGESCAPE OF LONDON



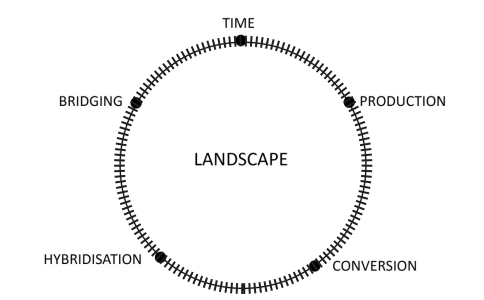
- 1 Walk on the Thames riverside, on the way to Battersea Power Station
- 2 Millenium Bridge
- 3 Waterloo Bridge
- 4 Blackfriars Bridge
- 5 Grosvenor Bridge
- 6 Tower Bridge today
- 7 Tower Bridge as it Might Have Been – Design by F.J Palmer 1877.

THEORETICAL STORYLINE

LANDSCAPE

This thesis is based on the theoretical premise of the growing hybridization of landscape design with urbanism and architecture, and will focus on the bridge concept as a connecting surface in the landscape.

Viewing landscape as a concept opens up for several interpretations. The theoretical storyline will follow 5 interpretations of contemporary landscape, which will finally explain it through architecture and urbanism as a hybrid practice.



The term landscape has started to no longer refer to the natural “innocent” surface in the city, but to concentrate around the complex mechanism between objects, spaces and the dynamic process and events around them (7)

Landscape, seen as an urban surface, becomes more than just the space between enclaves, more than just a recreational natural delimited area. It becomes the “field that accommodates buildings, roads, utilities, open spaces, neighbourhoods and natural habitats” (8). It becomes the stage for the rapid changing global city, a layered system of “landskip” (as meaningful place) and “landschaft” (working place) (9).

By accommodating fixed and temporary activities, the urban surface is the stage that “unfolds events over time” (10).

This short reinterpretation of landscape will show its dynamic capacity as a model for future design, by taking it as the methodology for thinking about bridges, and furthermore, armatures in the present post industrial site.

In this instance, these armatures/bridges become “melting works of architecture” (11) because they “melt” old and new urban forms, old and new neighbourhoods.

LANDSCAPE AS CONNECTING SURFACES

ARMATURES AS CONNECTING SURFACES

LANDSCAPE - TIME

The temporal approach of landscape, as an evolutionary surface: Landscape has no longer an ideal state in time. Seen as an evolutionary unit with an unstable structure, it is directed by the relationship of the site with its context at a certain moment in time (12).

“over time landscapes accrue layers with every new representation ...thus the idea and artifact of landscape are not at all static or stable” (13). I have tackled the theory of landscape urbanism as an integral part of landscape architecture, as the new attitude towards urbanism in the contemporary world reflects to the fast growing complexity of the contemporary urban fabric.

Looking into the methodology developed by architect and theorist James Corner, its four themes in the Terra Fluxus essay are considered fundamental in formulating landscape urbanism theory.

One of the four is “Processes over time” by addressing “how things work in space and time” leading to a “more organic, fluid urbanism” which values “shifting processes coursing across the urban field.” (14). The idea here is to understand and prepare the urban surface as the lens through which it can answer to the future demands in the global city, its future flows of circulation that create the mechanism.

In the understanding of Corner, landscape is a medium, which has to respond to temporal change.

LANDSCAPE AS EVOLUTIONARY SURFACE

ARMATURES AS EVOLUTIONARY SURFACE

LANDSCAPE-TIME-PRODUCTION

Reclaiming production

Through Corner’s approuch of landschaft, his interest in landscape is concentrating on how they “ ... work, what they do, how they interact, and what agency or effects they might exercise over time” (15).

Armatures as static structures
Armatures as movable structures

James Corner claims that in his new approach, landschaft, “issues such as program, event space, utility, economy, logistics, production, constraints and desires become fore grounded, each turned through design toward newly productive .. ends” (16).

The reinterpretation of landscape as landschaft thus implies a focus on process, on the cultural and natural processes over time.

Going back to the landscape urbanism theories by Corner in his essay, Terra Fluxus, the production concept of landscape is explained through the staging of surfaces: the way in which it functions on different scales and is capable of sustaining a large variety of programmes. “from landscape as a product of culture to landscape as an agent producing culture” (17).

Having Corners’ perception of landscape architecture as having the capacity to “engage the metaphysical and political programmes that operate in a given society”, one can explain the essential role of production in the contemporary community. The times have changed, from when the clear needs in the city would force the creation of the urban landscape , as a pure functional response, to landscape as the medium of production. We can understand “urban program as landscape process” (18).

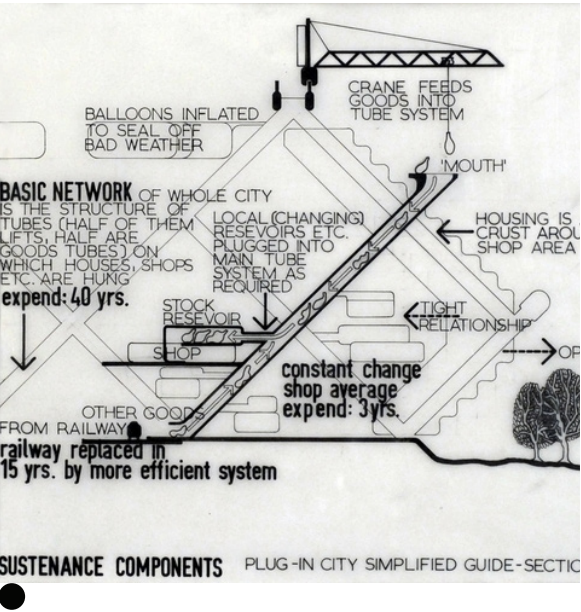
This reclaiming of production of culture is not a new idea, and it has been exemplified very well starting the 60s, in the moment when architects shifted their attention to the larger urban context. The avartgarde british group Archigram, composed of Peter Cook, Warren Chalk, Ron Herron, Dennis Crompton, Michael Webb and David Greene, experimented with modular technology, mobility through the city and space units formation. Their vision showed an optimist future machine city.

The concept of “plug in communities and new infrastrutural landscapes” created the Plug-in-City project by Peter Cook, a mega-structure with no buildings, in which living units or standardised components could be inserted. The machine had taken over and people would enjoy the experience (19).

Peter Cook presented new collective structures, with a flexible programming due to the use of the unit as living space, to garden, to exhibition space. (20)

The general idea was the creation of large scale infrastructural networks, to suport large scale activities. The Archigram ideas are very important because they pushed the programing of a site to its limits, to a ever changing, dynamic and productive limit. Thus, the infrastructure becomes the production agent of culture.

Taking the surface strategies developed by James Corner, I can perceive Archigram’s work on large scale armatures as living on a flexible surface, which has no start or end, and no definitive borders, a technique to give urban environments more freedom. (21)



LANDSCAPE AS PRODUCTION SURFACE

ARMATURES AS PRODUCTION SURFACE

The Plug-In City programming diagram

LANDSCAPE-TIME-PRODUCTION-CONVERSION

In Corner’s discourses, his way of tackling the ongoing complex nature of cities is by theorizing sites, territories, ecosystems, infrastructures as a large urban surface.

The very interesting strategy from James Corner is the surface strategies, by seeing the contemporary city as a horizontal surface, divided into 3 elements: demarcation, infrastructure and adaptation.
“Land division, allocation, demarcation and the construction of surfaces constitute the first act in staking out ground; the second is to establish services and pathways across the surface to support future programmes; and the third is ensuring permeability to allow for future permutation, affiliation and adaptation”(22).

This chapter will be introducing the idea of landscape in the reconversion of post-industrial spaces.
Understanding post industrial sites as ambiguous urban surfaces trapped between enclaves, I will be using the theories of James Corner on landscape urbanism as a possible strategy, as it takes into discussion the recclamation of post industrial areas.

As a result of the ongoing deindustrialization, large scale cities contain numerous areas of former industrial use, which create difficulties in the planning process for future development.

Due to the temporal approach of landscape, and its implications in planning, this approach is very useful when dealing with former industrial areas.

“new expressive architecture is coupled with old industrial buildings in order to create strong stories about the future (23).
For cities that are in transition
“from industrial production to production of knowledge and experience,” performative architecture can become the medium for this transition, Corner’s definition of landscape putting focus on the performativity of architecture.

Having James Corner’s definition of landscape as a living and performative surface with a constantly evolving character as a base, one can understand landscape as an open minded field.(24)
Corner’s approach of landscape and infrastructure takes the understanding of landscape as the creator or integrator of new cultural settings (25).

His argumentation is based on the possibility of creative re-use and re-imagination of spaces and structures, such as old industrial arrangements and cultural exchange.”(26)
The surface strategies hence work with preparation of a given site and simultaneously work with incorporating the ability of adaptation to future demands, strategy which is applied in former industrial sites.

In addition, in areas where the relation between existing structures of infrastructure and open spaces are in focus, as usually in post industrial sites, the concept of the hybrid approach of landscape becomes relevant.



● The Highline in New York, the re-converted railway.

LANDSCAPE AS LIVING AND PERFORMATIVE SURFACE

ARMATURES AS LIVING AND PERFORMATIVE SURFACE

LANDSCAPE - TIME-PRODUCTION-CONVERSION- HYBRID

When looking at landscape as a hybrid form, it will lead to a new scene: a dynamic surface. This is the only way to respond to the contemporary shifting city, with its unstable urban fabric, particularly to the idea of uncertainty, hybridization and infrastructure.

James Corner in the essay entitled “Terra Fluxus” presents a hybrid approach to landscape and infrastructure, by focusing more on the way they function, rather than aesthetic and representational spaces.

Also, the discussion “terra firma and terra fluxus” takes place, understanding the shift from the fixed to the fluid, a new way of understanding future planning ways. (27)
Corner’s definition of landscape puts focus on the performativity of architecture rather than on exact aesthetic appearance.(28)
He thus seeks to understand the landscape as a living and performative surface with a constantly evolving character as result of both natural and cultural processes. (29)

One can understand that landscape from this point of view is seen as performative, animated by different moving flows in the site, rather than just a static image.

In the essay, ‘Whatever Happened to Urbanism?’ by Rem Koolhaas “urbanism will be the staging of uncertainty” (30).

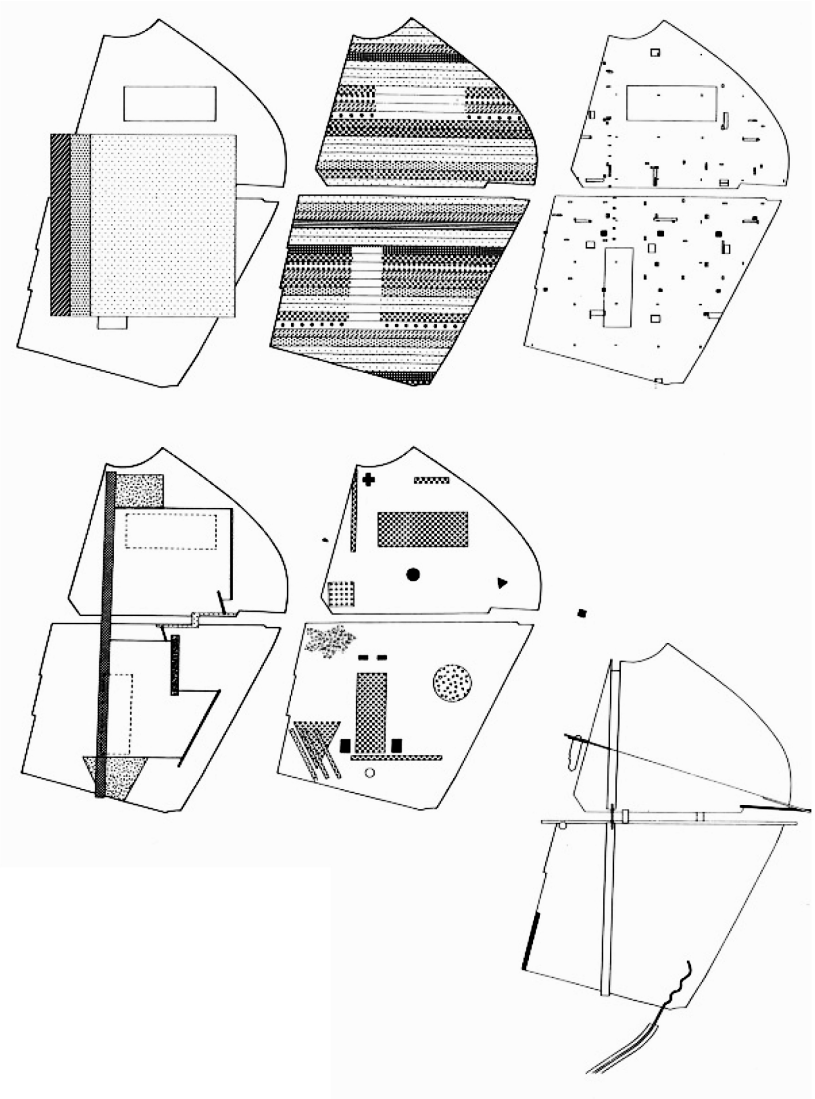
In order to explain the hybridization of landscape better, the proposal by the Office of Metropolitan Architecture (OMA) for the Parc de la Villette competition in 1982 was one of the first landscape architectural design that was designed as an adaptive hybrid park.
The design concept is an overlay of four layers ‘major elements’ with existing or proposed large-scale buildings like museums, music halls; “confetti” with small-scale elements like kiosks, toilets; ‘access and circulation’ with the boulevard as a central axis and the promenade reaching specific areas in the park ;‘strips’ with a width of sixty metres which can accommodate all conceivable functions like playgrounds, and theme gardens .

The ‘Strips’ layer is the most important one for the flexibility of the design. (31)
The strips also represented different ways of experiencing the space.

Moving perpendicular to the strips, the visitor will experience a section of all programs. Moving along the strip, he will sense a continuous feel of the space. Thus, the horizontal field of infrastructure of the park will become a surface for unlimited functions and uses in time.(32)

Taking Corner’s surface strategies, applied to the OMA project, the idea of the strips represent the demarcation, with their clear/unclear separation of functions. The infrastructure layer is flexible to support future programmes, and adaptation is exemplified by the one strategy applied to the project.

The competition entry of Rem Koolhaas OMA is important because it shows how the production of functions over time can lead to a design model, inspired by landscape.
A hybrid approach for the park project took place to show how to responding to the changing demands of society.



LANDSCAPE AS DYNAMIC SURFACE

ARMATURES AS DYNAMIC SURFACE

● OMA competition entry for Parc de la Villette; a layered composition with the east west strips as structuring layer on a performative ground.

LANDSCAPE - TIME-PRODUCTION-CONVERSION- HYBRID- BRIDGE

Planning and programming landscape in a post industrial context is a contemporary issue. The temporality of this approach is very well expressed through the iconic piece of infrastructure, the bridge, and its hydridization over time.

THE ARCHITECTURE OF CONNECTION

James Corner shows the understanding of infrastructures as a broader definition than just roads and pathways, and thus implies a perception of infrastructure as being both material and immaterial processes which operate on a site.(33)

The bridge of today does not represent just a simple infrastructural structure, as it has become a part of the urban experience.

The bridge, as iconic armature, can be seen as a compressor of time, and become un uncertain state of life in time (34).

It describes, in the post industrial context expecially, but not only, the movement from one state of time to another.

It can describe the transition from one period in history, to another, the separation of social groups or the needs of a community at a certain stage in time.

Furthermore, the idea of crossing over always includes the concept of speed, and how that may affect our understanding of space. In addition, an important part of a crossing : the scale-in correlation to the deck, the human scale and the surrounding landscape(35)

“The purpose of the bridge is not just for taking traffic from one side of the city to other without getting wet..it should embrace the city” (36)

Another notable project designed by James Corner – the High Line in New York City, is a great example of post-industrial landscape that shows the response of the former railway structure to the new needs of the existing neighbourhoods in Manhattan. Not only that, but to the needs of a new neighbourhood too, of the High Line.

Going back to Corner’s 3 surface strategies, these strategies are described by land division, allocation, demarcation.

lThe construction of surfaces constitute the first act in staking out ground; the second is to establish services and pathways across the surface to support future programs; and the third is ensuring sufficient permeability to allow for future permutation, affiliation, and adaptation (37) .

In practice, this means that the layers of demarcation and infrastructure have to be capable of including new programmes over time, acting as a surface that can adapt to different uses.

This was done by James Corner’s team in the site analysis of the High Line. In addition to the traditional site analysis activities, one study combined experienced relationships of the site.

The study included the experienced relationships between the morphology of surrounding buildings, wind, light, sound, water conservation, drainage conditions and vegetation, thus showing how their ecological approach to the post industrial site can contribute to the design process and improve the visitors experience so much.

THE HIGHLINE APPROACH

Also, the Highline, in the context of the surface strategies, evidently shows the boundary strategy with its changing pavement, transformed into a porous type of boundary.

The design of the paving was customized to the existing pre conditions found on the site, a key element in ecology. It was designed as a single, flexible surface, where each of the units were repeated across the whole structure. “It’s just like putting a plank down, and then another after it, much like how a railroad engineer would design a length of track.”(38) The many different microclimates along the High Line acted as design instruments to create different areas along the path: “it’s really these episode places that become a stage set for social life to play out.”(39)

The High Line project shows how different types of programs can be linked with time cycles where certain programs are short-term, such as parties or markets. These programs change according to season and contrasts to permanent programs of the site such as seating .



LANDSCAPE AS NEIGHBOURHOOD CONNECTOR

ARMATURES AS NEIGHBOURHOOD CONNECTOR

● The completed thickets of the Highline.

CONCLUSIONS

GROSVENOR AS ARMATURE

In the 21st century, armatures have the power to bridge the gap between ambiguous urban surfaces and activate the mechanisms of the global city, by pushing the limits between culture, production, and the community.

One can imagine the contemporary bridge as a layered mechanism of experience and mobility, which comprises different parts: social (the interaction between different communities) natural (the plants that cultivate and protect the environment), connection (as support for different ways of traveling as pedestrian or cyclist) and cultural (as support for local or global events).

PROBLEM FORMULATION

THE POST-INDUSTRIAL LANDSCAPE

How can post industrial infrastructure be integrated in the contemporary urban landscape, as a productive architectural element?

How can we as designers understand the switch from understanding the bridge, as part of the landscape, in a productive way rather than just aesthetical?

How can the designer adaptively reuse a product of the industrial era, as an integrated component of the city, as one of the twentyfirst century's infrastructural design challenges?

