

RETAINING INDUSTRIAL HERITAGE PUBLICNESS

The interrelationship of industrial heritage and public space

Abstract

This research aims to explore how to use interrelationship of industrial heritage and public space for making a city with public industrial heritage. In the UK and especially in London, the industrial heritage is gradually becoming a private profitable property rather than being used as historical knowledge for the public. To retain the publicness of industrial heritage, this research uses public spaces as a platform for industrial heritage presentations, examines how the industrial heritage shapes and influences the public space, and in what way the public space reflects and responds to the public value of industrial heritage in the transformation process. The research finds that the interrelationship of industrial heritage and public space can be enhanced and created by intervening on the public space visually, socially and physically. Therefore, three specific strategies of different aspects are proposed to enhance the interrelationship and further to present the publicness of industrial heritage.

Key words: industrial heritage; publicness; public value; public space

0.Introduction

With the pressure of housing and profit rises in the last twenty years and the booming of post-industrial transformation, the abandoned industrial heritage is re-used for stylised high-end housing for urban development. In the UK and especially in London, the industrial heritage is gradually becoming a private profitable property which is purchased by investors and developers because of the location, distinct physical fabric and the high price of land, further transformed into high-level residential and commercial buildings for specific groups. However, as the private value of industrial heritage is continuously magnified, its public values are overlooked. When transformed into residences, the industrial heritage is privately owned and increasingly emphasising its use-value for specific groups, rather than being used as historical knowledge for the public. This makes the industrial heritage lack publicness, private values are over-presented, and public values are under-presented.

This research argues that the industrial heritage needs to retain the publicness in the city rather than utilised as private property. To present public values, the interrelationship of industrial heritage and public space are studied to explore the way of presentation. Thus, two research questions are investigated: how the industrial heritage shapes and influences the public space, and in what way the public space reflects and responds to the public value of industrial heritage in the transformation process (Figure 1).

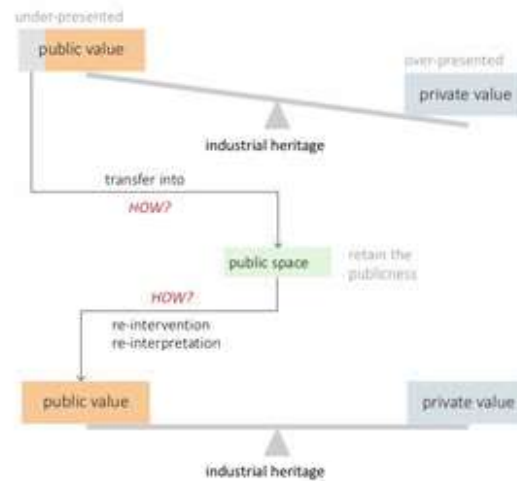


Figure 1. Diagram of research questions

1. Industrial heritage and its public values

1.1 Definition of industrial heritage

In the London context, industrial heritage is usually used as an effective and significant resource for economic growth. With the rapidly increasing of land price, there is a tendency that the industrial heritage is purchased and invested by private developers, the transformation focuses on high-end residences and offices to get maximum profits.

However, the transformation ignores the socio-cultural value of industrial heritage, resulting in the values that should be expressed for the public are under-presented, only reach to specific groups, the true socio-cultural value of industrial heritage may be concealed or even forgotten. For the public, especially the minority with the experience and memory of industrial heritage and the next generation, the value of heritage cannot be felt and loses its inheritance from the past to the future.

From these perspectives, the transformation of industrial heritage indeed should consider the part of definition related to “social activities”, for highlighting its public values and social life and memory related to industrial eras.

1.2 The publicness of industrial heritage

This research argues that the publicness of industrial heritage should be retained and presented for the public. Thus, four elements are selected to figure out what are the “publicness” of industrial heritage and the meanings in the contemporary context.

1.2.1 Physical fabric

The "physical fabric" in this research refers to the "formal appearance" of industrial heritage and its morphological reflection in the urban landscape. ICOMOS (1987) and Historic England (2008) state that the scale and massing, style and form, materials, colours and decoration constitute the appearance of industrial heritage, are "the product of formal design" and the "succession of responses within a particular cultural framework" (Historic England 2008, p. 31). In the larger scale, the physical fabric of industrial heritage treats as an "organic form" (Historic England 2008, p. 31).

It believes that in the "physical fabric", the industrial heritage shapes the traditional aesthetic value. The architectural design visually reflects the specific architectural and technical significance of the industrial era, the interpretation and preservation of the design over time are overlapped, formed the current industrial heritage landscape, which is the self-development process of industrial heritage. But when it is placed on a city perspective, it is also necessary to consider how to combine with other urban spaces to build a harmonious urban landscape. Specific industrial heritage is mapped as a landmark and its meaning is reflected through reinterpretation. This is one of the ways in which industrial heritage can keep up with the times after losing its original function.

1.2.2 History

Lowenthal (1998) made the distinction between "heritage" and "history", he argues that "history explores and explains pasts grown ever more opaque over time; heritage clarifies pasts so as to infuse them with present purposes" (p. xv). The history itself is what happened in the past, it is the study of the past, did not need to engage with specific groups of people; while heritage is "the celebration of the past" (Lowenthal 1998, p. x).