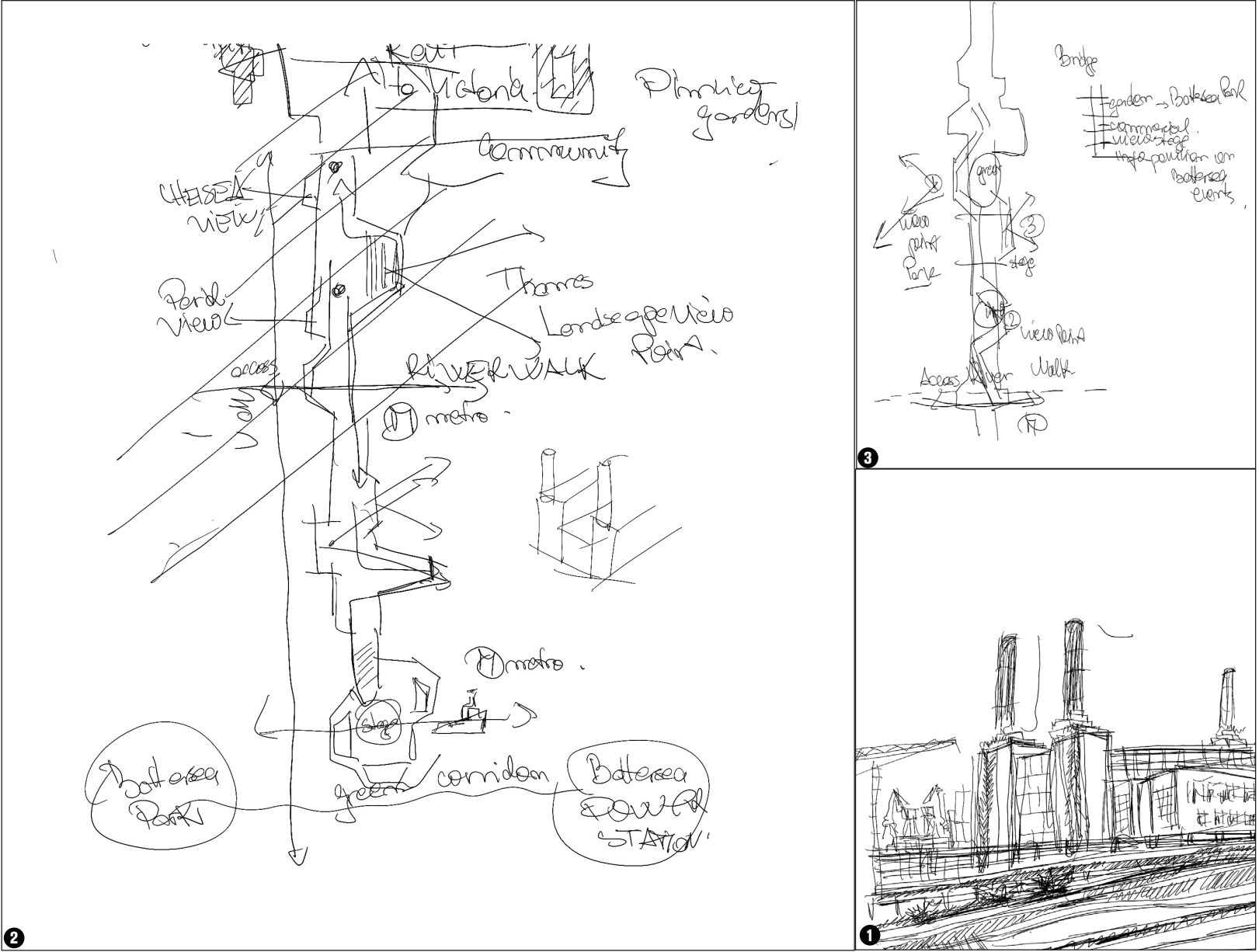
How can the designer integrate the Grosvenor Railway structure to become a platform for neighbourhoods that communicate and interact, instead of separated as they are today?

Grosvenor rail bridge AS LAYERED SURFACE

Grosvenor rail bridge AS PRODUCTION SURFACE

Grosvenor rail bridge AS LIVING AND PERFORMATIVE SURFACE

Grosvenor rail bridge AS GREEN CONNECTOR TO THE SURROUNDING LANDSCAPE



- 1 Grosvenor rail bridge structure sketch on site.
- 2 Concept sketch-developing of the Battersea Walk platform.
- 3 Concept sketch -bridge programming.

SITE INTRODUCTION

GROSVENOR RAIL

Grosvenor Railway Bridge is located on the South Bank of the Thames, where the remaining part of the unfunctional industrial riverfront, the Nine Elms area, is planned to be transformed. This significant harbour area is the last large scale site that has remained unplanned by the municipality at a local and global level, and is already under major construction at the moment. “Over the last 30 years the South Bank of the River Thames has made an extraordinary transition from a primarily industrial area to an internationally recognised cultural destination with attractions including the London Eye, ...Tate The regeneration of Nine Elms will extend the vibrancy of the South Bank ..

..through Albert Embankment, Vauxhall and on to Battersea Park. “(The Nine Elms Vauxhall Partnership presentation). This becomes a key point in the need of re-connecting the Battersea former industrial site and its backbone, to the contemporary and future changes of the urban fabric. The surrounding housing districts of Battersea, Chelsea, Pimlico, Bridge Wharf and Wandsworth all have different characters and thus different needs of the community, and the GROSVENOR railbridge is situated between all these complex areas. The current bridge as part of the Battersea site is Grosvenor Bridge, the ten-track railway bridge that serves Victoria Station. Before its structure was expanded, its predecessor was Victoria Bridge, the first rail bridge to cross the Thames in the London area.



London in the U.K.

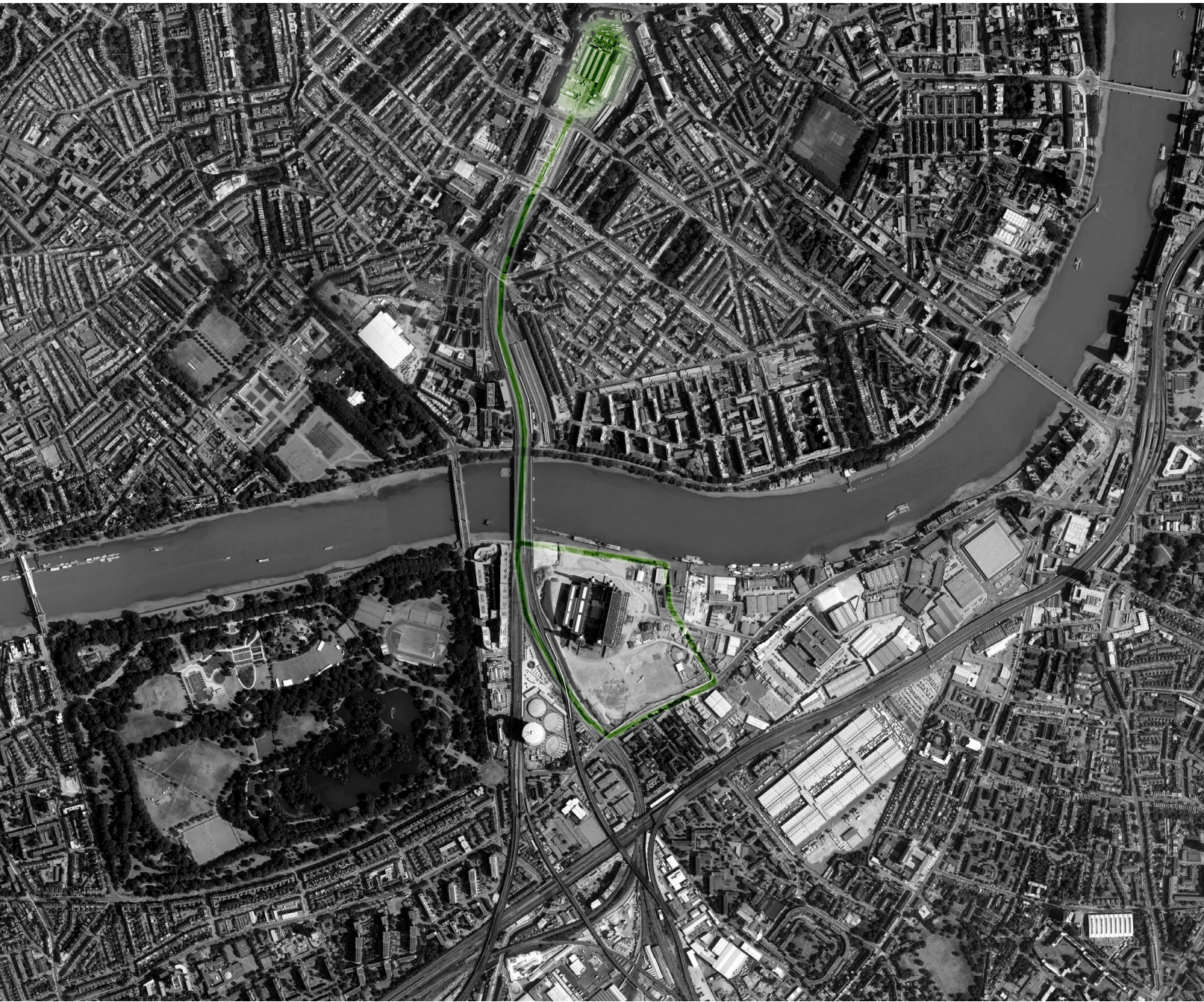


Nine Elms area in London



Grosvenor Bridge next to Battersea Power Station in Western London

SITE OVERVIEW



● The South Bank of the Thames with the Battersea Power Station connected to Victoria Train Station by the railway system.

CONTEXT MAPPING

MAPPING INTRODUCTION

My research on the Grosvenor bridge will include an interrogation of the ecological history and social processes that have formed this unique site on the South Bank.

The mappings will combine site-specific analysis of the existing structure of the bridge, socio-spatial mappings, and the future plans proposed by the municipality to develop the area.

The site analysis will be limited to the South Bank of the Thames River, in the city of London, and its immediate urban context

SITE LIMITS

My research on the Grosvenor bridge will include an interrogation of the ecological history and social processes that have formed this unique site on the South Bank.

The mappings will combine site-specific analysis of the existing structure of the bridge, socio-spatial mappings, and the future plans proposed by the municipality to develop the area.

The site analysis will be limited to the South Bank of the Thames River, in the city of London, and its immediate urban context.



NEIGHBOURHOODS

There are well established residential communities located within and around Grosvenor bridge.

The site is located at the intersection between different neighbourhoods, fact that gives a complex character to area, on different levels: social (the annual income of the local communities vary very much in relation to their location on the south or north side of the Thames River) temporal (the different periods in history when they were developed), architectural (the different styles of the existing built fabric)

EXISTING DISTRICTS



HISTORY OF THE SITE

Battersea was a village situated on the Southern bank of the river Thames.

1767: Battersea fields. Swamp lands where the first asparagus was grown.

1832: Battersea was completely altered by the arrival of the first railway station and over the next 22 years extended by five additional lines. This marked the end of the medieval ages agriculture and the beginning of the industrialisation.

1850's: The industry expanded so housing was needed, the asparagus fields of Battersea were surrounded by rows of terraced houses.

1930: Battersea Power Plant A starts production. Architect Sir Gilles Gilbert Scott.

1980: In recognition of its Art Deco design, Battersea Power Station was listed as a building of special architectural and historical interest.

1982: Battersea Power Plant ceases operations.

New plans:

2013: construction works on Battersea site, around the power station building-preparation of the site.

2017: new town centre will be built around a redeveloped Battersea Power Station.

GROSVENOR BRIDGE

The rails that cross the Battersea site is Grosvenor Bridge, a 10 rack railway bridge that connects Victoria Station. Its predecessor was Victoria Bridge, the first rail bridge to cross the Thames in the London area.

The bridge was first built in 1860 as part of the Victoria Station & Pimlico Railway, and is 213.3 meters long. Designed by John Fowler, the bridge carried two railway tracks initially over four 53.3m river spans.

The bridge was first widened in 1866 (designed by Sir Charles Fox), when another 5 tracks were added on the east side. The structure was widened again in 1907, adding another 2 tracks on the west side, with its steel arches.

Due to the cost of maintenance, it was decided in 1958 to replace the bridge, with work taking place between 1963 and 1967, to a design by Freeman Fox. The bridge today is formed by 10 parallel bridge structures supported on common piers. The elevation of the bridge has remained unaltered next to the original design, even though the reconstruction of the piers has shortened the spans to 50m each.

The current arches are two-pinned welded steel box girders, each 1.13m deep and 0.61m wide, with steel plates up to 31mm thick. ()



ATMOSPHERE IN THE SITE

The character of the site is divided from North to South. Going from historical residential areas such as Chelsea in the North, with its typical red brick mansion houses and victorian parks, to the South where new

glass and steel residential blocks surround the power station.

The only element in the landscape that connects them is the railway bridge Grosvenor.

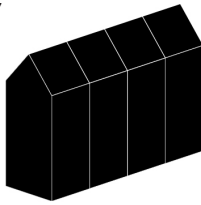


THE NEIGHBOURHOODS

CHELSEA

An exclusive residential area, with its rich history and bohemian atmosphere. The urban fabric is defined by row mansion houses, with red and dark orange bricks. The community has a high income level, and it represents a gated community due to the high level of security in the area.

TIPOLOGY



SENSE OF PLACE

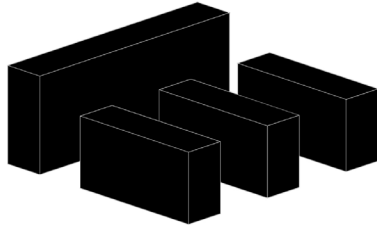


MATERIALITY



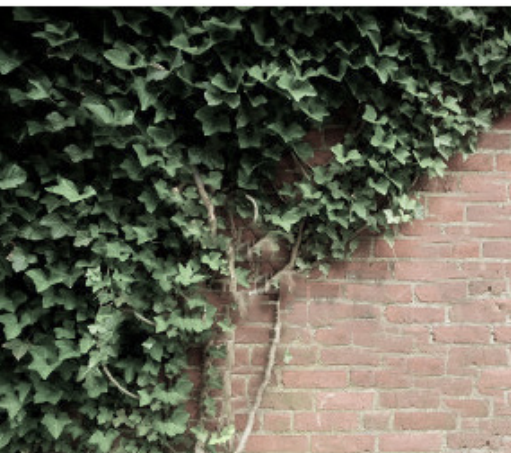
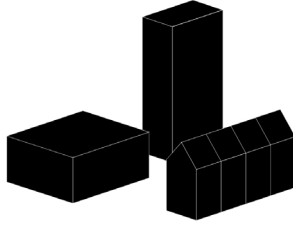
PIMLICO

Pimlico is a large scale residential area defined by high rise blocks of flats, built in the early 1950s. The public spaces created between the housing blocks are large, flat green areas for children and the local inhabitants, which tend to be either closed to the public or hidden in the urban landscape by the change in terrain levels.



NINE ELMS

The Nine Elms future riverside district will be a large residential mixed-use development, with an emphasis on providing active ground floor frontages connected to the Battersea Power Station.



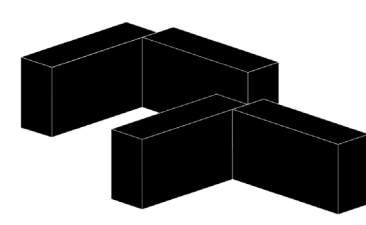
PIMLICO GARDENS

The terraced large community gardens between the housing blocks of Pimlico are hidden from the riverside horizon. The notable design element here is the difference in levels of 1-2 m height, that create a separation between public space and semi-public space. The gardens are meant to be used by the local community.



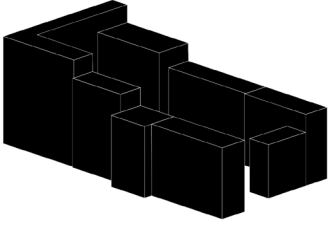
BATTERSEA

The Battersea neighbourhood consists of 8 storey housing blocks and social housing. The community has a lower income in comparison to the other neighborhoods, and this is visible in the quality of the building maintenance and lack of public areas.



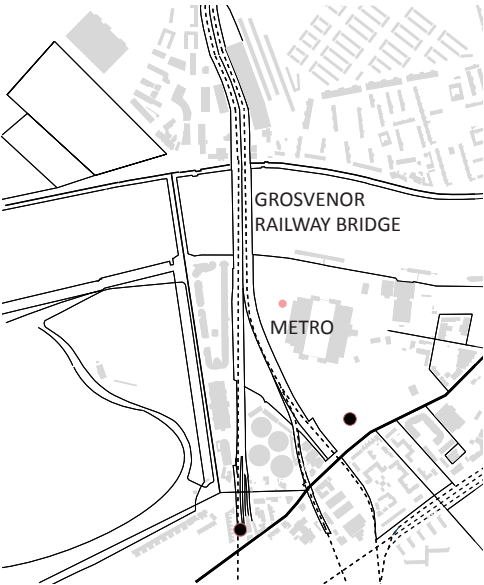
CHELSEA BRIDGE WHARF

The post-modern 1970s high rise development is based on the riverfront alongside Battersea Power Station. The community here has its own private backyard and shopping stores at the ground level.



INFRASTRUCTURE

The current system of armatures that cut the site in half creates a major physical barrier. The connection to the Battersea Park on the West side of the site is blocked due to the closed viaducts. On the North side of the site, the railway system that connects to Victoria Train Station separates the two major neighbourhoods Pimlico and Chelsea. Also, the plans for a new metro station in the Batterse site has been aproved for 2015, and will be a continuation of the Northern Line METRO.

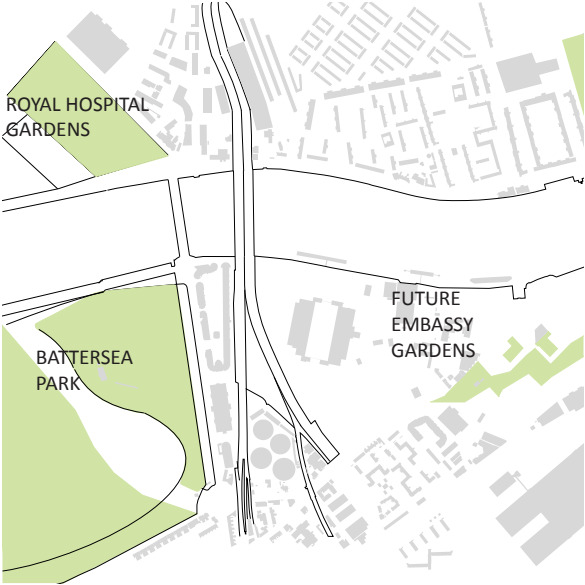


GREEN SPACES

Existing and proposed by the Municipality

A large pedestrian green corridor is planned to run through the east side of the Battersea, named Embassy Gardens (the future American Embassy will be located 1 kilometer east from Battersea).

On the other side of the Grosvenor railway the victorian Battersea Park extends for another kilometer making it the largest green structure adiacent to the site.

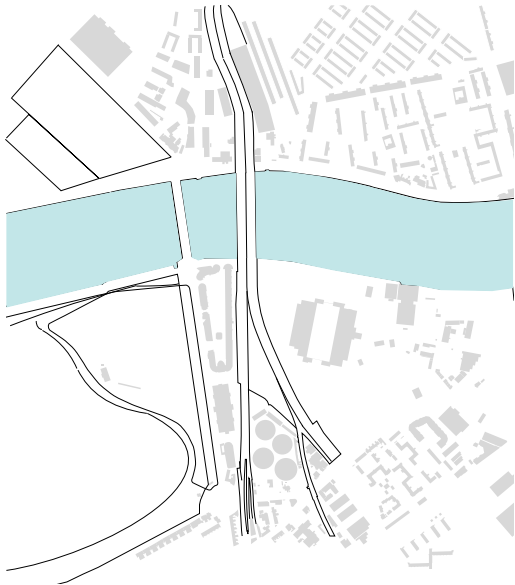


BLUE SPACES

The blue corridor of the Thames is not accesible to the public on the South side of the site, due to the closed Battersea. The only way of connecting with the water in this area would be as a train traveler.

This detail sets an even deeper separation between the North and South communities.

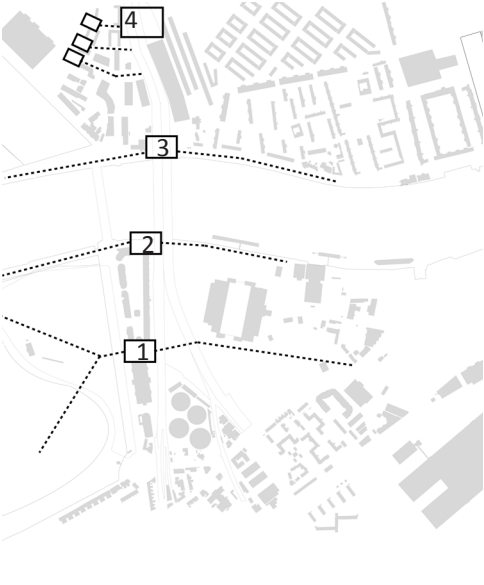
On the other side of the river, there are furnished urban spaces along the riverfront, a large sidewalk and bike lane, all heavily used by the local communities.



ACCESS POINTS IN SITE

There are 4 main pedestrian access points to the site, that can create a stronger bond with the river front and entire Battersea side, if programmed carefully.

These points also create a strong view line with the entire riverfront and Battersea site, going through the railway viaducts (1) , the Thames riverfront (2) (3), or from the Victoria Train station (4).



PUBLIC SPACES

Due to the railway cutting the site in half, there is a lack of major public spaces, with the exception of the Battersea Park, which has a slow connection to the East side of the site and the rest of the Thames riverfront.

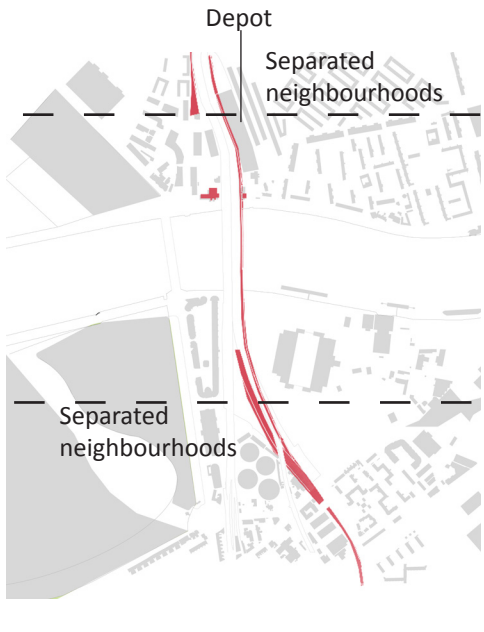


UNUSED RAILS

Unused train tracks and buildings:

There is one track out of the 10 train tracks that is not used anymore, due to the closing of the power station, the last on the east side of the entire railway system. Due to this, there are abandoned train tracks between the viaducts of the railway, that block the access into the Battersea and Battersea Park.

In the north side of the site, the train depot that works in relation to the Victoria Train Station covers 6 separated train tracks, and separates the entire residential area.



FUTURE DEVELOPMENT
of the Nine Elms area

The Grosvenor rail bridge is part of the future Nine Elms development plan, as part of regenerating the South Bank of London. The vision of the municipality is to transform the Nine Elms into a modern destination in central London.



BATTERSEA MASTERPLAN
of the Nine Elms area

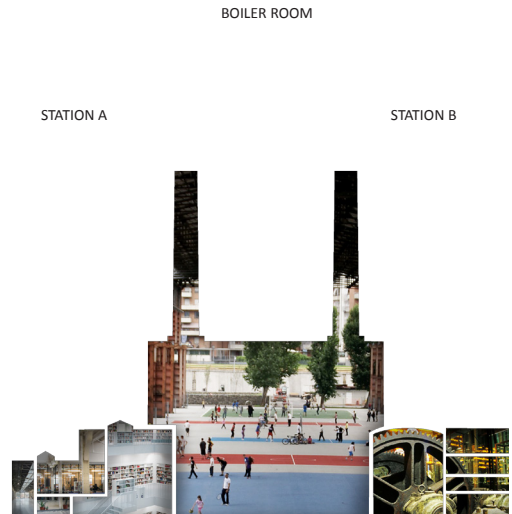
In the 3rd semester of the Urban Design Master, I have developed the masterplan and the transformation of the Battersea Power Station. The master plan deals with issues of scale and density and forms a strong connection to the waterfront. The proposed development of the Battersea site will serve as part of the context for the development of the current design proposal in this master thesis.



BATTERSEA BUILDING
of the Nine Elms area

The Battersea Power Station transformation has preserved the architectural qualities of the Battersea building. The main strategy was to keep the many raw differentiated industrial spaces as found; thus different functions will be allowed to fill the voids in their own ways. This will mean adapting the use to the spaces given and not the other way around.

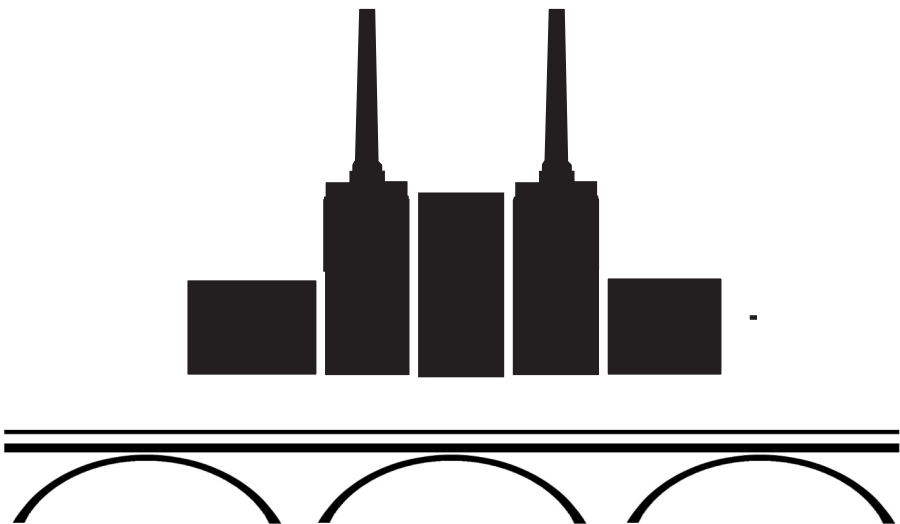
The Battersea will include a public library, in station A of the building, and an Industrial Heritage Museum in the B station. Central, in the former boiler room, there will be a flexible venue for sports activities and concerts.



CONCLUSIONS

SITE NEEDS

THE BATTERSEA LANDSCAPE MUST SUPPORT
THE PRODUCTION OF CULTURE



The site needs to use its existing infrastructure to support the future cultural development of the site. The power station building will be host to various public venues, and will become a catalyst of transformation for the entire Battersea area. Thus the existing infrastructure must respond accordingly.

NEIGHBOURHOOD WALK

VISION

Instead of proposing an absolute vision of urbanism, by demolishing the urban structures that create these non-spaces, I believe this transformation of the public empty spaces, neglected in/by the city is the most appropriate way to reinterpret urbanity, in collecting surfaces (single minded spaces have the potential to give consistency and continuity to the pluralistic urbanity.)

The aim for Grosvenor Bridge will unlock this inaccessible transport corridor but retaining its active use as a train transport network. Battersea Power Station demonstrates the potentials of industrial ruins, and its transformation for contemporary use will show a positive way for the handling of contemporary post-industrial landscapes.

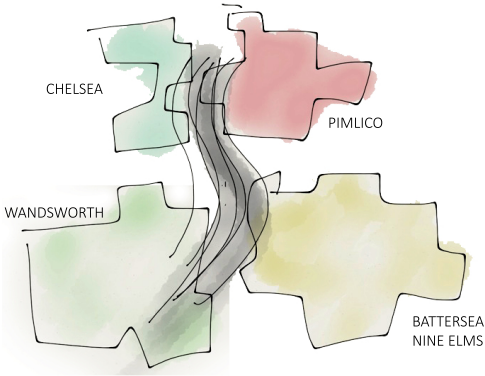
Also, due to its future development plans, Battersea Power Station must become the entity interacting with all the different components in its site.

Grosvenor Bridge will have a key role in this story, by becoming Battersea’s connecting backbone to the rest of the city.

The new reconverted bridge will become the future landmark for the Battersea and South Bank waterfront of London, by keeping its functionality but preparing it for the future developments in the Nine Elms area.

The overprogramming of the new surface around the rail tracks will provide the best conditions for a better mobility overall.

This structuring of surfaces and their thickness will introduce a vertical planning of the transport structure of Grosvenor bridge.



James Corner
“from landscape as a product of culture to landscape as an agent producing culture”

NEIGHBOURHOOD WALK

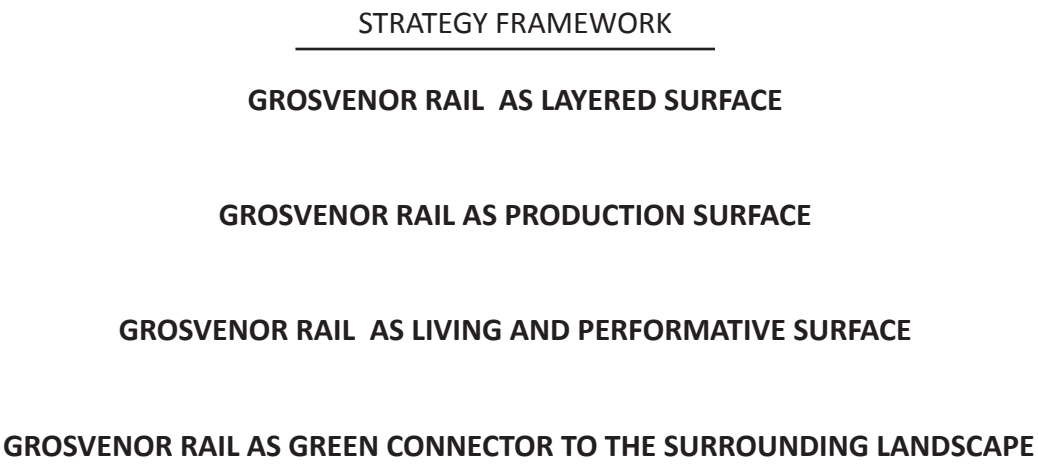
STRATEGY

Battersea started as a productive village, but due to the industrialisation era, that had to be terminated, creating a new layer of infrastructure and production.

The NEIGHBOURHOOD WALK Strategy proposes not to go back to the historical state of the site, but to push its landscape forward by creating a new layer of culture production and so Grosvenor bridge will become Battersea’s connecting surface /backbone to the rest of the city.

The strategy principles are developed from the theoretical framework presented in the first chapter of this thesis, and is also integrated in the greater strategy of the municipality of London, for the development of the Nine Elms area.

I have set up a framework in order to develop the processes that will take place of the surface of the NEIGHBOURHOOD WALK, which will become the future master plan..

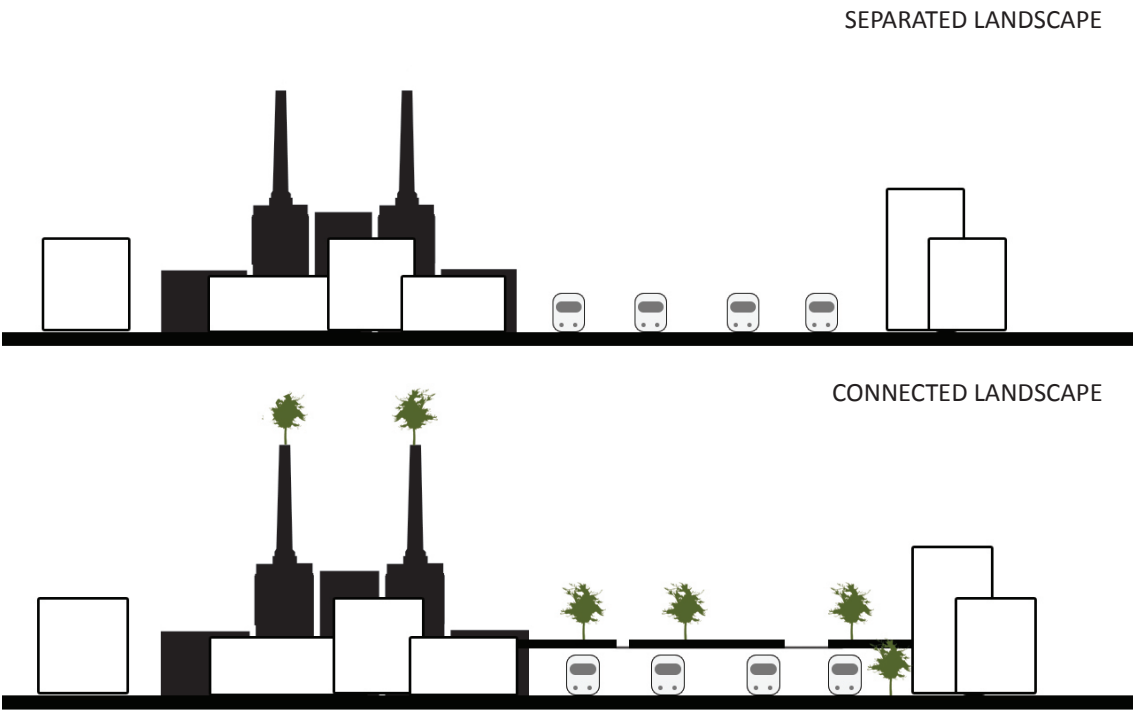


BATTERSEA WALK CONCEPT

A NEIGHBOURHOOD CONNECTING LANDSCAPE

A new platform will communicate with the existing function of the Grosvenor Bridge, the railway, and will create future possibilities for Battersea, its community and visitors. This platform will be a responsive strong base to the new developments that are taking place in the former industrial area of Battersea.

Approach: the future platform will create a sense of place, identity, and belonging, in order to develop sustainable communities and respond to the existing conditions found on the Battersea site. The design proposal will be a reaction to the active and mobility character of the site, a reaction gesture to the urban noise, to the railway, which should not be removed, but embraced.

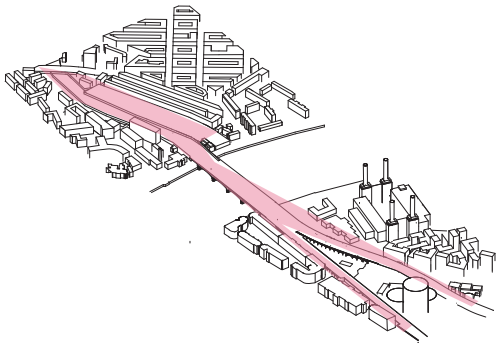


CONCEPT STORYLINE

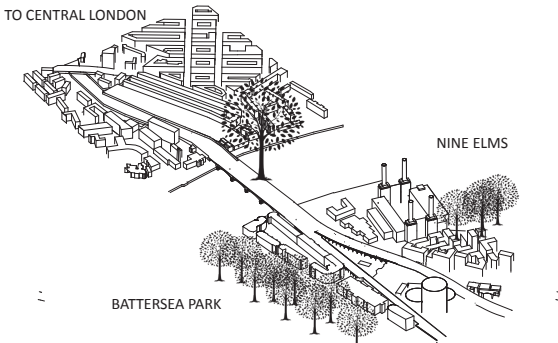
THE STORYSCAPE

This neighbourhood platform will perform in various ways in the landscape, as:

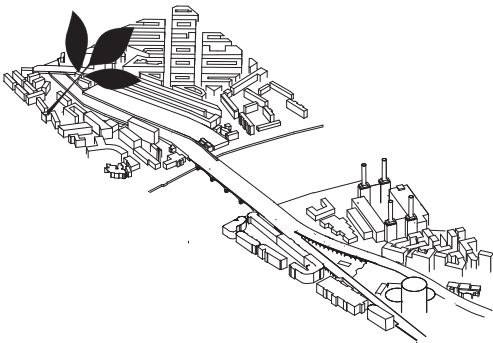
BRIDGESCAPE- new pedestrian flow from the Battersea Power Station to the rest of central London



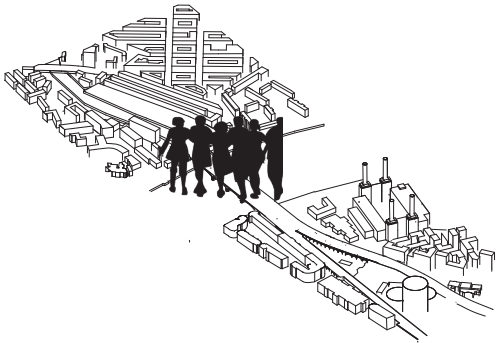
GREENSCAPE-green connection over the Thames, between the Battersea Park and the future Green Corridor of the Nine Elms site.



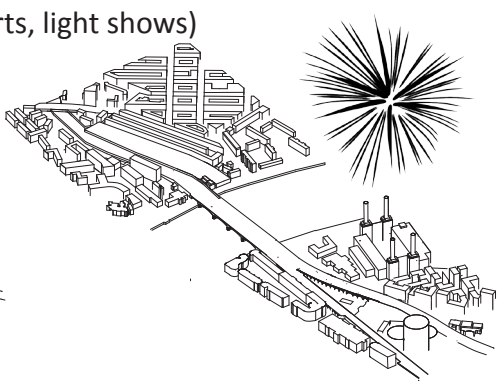
GARDENSCAPE- following the english garden tradition, insert new planted area for the local community over the railway.



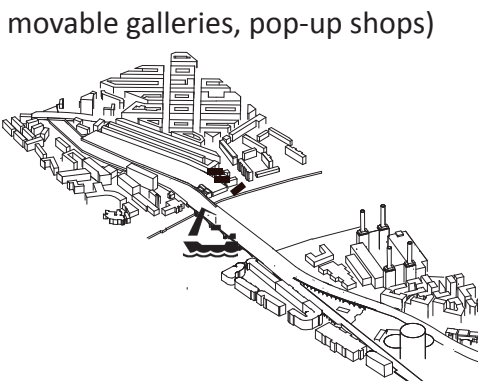
NEIGHBOURHOODSCAPE-find a common platform for the separated local communities around the railway



EVENTSCAPE- use the railway structure to create a platform for Battersea, to watch from or organise on cultural events(concerts, light shows)



PLUG-IN SCAPE- use the railway structure for temporary installations (programmed shipping containers as movable galleries, pop-up shops)



NEIGHBOURHOOD WALK

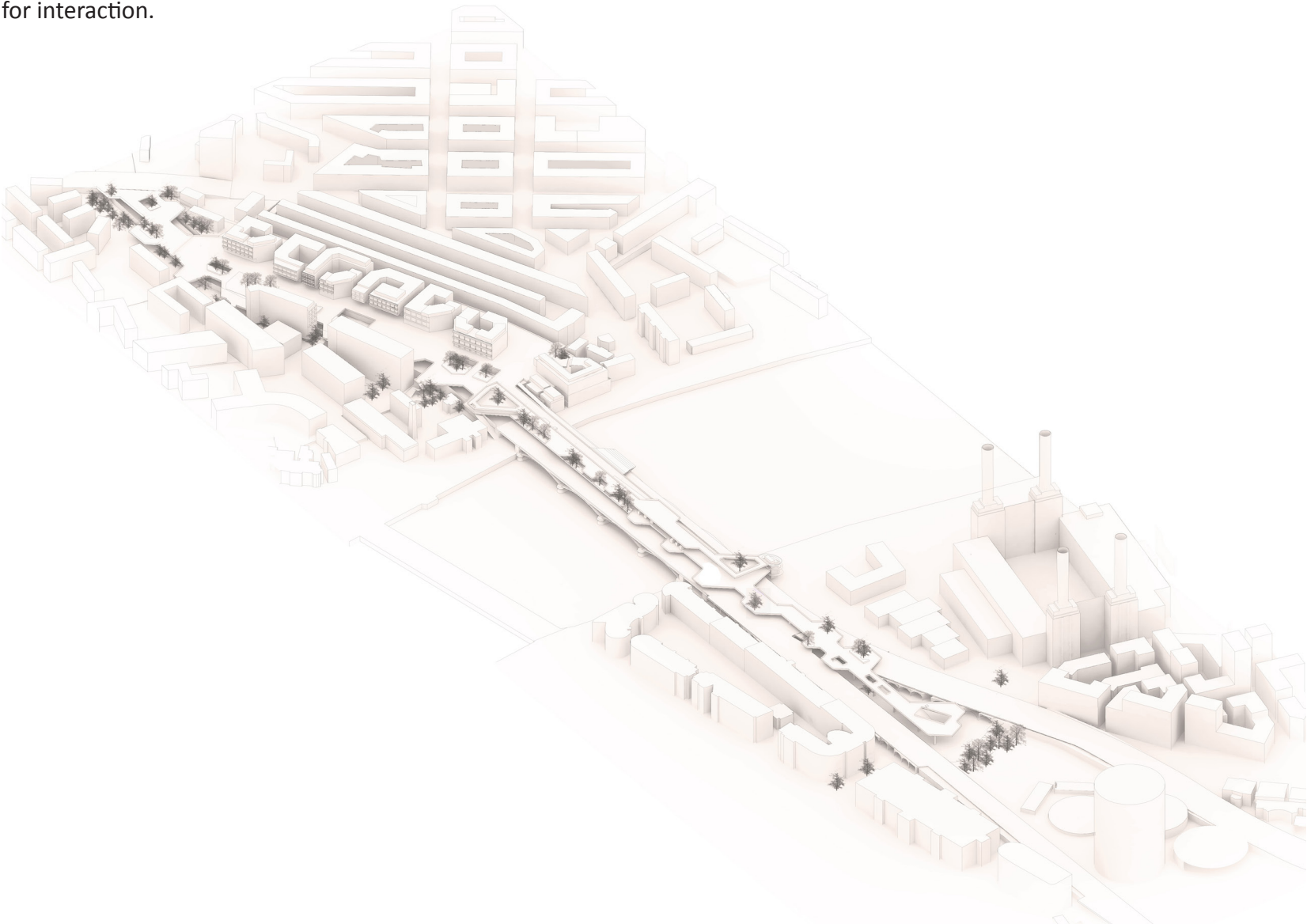


MASTERPLAN

THE BATTERSEA NEIGHBOURHOOD

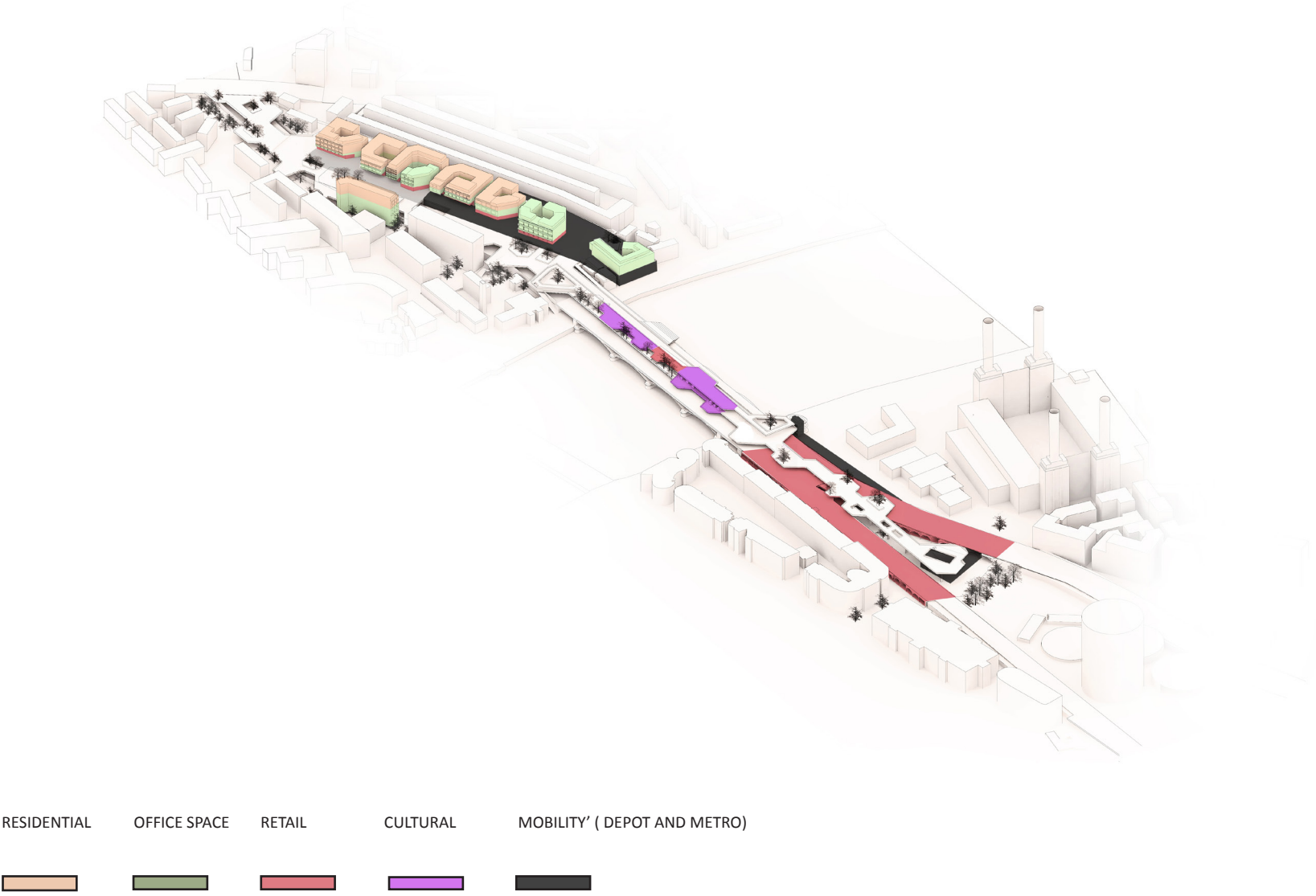
The overall masterplan connects the separated landscape of the Thames into one comprehensive platform. The rail will is no longer a separation between communities but a catalyst for interaction.

The Battersea Neighbourhood has become the urban surface as the stage that unfolds various events over time.



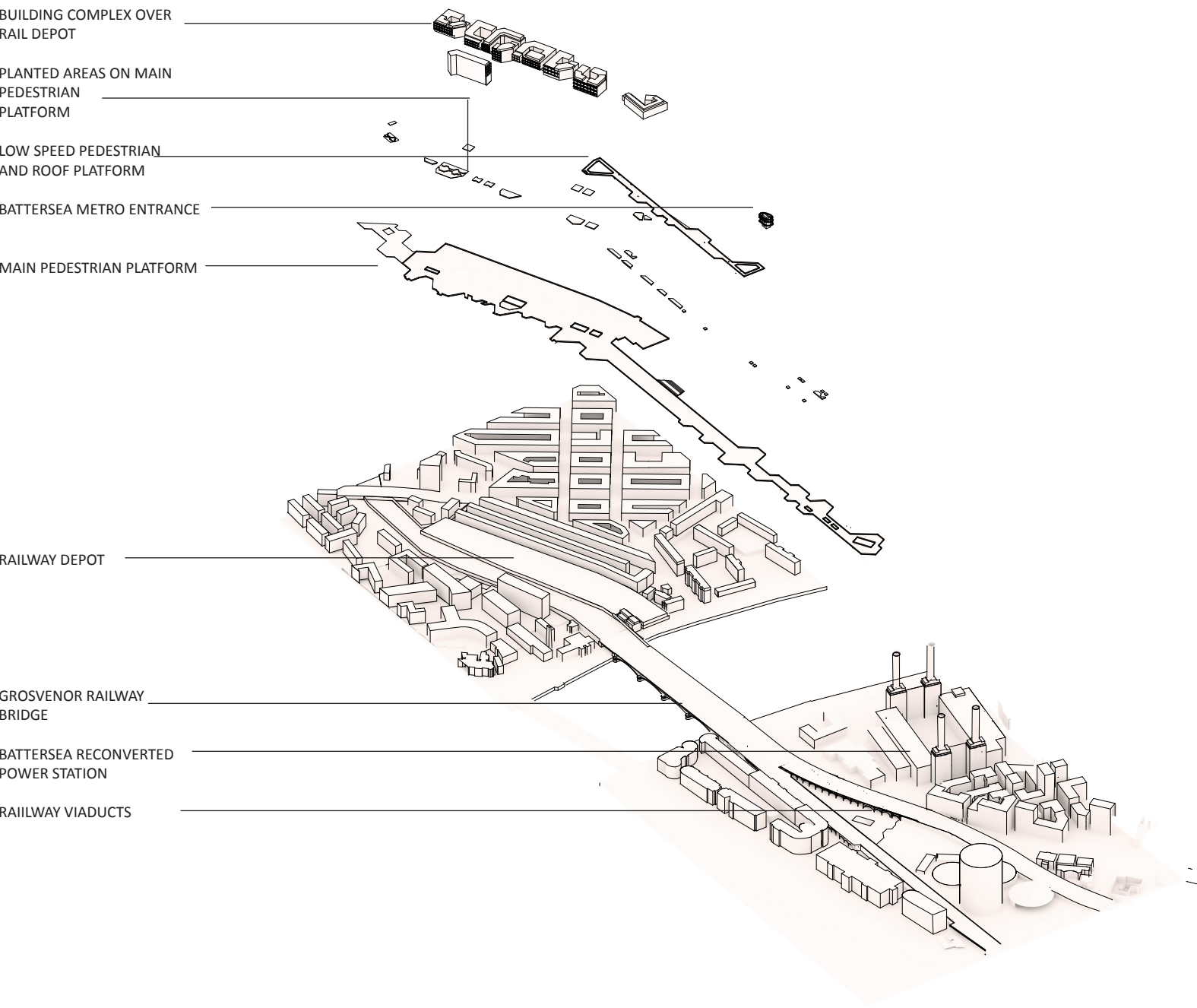
PROGRAMMING

To create a strong story about the future of the Battersea:



- RESIDENTIAL
- OFFICE SPACE
- RETAIL
- CULTURAL
- MOBILITY* (DEPOT AND METRO)
-
-
-
-
-

ELEMENTS OF THE MASTERPLAN

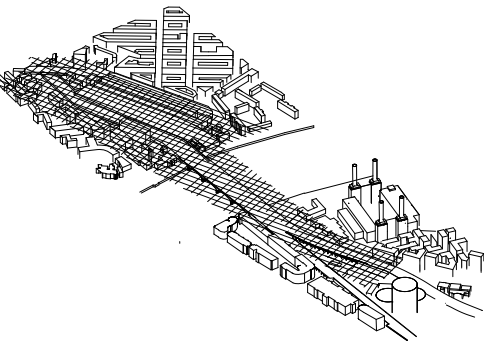


CONCEPT DESIGN STORYLINE

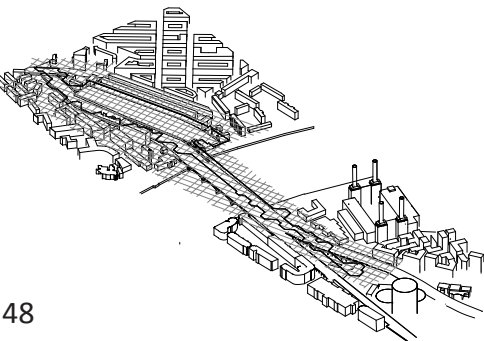
DESIGN STEPS

Defining the platform

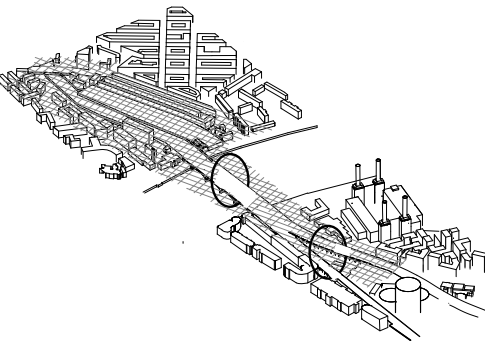
DEFINE GRID IN RELATION TO THE EXISTING BUILT STRUCTURE OF THE SITE



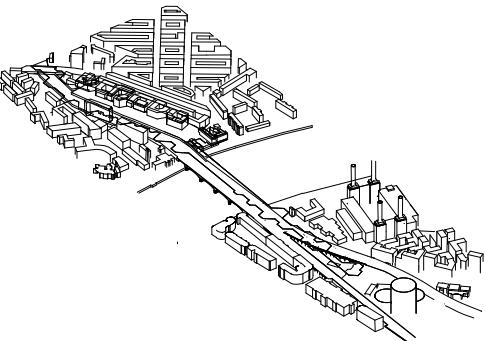
DEFINE PLATFORM SHAPE IN RELATION TO THE ACCESS POINTS



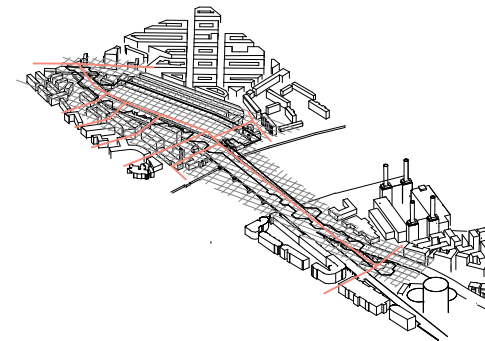
REUSE THE EXISTING STRUCTURE OF THE GROSVENOR RAIL BRIDGE AND VIADUCTS



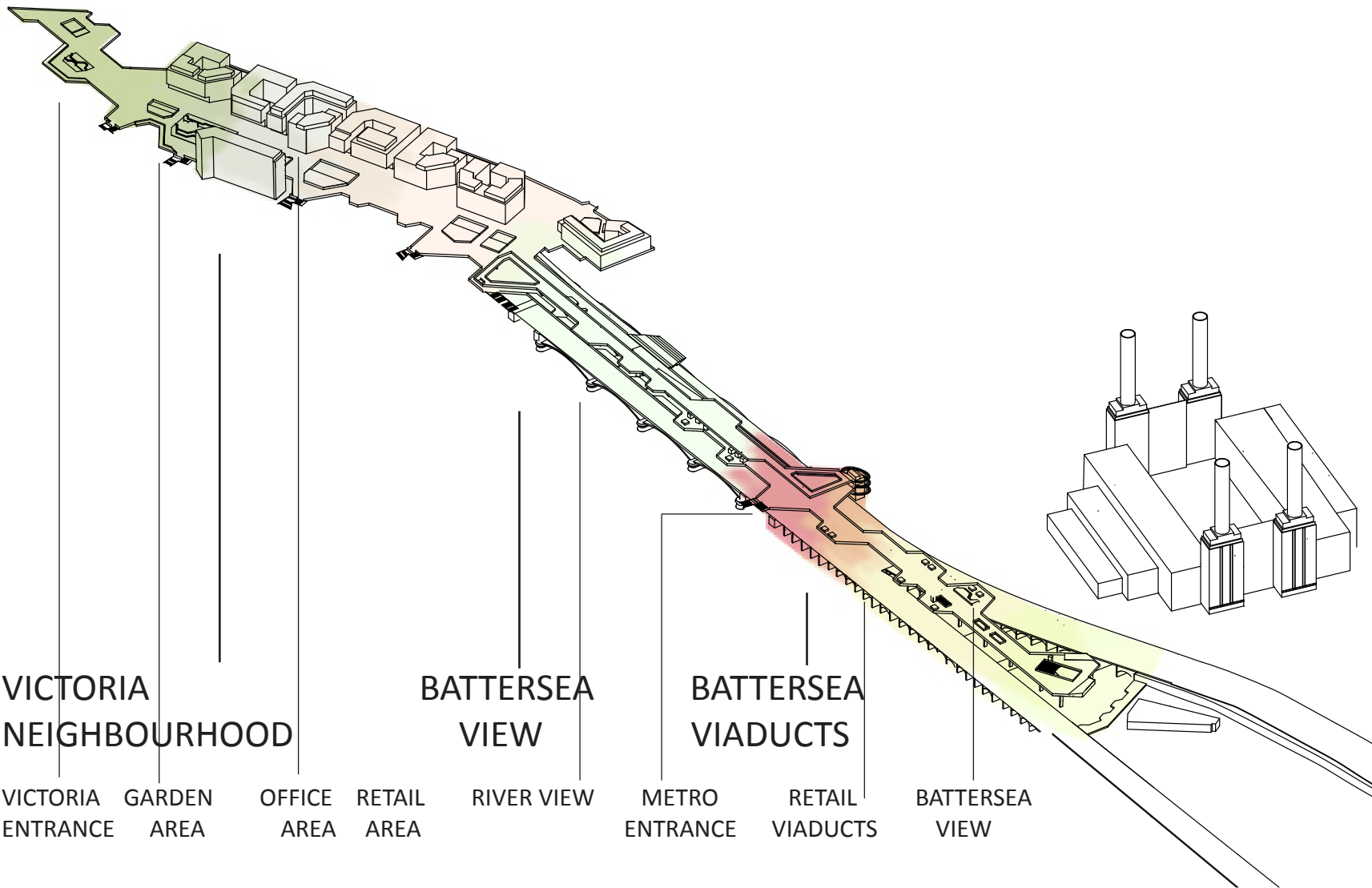
INSERT NEW FUNCTIONS: RESIDENTIAL, RETAIL, OFFICE AND WORK-SHOP SPACES, GALLERIES.



DEFINE NEW CONNECTIONS THROUGH THE SITE INTO MAIN ACCESS POINTS



THEMED AREAS ON THE PLATFORM



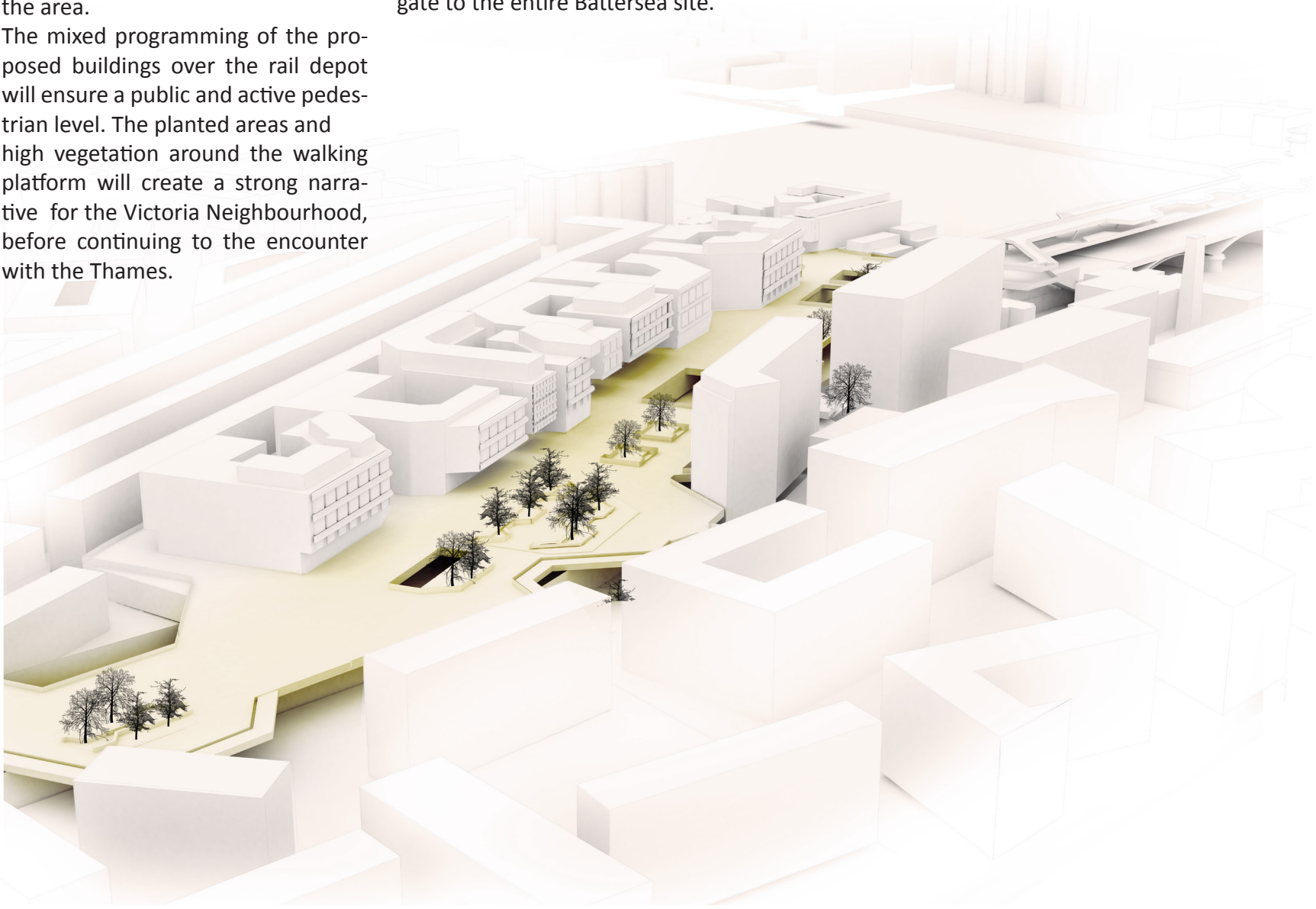
VICTORIA NEIGHBOURHOOD

VICTORIA RAIL NEIGHBOURHOOD

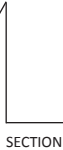
The new Victoria Neighbourhood will represent the clash between Pimlico, Chelsea, and the tourist flow in the area.

The mixed programming of the proposed buildings over the rail depot will ensure a public and active pedestrian level. The planted areas and high vegetation around the walking platform will create a strong narrative for the Victoria Neighbourhood, before continuing to the encounter with the Thames.

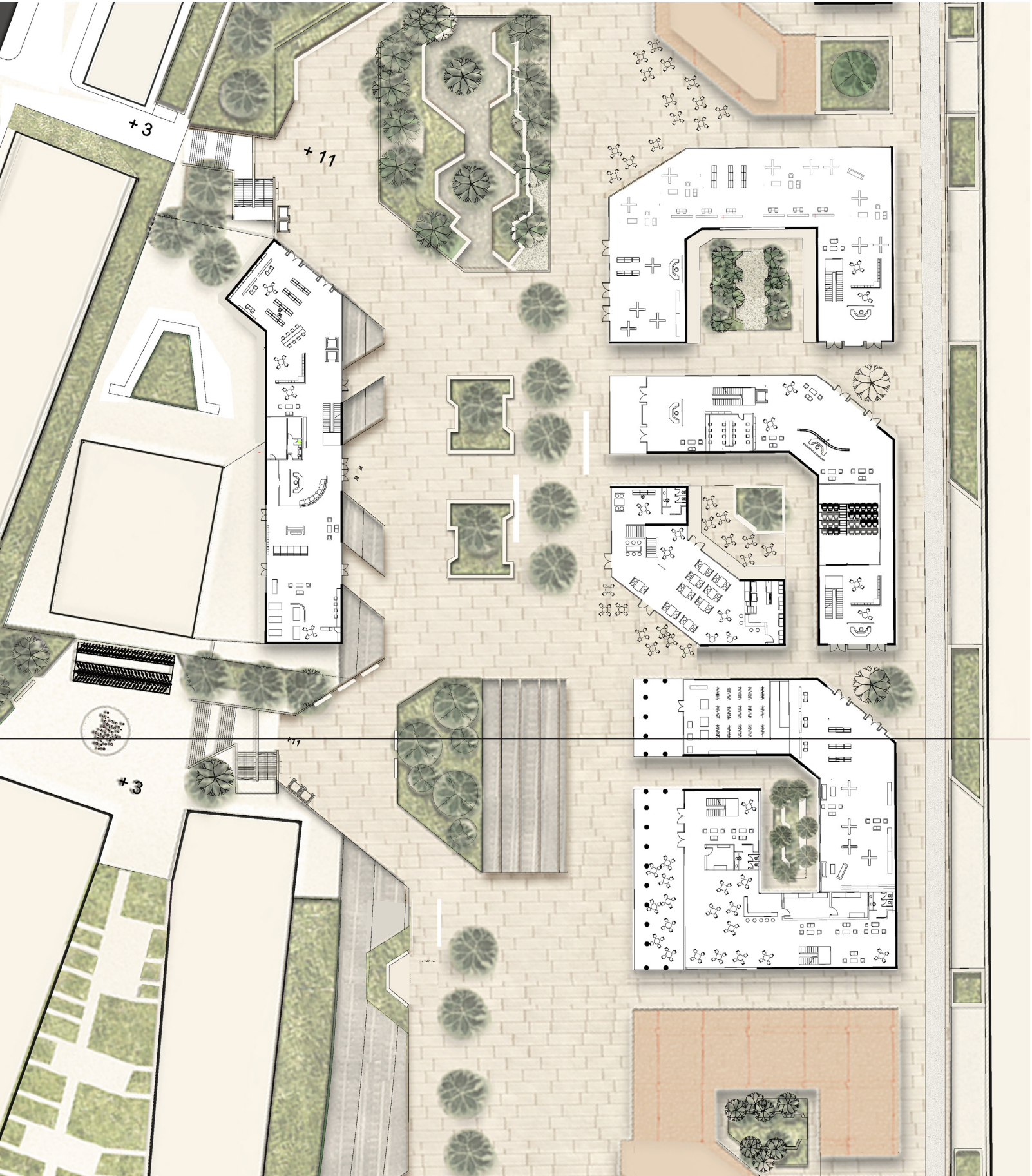
Considering the Victoria Train station as an important mode of transportation for new tourists in London, this area will be the main gate to the entire Battersea site.



PLAN

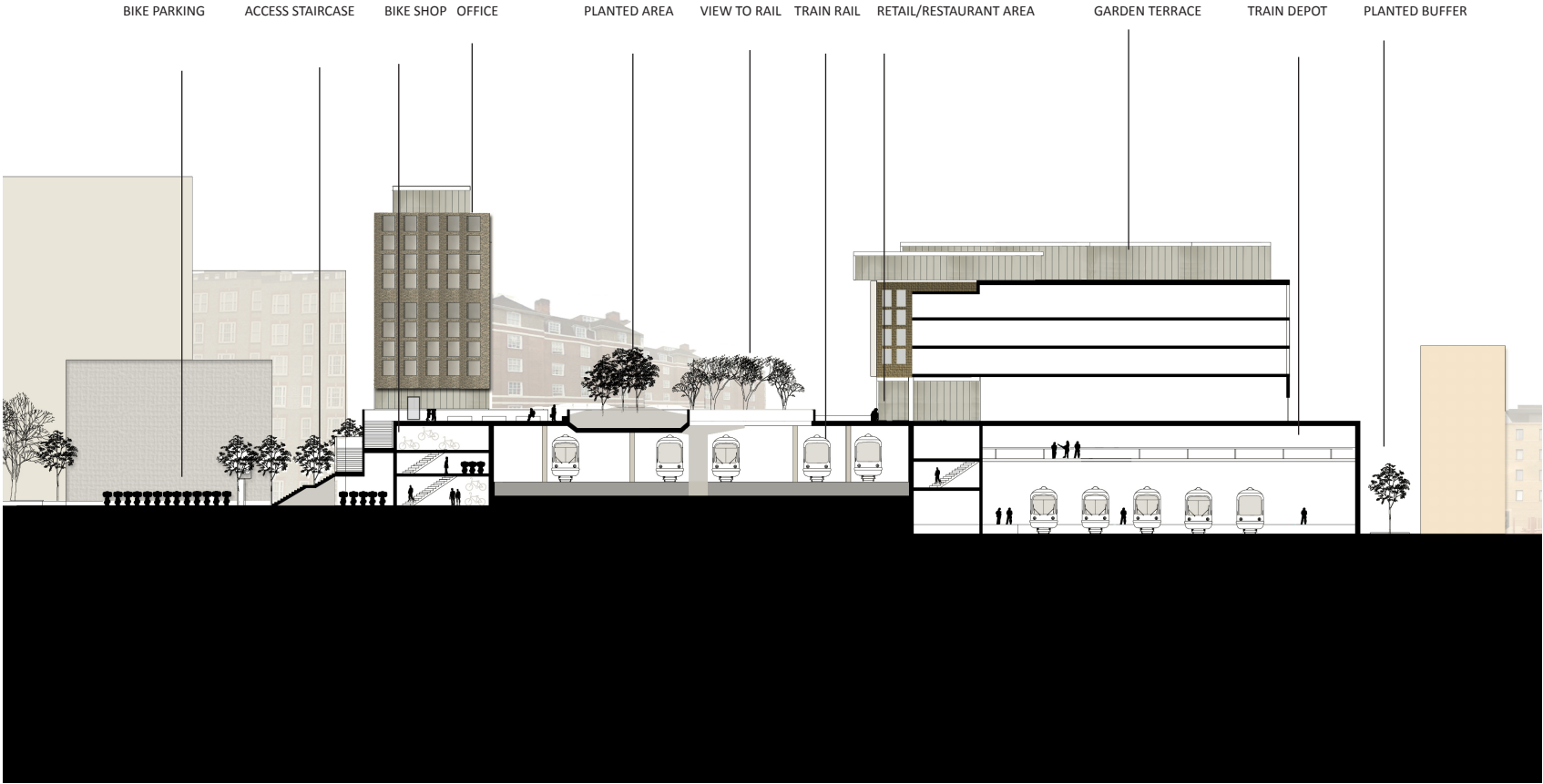


SECTION



SECTION

VICTORIA NEIGHBOURHOOD



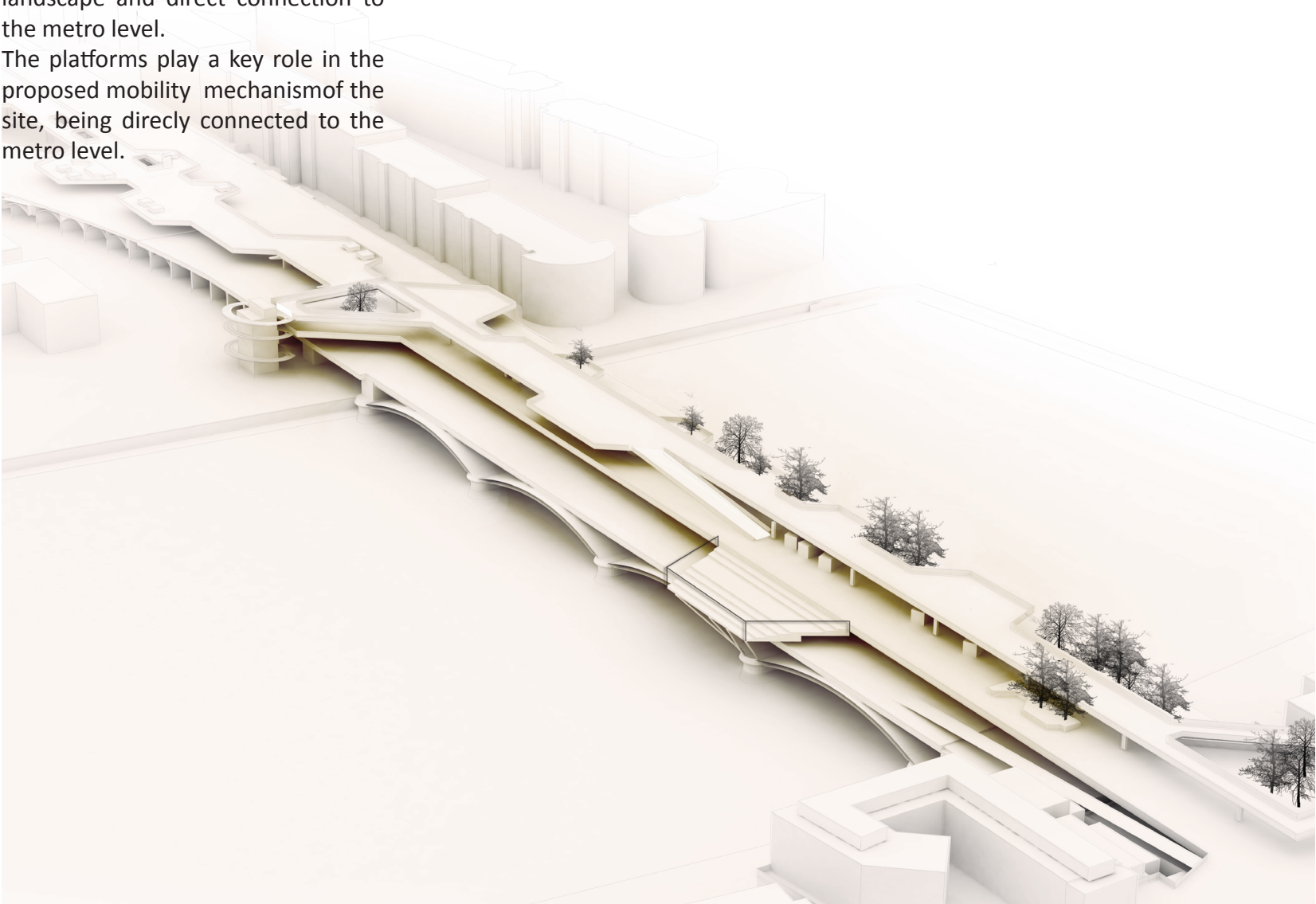
BATTERSEA VIEW

THE RIVER NEIGHBOURHOOD

The new pedestrian platforms will create a busy environment over the railway, with retail and cultural zones, key view points to the surrounding landscape and direct connection to the metro level.

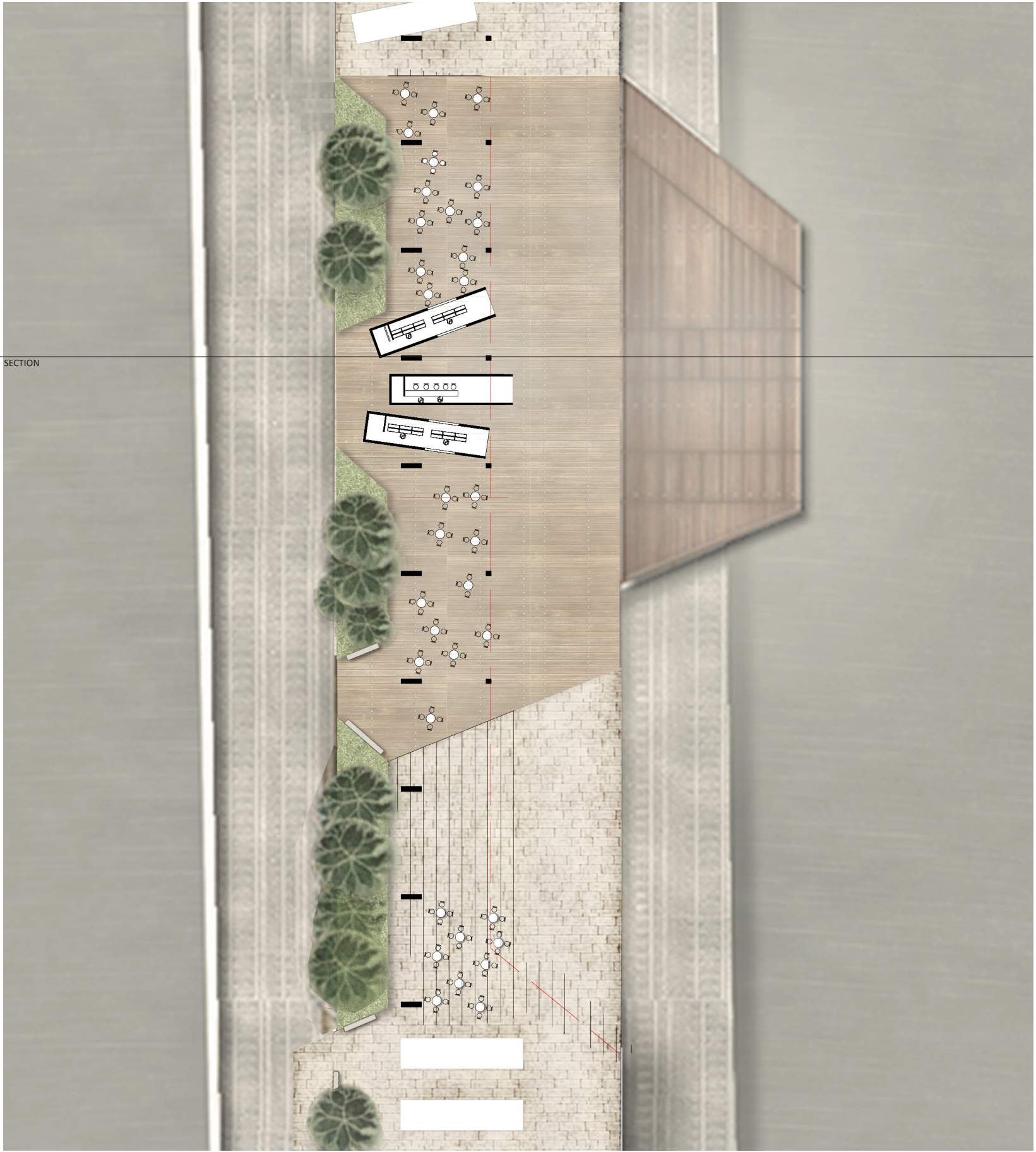
The platforms play a key role in the proposed mobility mechanism of the site, being directly connected to the metro level.

The sense of place will be the most important here, on the main view deck towards the Battersea Power Station and Thames River.



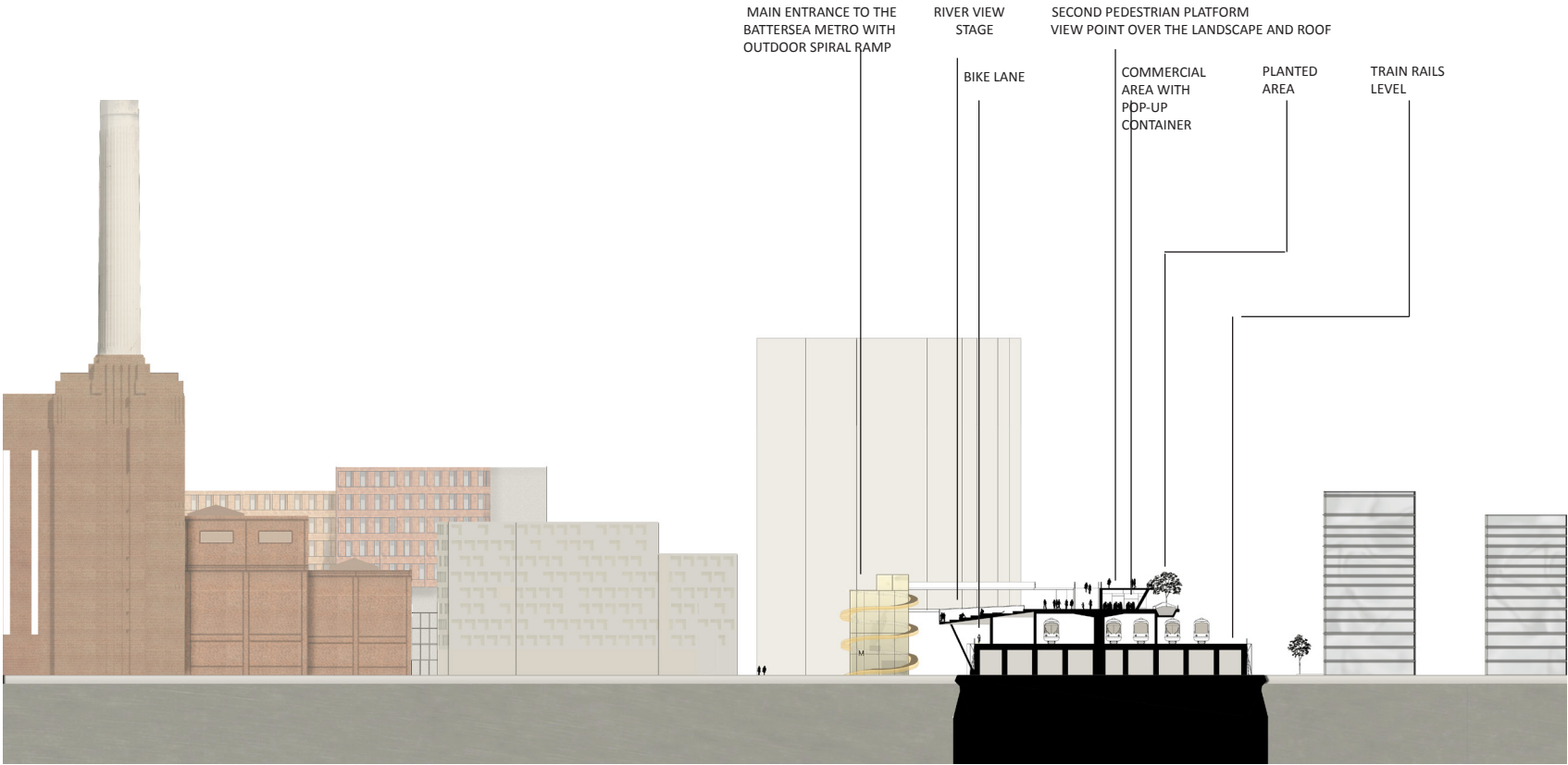
PLAN

SECTION

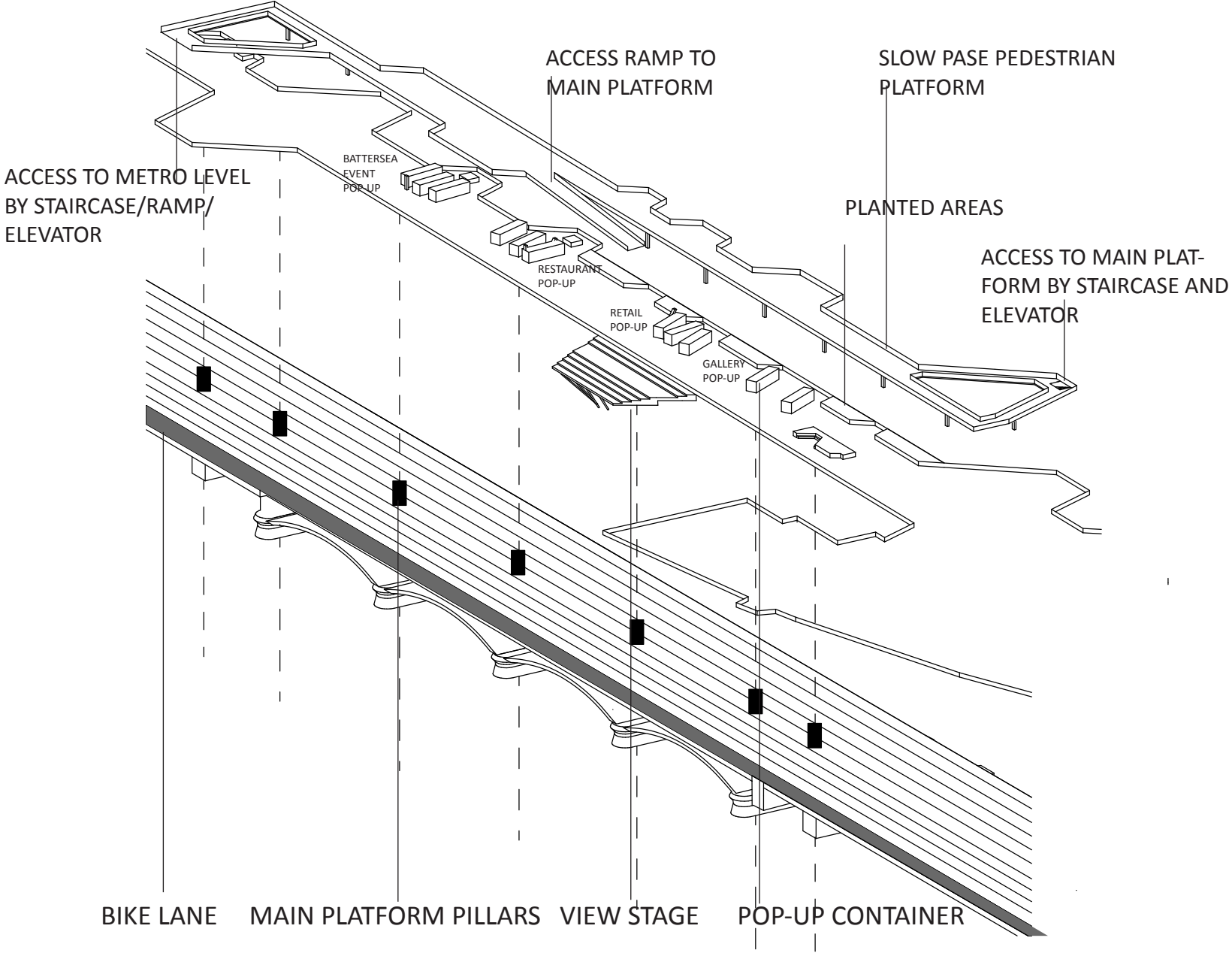


SECTION

THE RIVER NEIGHBOURHOOD



PROGRAMMING



BATTERSEA VIADUCTS

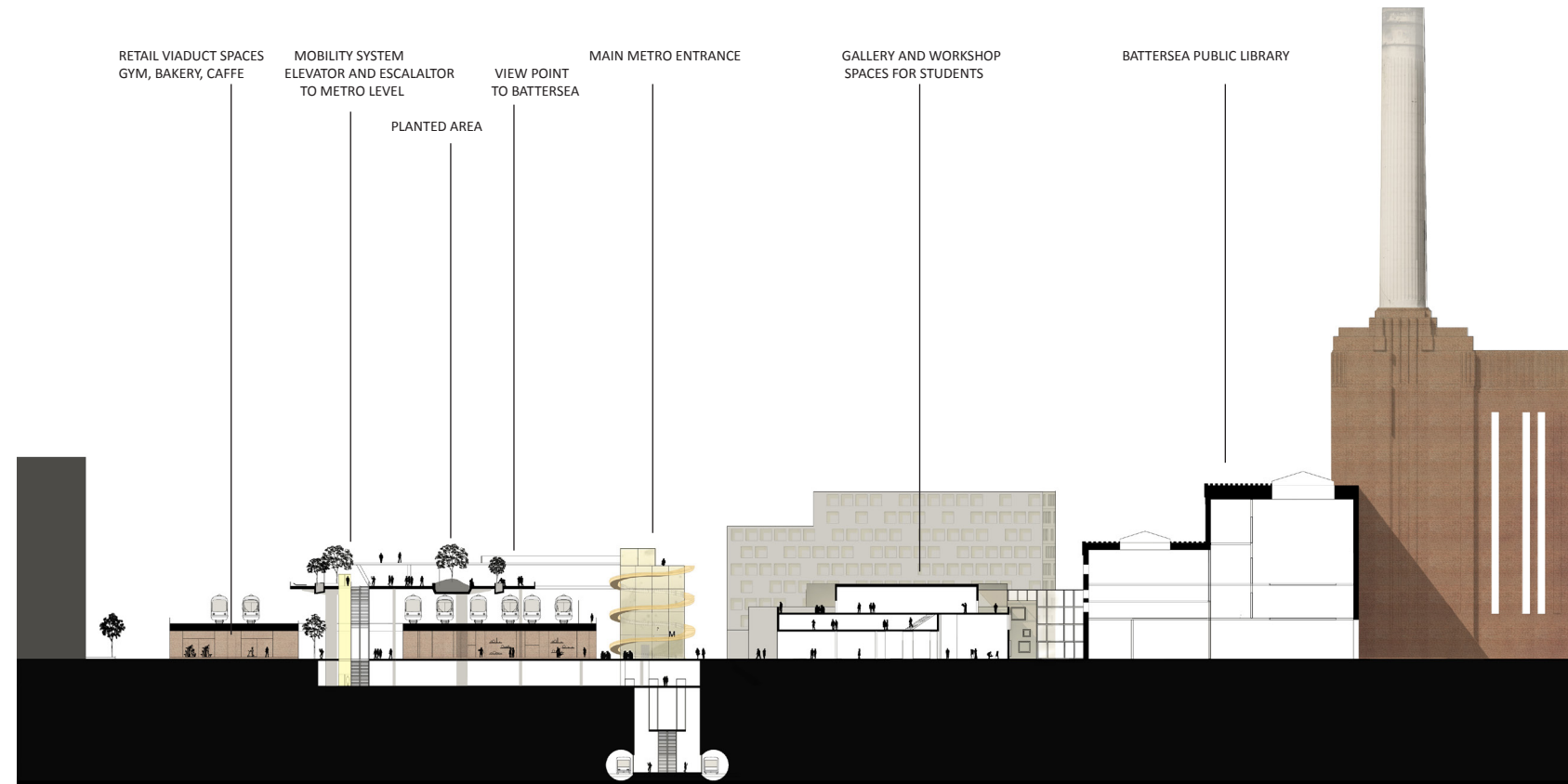
THE VIADUCTS NEIGHBOURHOOD

The spaces under the rail tracks are occupied and opened to the public. The shops and galleries will be connected to the metro level and platform level by a system of escalators and elevators that create the complex mobility machine through the viaducts.



SECTION

THE VIADUCTS NEIGHBOURHOOD



CONCLUSIONS

GOALS

The main goals of this master thesis have been to define a new landscape in the post industrial context of London.

The challenges of this urban transformation process have been to develop a large master plan that has to connect 3 different areas in the landscape: a railway/depot area, the natural area of the Thames, and an industrial site.

One of the major questions for the project has been how to respond to the future development of the area (the Battersea site) and what connections will need to be developed in order to create a fluid urban fabric. Thus the Grosvenor railway, the only physical barrier in the site, has been transformed.

RESULTS

The design proposal has changed the Thames landscape in a sustainable way, by creating a new neighbourhood of communities, the Battersea Community.

By reclaiming the existing structure of the first railway bridge in London, the Grosvenor Bridge, the future Battersea building, of local and global importance, will be connected to the rest of the riverfront and the surrounding neighbourhoods on a local level but also on the global level, having the Victoria Train Station in close proximity.

Another challenge has been keeping the vision and strategy in close relation to the real municipality plans for the entire South Bank. Thus, the final proposal incorporates the proposed metro line, the extension of the Northern line, by the municipality.

The mobility mechanism has been very important thought out the project. Therefore, a major pedestrian way has been introduced over the existing railway, and also the bike lane of the unused train track.

The entire mobility system thus incorporates the pedestrian flow, the metro, and the cyclist flow, all around the backbone of the site, the railway.

REFLECTIONS

The soft side of sustainability.

The neighbourhood concept in a community represents a soft tool for developing a sustainable community. This means there is a strong connection between landscape, culture and sustainable neighbourhoods.

“from landscape as a product of culture to landscape as an agent producing culture” James Corner

With this thesis I have proposed a structure which enables public engagement, that invites initial separated communities to a conversation, between themselves but also with the natural landscape, the Thames. The process of planning has become more open minded in the last decade, thus more open minded spaces can be created.

In the Battersea Walk, the covering and active use of the railway as part train tracks/part bike lane has opened public access to a part of the past that has never been accessible before.

This kind of intervention of course relies on hard programming of the proposed project, but also creates a softer side of the design. This is the sense of place, the identity which revolves around the new neighbourhood, of the Battersea.

This leads to a question I have reflected on at the end of my creative process, what is a sustainable neighbourhood in a post industrial context? and most important, how can it be created.

I have drawn the conclusion that the altered/changed character of the site, its sense of place is key to enabling a sustainable community in a certain area.

Thus, I consider that in order for landscape to be sustainable, landscape has to enable us to think, to feel and lastly to do.

The temporal approach to landscape determines the idea that over time, the urban fabric adds more and more layers of enclaves and armatures. In the case of urban landscape, time can add value to the fabric (historical monuments) or add to its decay. What makes the difference between a valuable and decayed urban landscape is in my opinion the sense of place. Taking the Battersea site as practical example, it has stood the test of time. It is still present in the collective memory of its visitors and also of its local communities, it has its own story that just waits to be rediscovered. Having a story will always bring a strong sense of place to a space.

Taking into consideration James Corner, and his approach to sustainability, one can draw the conclusion that the culture producing landscape will create the positive scenario for a sustainable community in a certain place.

Corner understands landscape as a medium, as an agent that produces culture. Considering the fluid character of landscape, and its temporality, I draw the conclusion that adding a temporal dimension to a design proposal will always add up to a sustainable result in the long term. Planning for a fluid urban surface by incorporating the existing infrastructure in a site will create a sustainable landscape for the future. The planning of a connecting bridge is a great illustration of landscape as medium.

In this thesis, I have tackled the concept of the pedestrian bridge in a different way. Here, the edges of a connection are more important than the connection itself, and define the character of the link. The different social groups that will pass by the new pedestrian connection I have proposed in this project will be defined by the Victoria Neighbourhood and the Viaducts Neighbourhood, but will meet in the middle, at the Battersea View. This will give unity to the entire proposed platform.

LANDSCAPE AS MEDIUM FOR A SUSTAINABLE COMMUNITY



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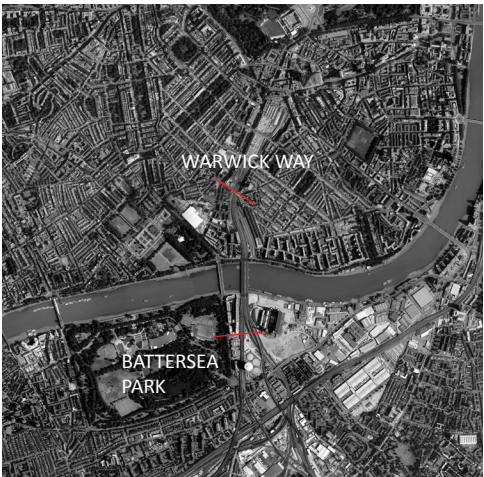
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APPENDIX

Purpose and delimitations of the thesis

Site limitations:

The project has its territorial boundaries on the East and West block neighbourhoods next to the Victoria Railway. The Grosvenor Bridge part has been chosen to be in direct relation to the Battersea Power Station. Thus its South limit is next to the Battersea Park entrance, and its North limit is next to the pedestrian, bike and car street Warwick Way.

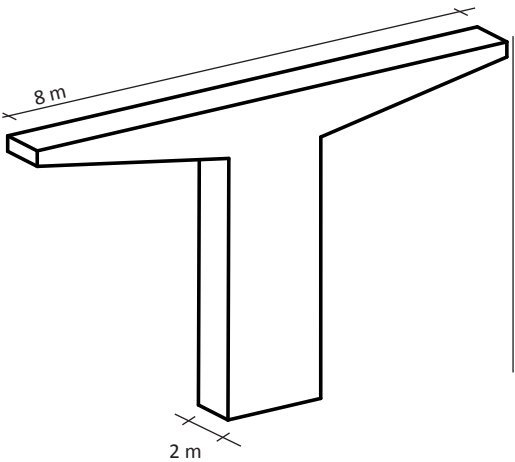


Technical limitations:

The emphasis of this project has not been on the financial cost of the proposal, considering its cultural situation. Also the structural calculations have not been made in detail, in order to explain how to develop a new structure over the existing one. The proposed structure of the bridge is considering the existing arches of the Grosvenor Bridge, and their beauty. Therefore the new structure consists of concrete pillars, 2m thickness and 8 m long, that will be supported by the existing 5 main pillars of the Grosvenor Bridge.

The main concrete pillars will create the support for the system of concrete beams that will support the main pedestrian platform.

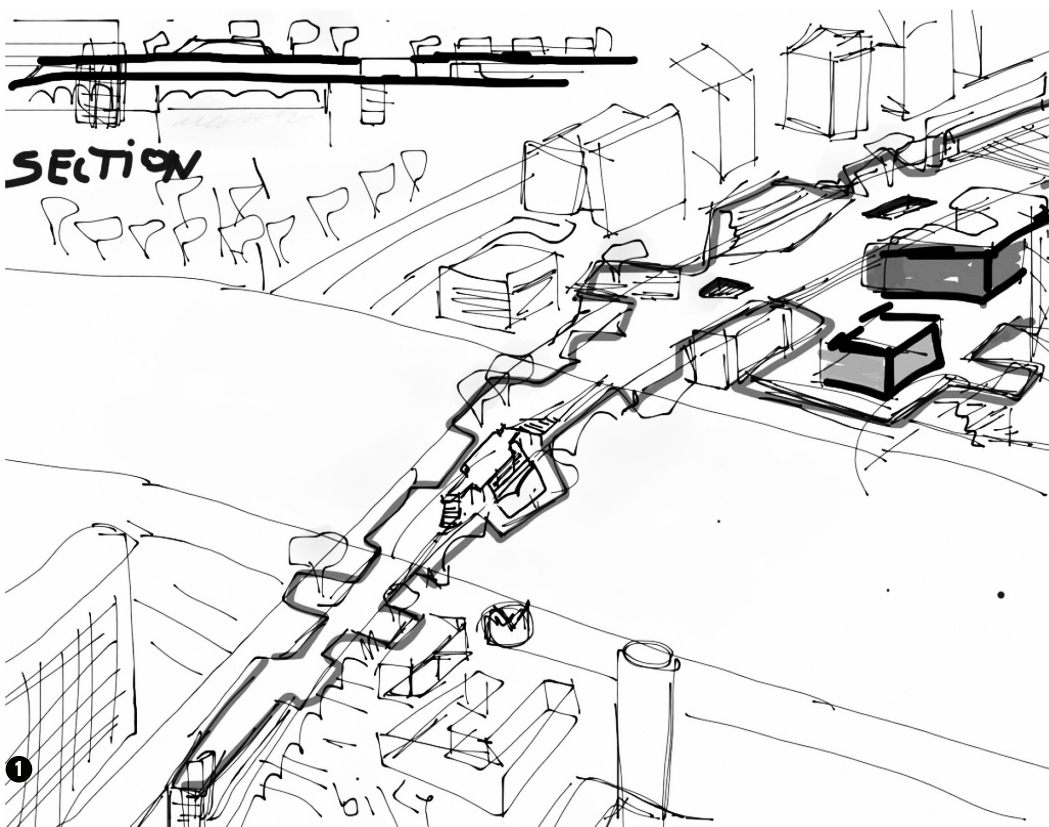
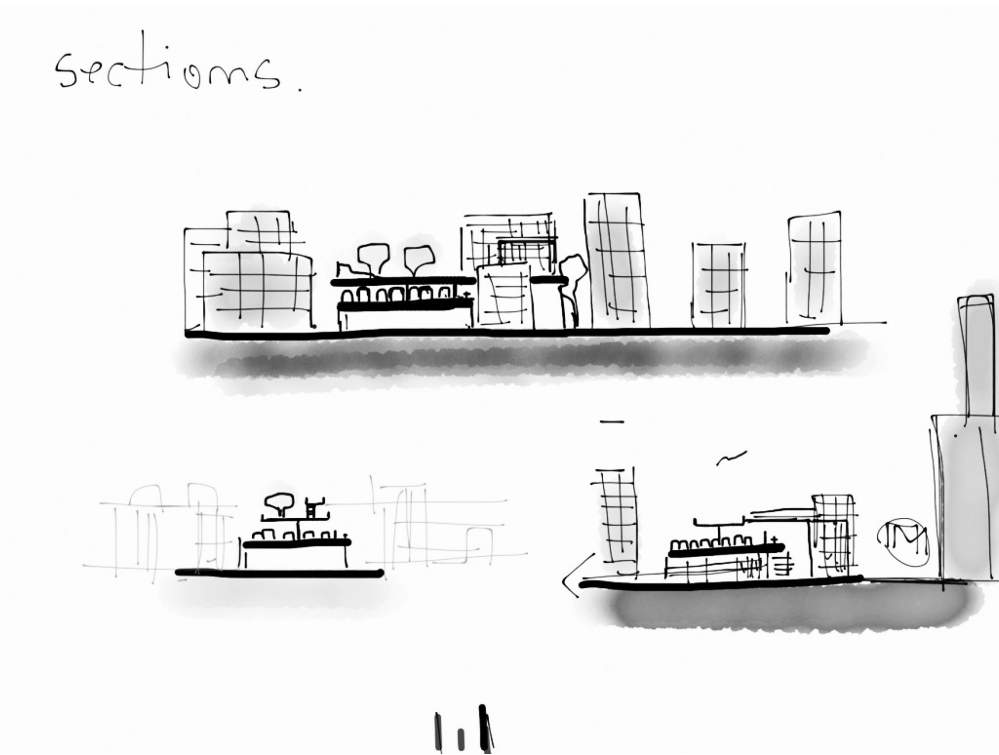
Thus, the proposed structure will remain at a conceptual level. Considering the structure of the railway (it was created as 10 different individual bridges that were brought together) the new weight of the proposed platforms will not create difficulties.



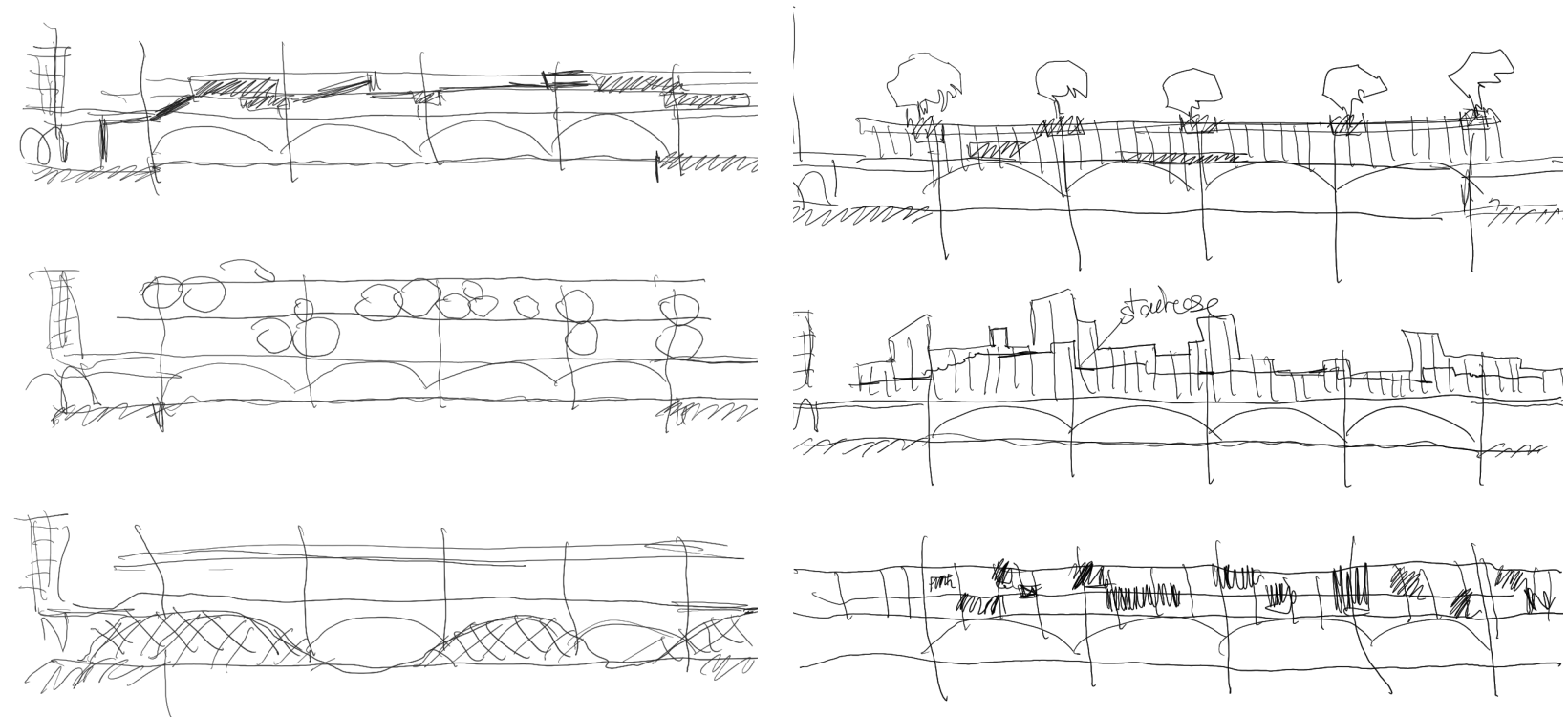
Design process

SKETCHING

I have been developing different concept ideas for the Grosvenor Bridge and entire site by sketching, and using a working model.

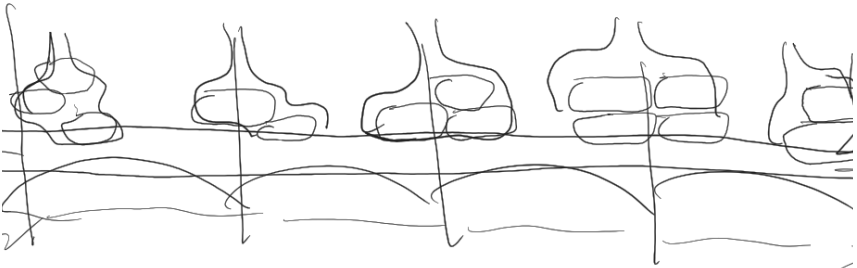


SKETCHING

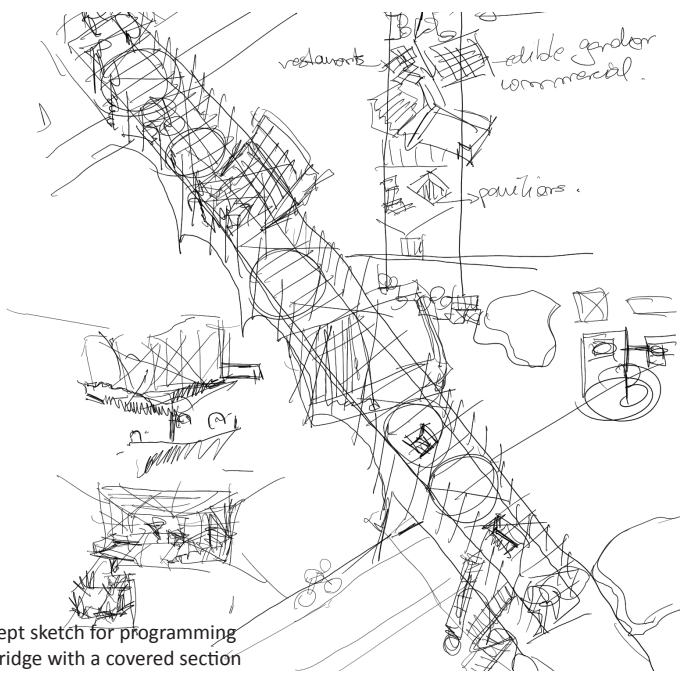


1 Concept sketches for bridge proposal

2 Concept sketch for bridge elevations

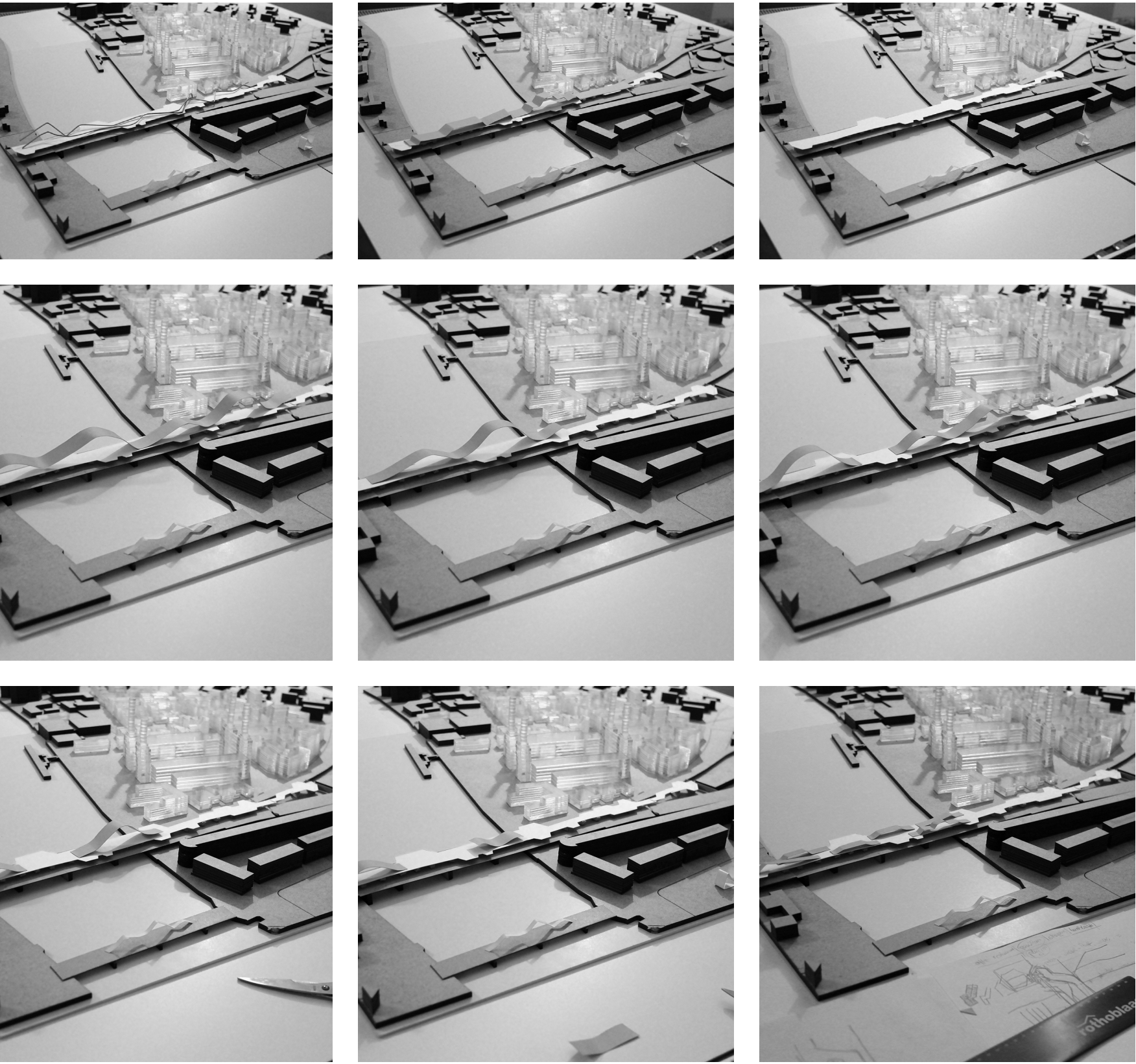


1 Concept sketch for programme modules on bridge



2 Concept sketch for programming the bridge with a covered section

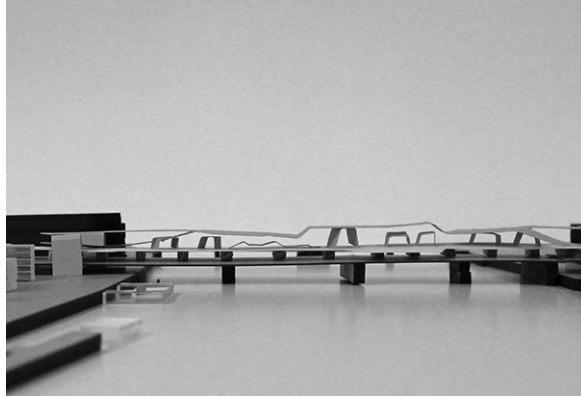
MODEL STUDY



MODEL STUDY

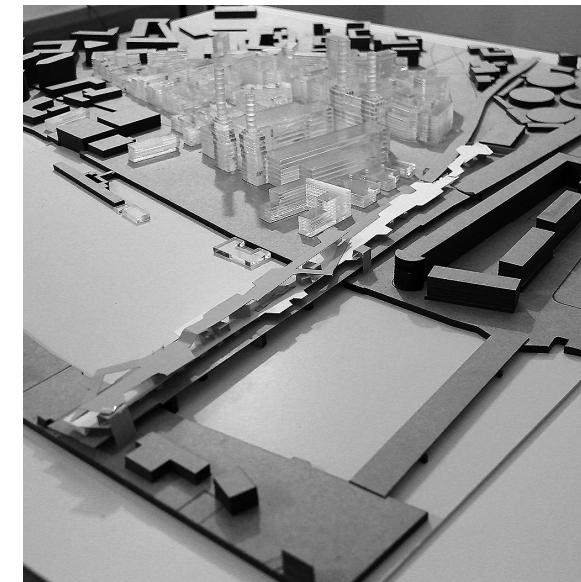
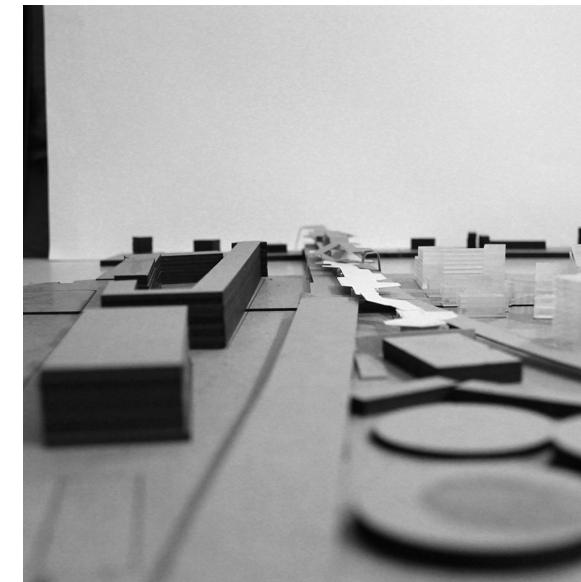
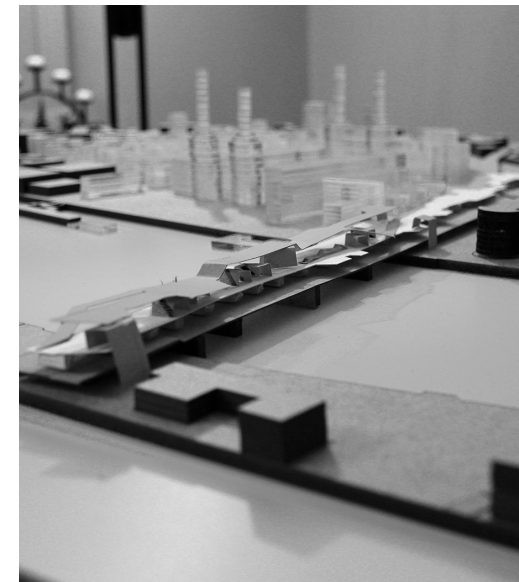
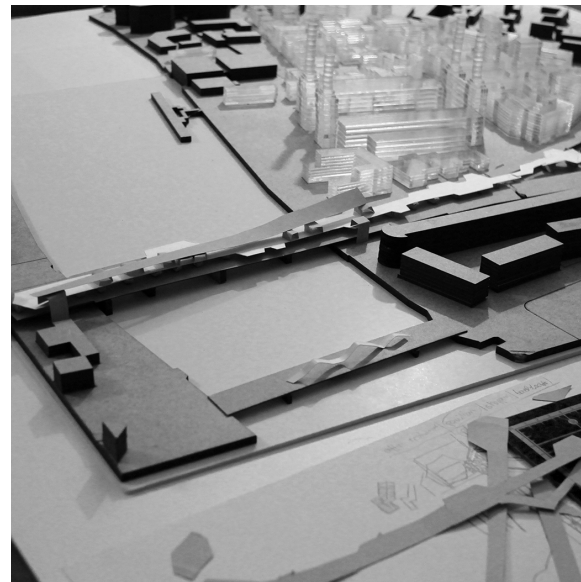
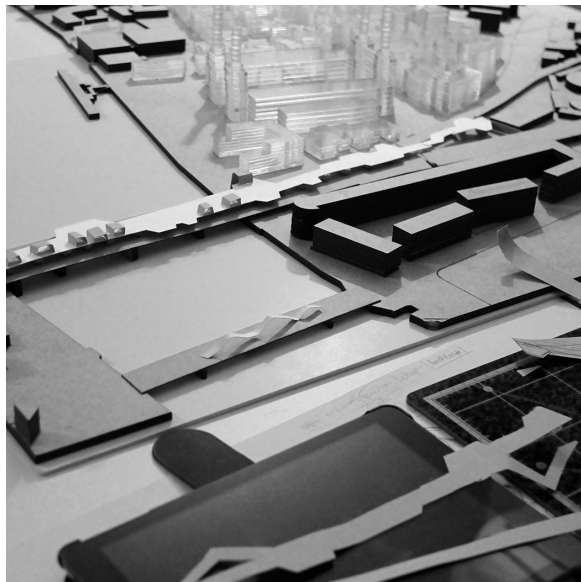
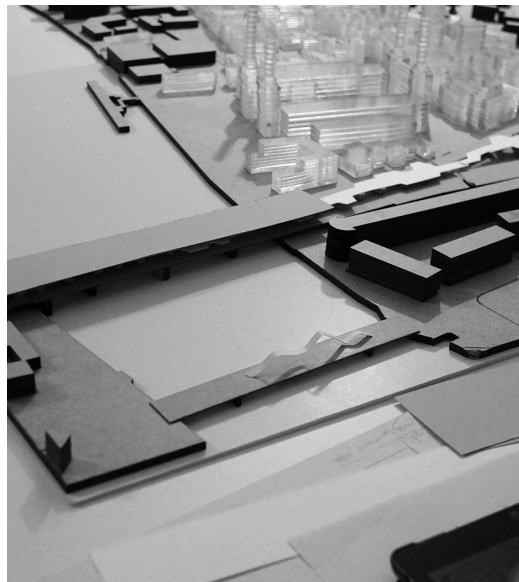
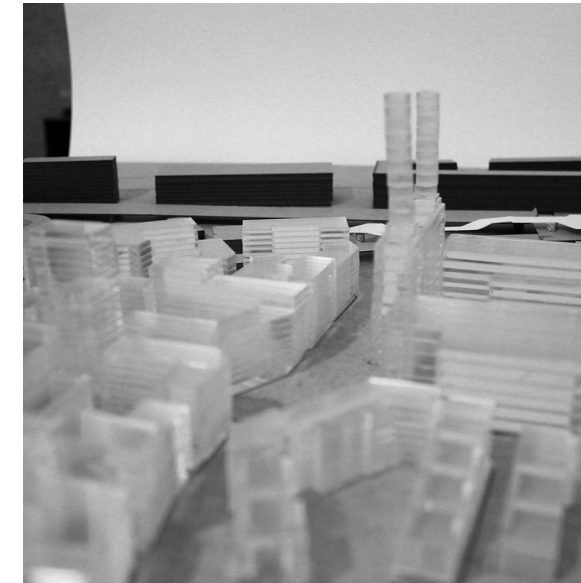
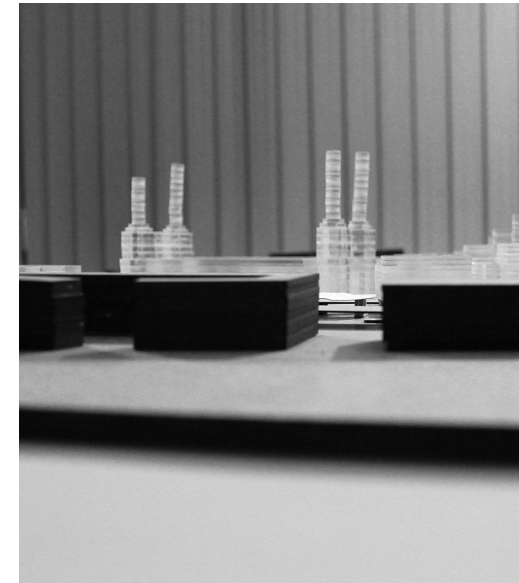
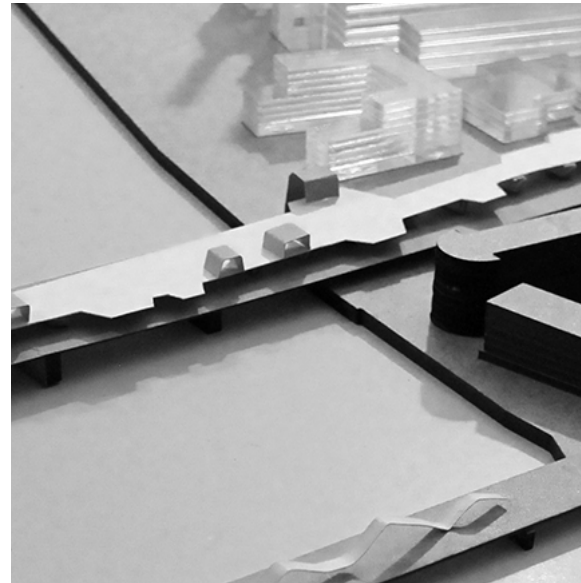
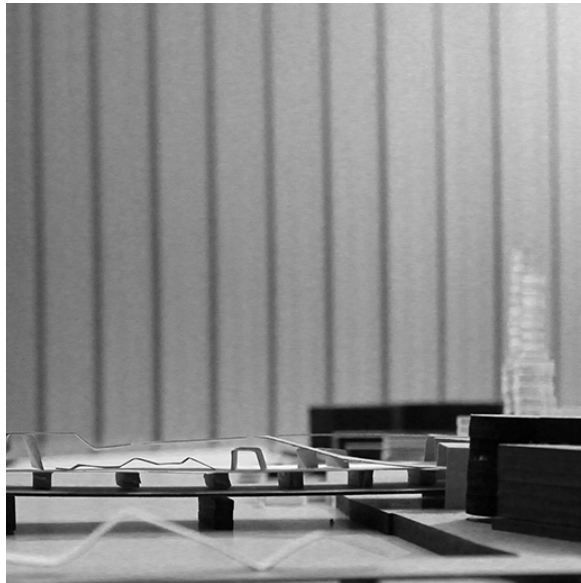
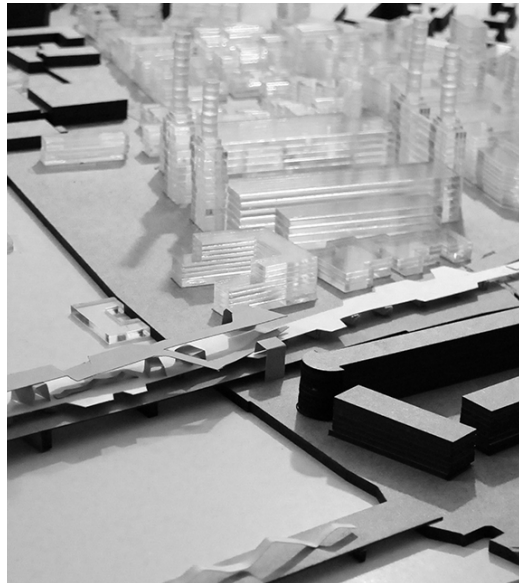
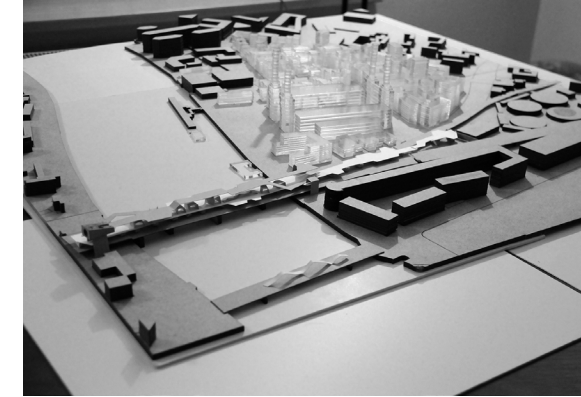
BATTERSEA VIEW

In the work model I have experimented with the different layers in the landscape-pedestrian, programmed layer, roofing etc, to test the impact on the overall Thames landscape.



BATTERSEA VIEW

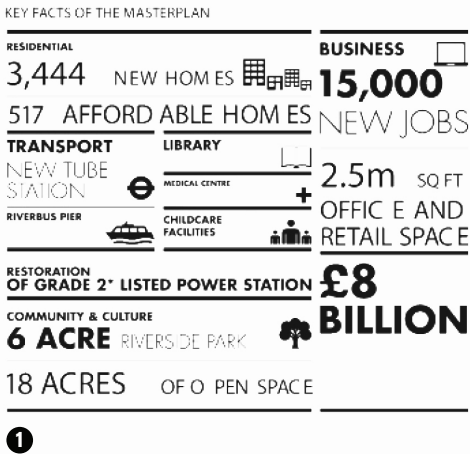
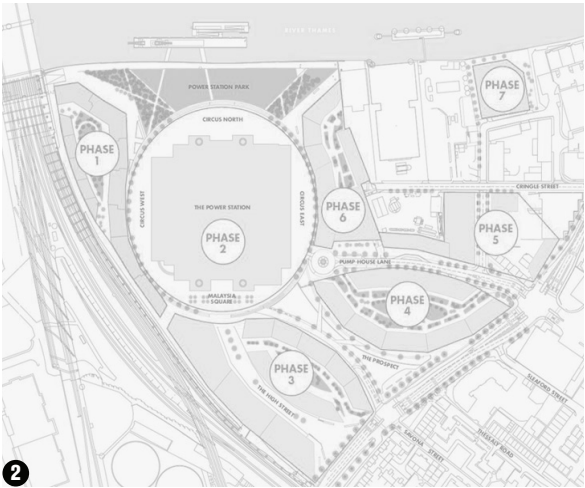
Model testing for key viewpoint to the proposed platform.



MUNICIPALITY PLANS:

The South Bank of the Thames is going through an incredible period of change, and Vauxhall, which includes the Battersea area. It lies within the wider Vauxhall Nine Elms Battersea (VNEB) Opportunity Area, which will play a key part of the future prosperity of London, with plans including 16,000 new homes, up to 25,000 new jobs and an extension to London Underground’s Northern line. The first element of this regeneration plan, the Regeneration of the Rail Arches has already started. Working with Network Rail, the developers and Lambeth Council, Vauxhall One has developed a programme for investment and design in the railway arches, in order to create the so called Vauxhall Sculptural Trail. This will turn the barrier of such a structure into an opportunity.

Rail Arch Regeneration has already been included in Lambeth Council’s new Supplementary Planning Guidance for Vauxhall, published in October 2012. The Grosvenor Bridge represents a continuation from land to water of the Vauxhall railarcher, thus is becomes very important in the future approach of this beautiful structure how it will serve Battersea.



- 1 New homes in Nine Elms proposal.
- 2 Master Plan approved by the municipality of London.
- 3 Extension of London Metro to Battersea. Location proposal.

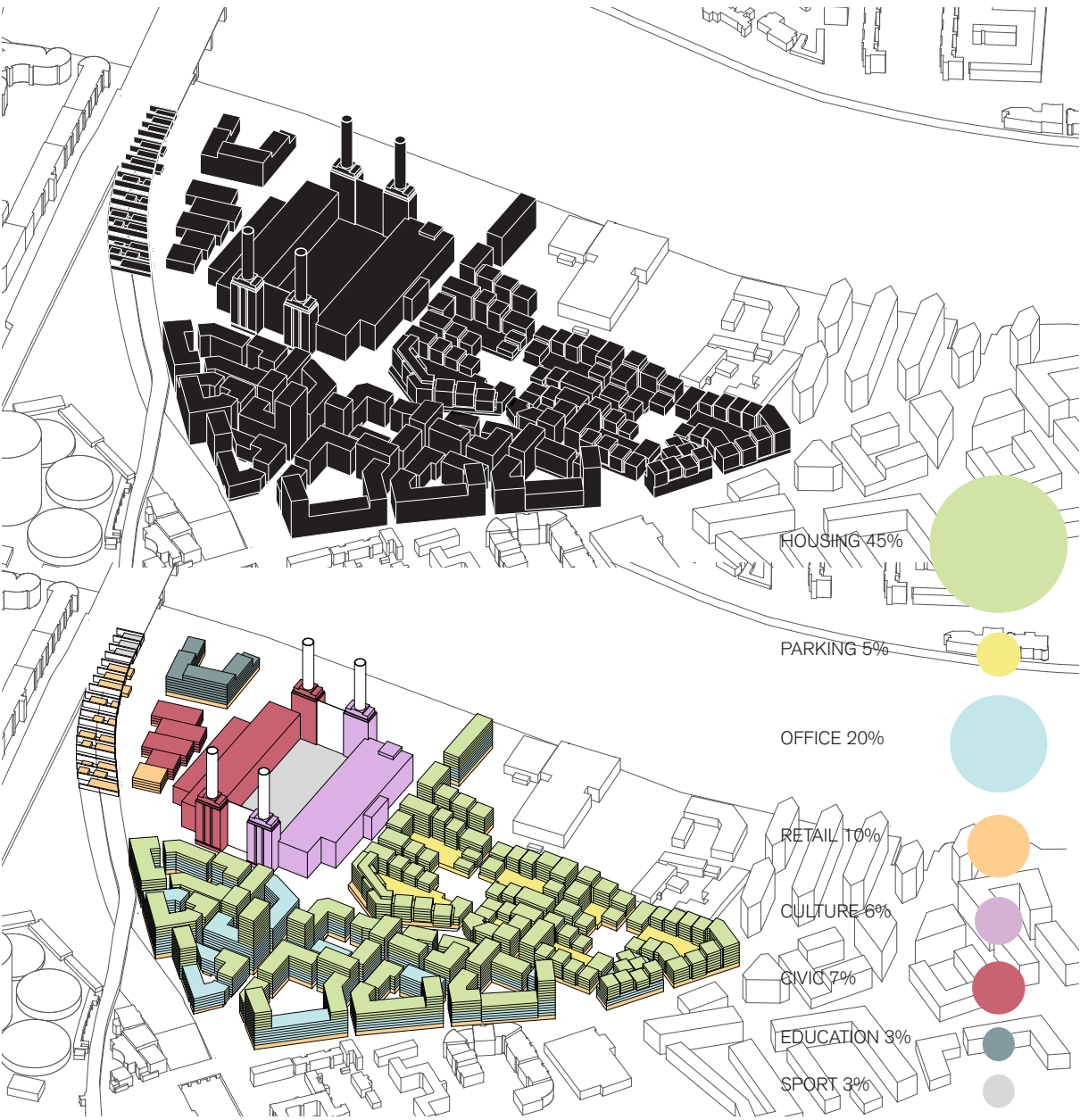
BATTERSEA STUDENT PROPOSAL

A different MASTERPLAN

During the period from March 25th 2013 to May 22nd 2013 me and my other two group colleagues have developed the Battersea Project for the course module Designing for Urban Transformation, 2nd semester MA. The main focus of the project was to understand the complex and multi-layered fabric of contemporary cities in transformation. We developed a new masterplan for the Battersea Power station site and focused on reconvertng the power plant . Thus in this master thesis, the programe scenario used will follow our proposed masterplan.

This aspect is key to the development of the entire surrounding areas of Battersea. By converting the power plant into a public library and Industrial Museum, it will not only attract a large flow of tourists into the area, but also open up the river front to its actual inhabitants.

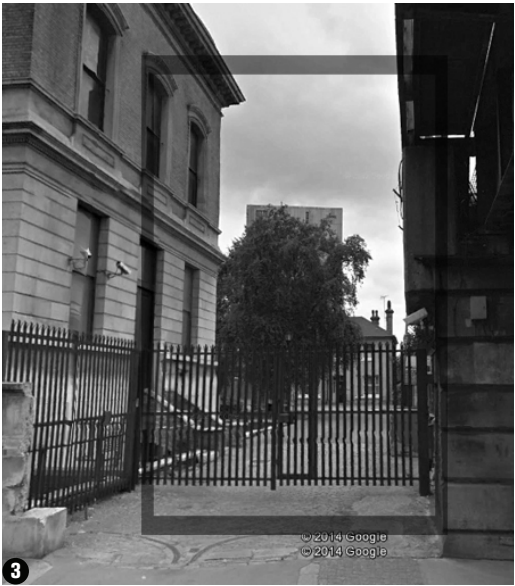
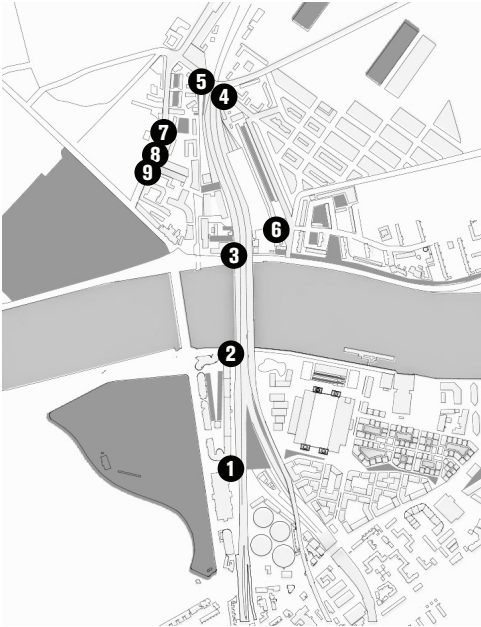
The Battersea building redevelopment :An Industrial Heritage Museum and public library with business incubators and workshop spaces are located inside the A and B stations. The boiler room has a more changeable character. It will be occupied with sports facilities, and change to a venue hall in certain periods of the year, depending on the season. In addition to this, next to the harbour area a higher education institution will be located.



- 1 Master plan proposal by me and my design team for 2nd semester UD
- 2 Master plan programming

MAPPING

Access points to the site:
These entries into the site have had a strong influence in the design shape of the main pedestrian platform, as they represent the gates into the new neighbourhood of Battersea.

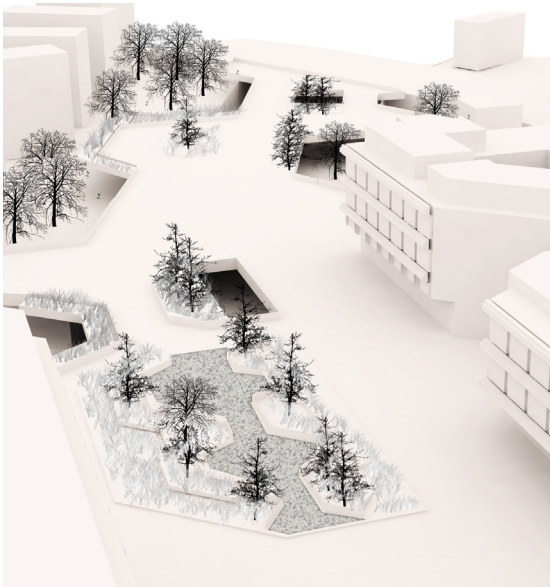
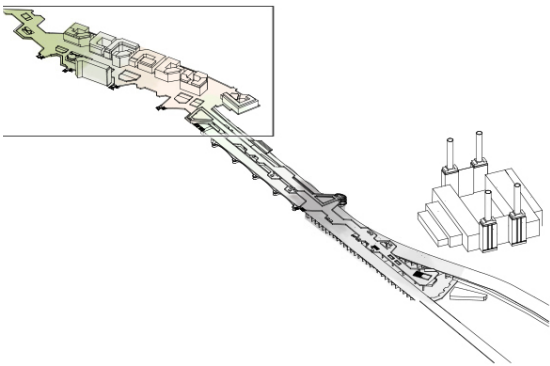


REFERENCES AND MATERIALITY

VICTORIA NEIGHBOURHOOD

The main entrance to the pedestrian platform is through the North side of the site, from the Victoria train station side. I have taken into consideration the existing character of this part of the site, the existing communities, the public spaces and their green courtyards, which create a beautiful contrast to the dark brick mansion homes of Pimlico and Chelsea. Thus the facade treatment for the proposed buildings which incorporate offices, retail spaces and residential spaces in the Victoria Neighbourhood will bring light brick tones with the dark brick main facades towards the pedestrian way. The dark brick facades will also have a metallic grid of vertical and horizontal lines, that define the glass units, as inspired by the Renzo Piano project in London, the St Giles Development.

The garden areas in this part of the platform have a gravel covered area surrounded by trees with light flowers such as the Indian bean tree and planted flowers and lavender around sitting areas. There will be tall trees on the ground next to the rails and platform (mainly the Common lime *Tilia x europaea* species, which is very much used in the London public parks). The sitting areas will be on the edges of the pedestrian platform, next to the raised flower planted areas and in the central area of the platform. The main materials used will be metal sheets covered with wood planks on the seating area. The main platform pavement treatment will consist of rectangular plates with a concrete finish, that will give the shine aspect when it rains, such a familiar detail for London.



- 1 Gardens and the community.
- 2 Harbour design by Martha Schwartz.
- 3 Forum Granada landscape architecture by Federico Wulff Barreiro.
- 4 Metallic treatment of planted area. Martha Schwartz.
- 5 Wet cladding pavement.
- 6 Central St. Giles Court Mixed-use Development by Renzo Piano. Facade treatment.

BATTERSEA VIEW and BATTERSEA VIADUCTS NEIGHBOURHOODS

The riverfront will be contured by the Battersea View area, the pedestrian bridge over the rail-way.

The overall approach to the ma-teriality of the site was to use the already existing materials found in the site, such as metal, glass, brick.

I have made the decision to cover a portion of the pedestri-an platform with wood decking and wood steps that act as a soft warm stage to contemplate the landscape of the Battersea and Thames River, in contrast to the heavy metallic structure of the rails.

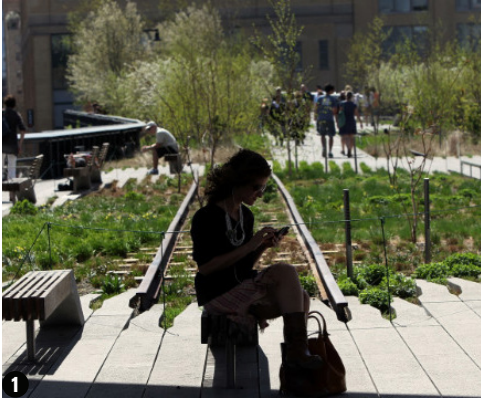
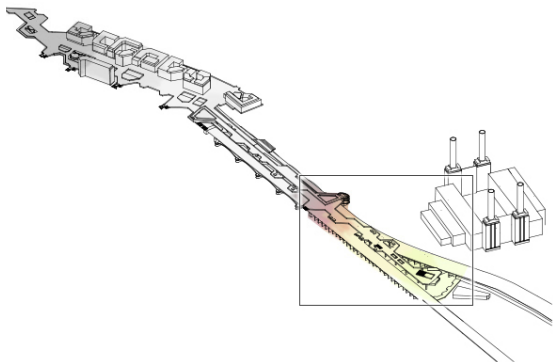
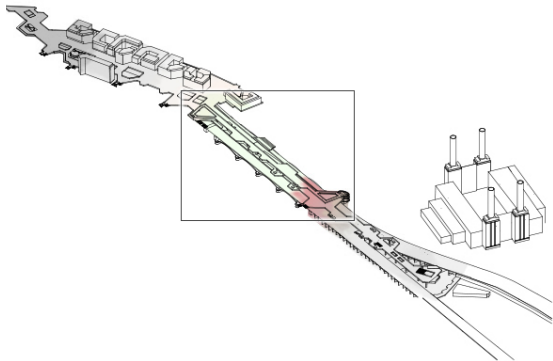
The paving of the entire pedes-trian bridge will consist of rect-angulas concrete tiles, which create a perpendicular direction to the bridge.

The Viaducts on the South side if the site, under the Grosvenor rails, have been closed down since the power station stopped functioning. Their reconversion will open up the brick arches, and create a new pedestrian flow that connects Battersea Park to the East side of the rails.

Various retail spaces will occupy the viaducts, such as private art galleries, caffee, small restau-rants, gym, urban dance school, shops.

All these different programmes will be connected to the mobility machine by a system of stairs, elevators and escalators that will connect the pedestrian platform , at +12.00 m high down to the metro level.

The use of new materials in the site will be minimum. Thus in the brick and metalic structure of the railway will be inserted only the glass facades of the retail spaces.



- 1 The Highline project. Light and shadows.
- 2 View from the Chelsea Bridge to Grosvenor Bridge.
- 3 Paving. Wood and concrete in Barcelona.
- 4 Urban furniture treatment. Wood and concrete paving in Barcelona.
- 5 The Highline project. Urban furni-ture and materials.
- 6 The Viaducts Project in Zurich by EM2N.