The theory holds that the history of heritage can be selected and changed according to current purposes. However, heritage is a manifestation of the historical process, as regards the phenomena of heritage development, some of history is interpreted and presented by the authorities, valued and manipulated to benefit them. Therefore, the authorities control history in heritage, the selected parts are in a profitable way to serve some groups. Authorities ignore the history of heritage as it relates to the public because this part of history and its owners cannot contribute to the current development. This makes the historical display of industrial heritage neglect its original value to the public, makes the public gradually forget the original history and heritage. Heritage can cater to the development of the times, inject new functions and serve new groups, but are no longer the public, the heritages is gradually losing the publicness.

1.2.3 Personal memory, collective memory

Memory is related to past experiences. Locke (1971) argues that personal memory is the memory of "particular items [that] personally experienced", which is physical experience and life, while Benton and Cecil (2010) further treat it as unique "personal mental act", which is the individuals selective interpretations, related to the people themselves. The minds "encode" the experience as a memory, while the interpretation or intervention in the present is the process of decoding. In common circumstance, it decodes visually through images, objects and sculptures, shows the culturally specific or personal experiences.

Different from personal memory, collective memory refers to groups and their experience as “lived experiences” or “moments from the past”. It is always social and only exists when shared with others. The special nature of group experience creates shared memories and identities; it creates a powerful bond with each other. In the present, the public use collective memory to get identity and sense of themselves, it can occur more powerful resonance than personal memory. The “communal value” of heritage reflects the importance of collective memory. The collective memory of industrial heritage is influenced by the specific physical and social environment of the industrial era, it is reflected in the contemporary resonance of certain people for certain experiences in the past. The resonance is very important for the specific groups, it represents the imprint of experiences and memories. In the social context, these memories further form the every-day urban life and cannot be ignored by the public.

1.3 The presentation of industrial heritage

In the transformation of industrial heritage, how to explain and apply these concepts to the project is very important. In terms of publicness, industrial heritage needs to find a way to show these values to the public to retain the publicness within the privatisation development. This research uses public space as a display platform for industrial heritage, examines the presentation of the values by analysing the relationship between these two aspects.

2. Public space: definitions, dimensions and elements

2.1 The definitions of public space

In the definition of “public space”, “public” refers to the people in general, it points out the nature of “public space”, which can be accessible to or shared by all members of the public; it also provides a place for the use of human contact and interactions related to social. However, the dictionary definitions are not sufficient to systematically describe the public qualities of urban place, in this regard, this section focuses on the publicness in public space.

2.2 Dimensions of publicness

Existing literature agree with the core dimension of publicness and have a high degree of commonality, Varna and Tiesdell (2010) further concludes them into five mega dimensions – “ownership”, “control”, “civility”, “physical configuration” and “animation”. The terms “ownership”, “control” and “civility” refer to whether the space owned and used for the public and how to balance the management of public space for different groups. The “physical configuration” and “animation” are two design-oriented dimensions, the distinction is whether considering the site as a whole to discuss the relationship between other areas (“physical configuration”) or the potential uses and activities inside the site (“animation”).

In the process of industrial heritage, it can be predicted that when the industrial heritage and its public space is privately owned and managed, it is becoming more and more important to discuss the publicness in terms of “physical configuration” and “animation”. Therefore, this research focuses on four elements from these two aspects to explore the specific meanings of publicness in the industrial heritage transformation.

2.3 Elements

2.3.1 Morphology

Physical configuration refers to the connection system environment and settings provided by the public space, highlight the “accessibility” and “visual permeability”. The “accessibility” contains the layout and configuration of public space shapes and forms, which can be shown by the morphological changes in the public space. The morphological structure of the public space network defines "streets" and "spaces" through the arrangement of buildings, which can reflect the local development patterns and processes of change. It also constitutes the basic movement patterns of different scales for different groups of people, further determines how easy people can enter and well-used the public space and the publicness of public space”.

Based on these interpretations, the research defines the morphology of public space in industrial heritage project by two scales, the regional scale and the project itself. In the regional context, industrial heritage is defined for establishing as an important node in the public space system. Its morphology caters to a larger scale public space system, highlight accessibility of different social groups and important social and political position. In contrast, inside the project, the morphology of public space related more to the new building forms and concentrations. The form of public space caters to the new functions of industrial heritage and specific consumers, highlighting the accessibility of specific groups, regardless of the vulnerable groups in the city, contrary to the definition of “public”.

2.3.2 Visual perception

Another concept of physical configuration is “visual perception”. This research argues that visual perception could be used as a tool for visual permeability experiencing and measuring the visual connection to the built environment. The patterns and rhythms of building and its relationship to space help to understand the characteristics of visual perception. The English Heritage (2012) clarifies the important role of views in shaping knowledge and understanding of heritage. For industrial heritage, the view is the historical industrial composite; it represents the specific eras and experiences. The direct visualisation of industrial heritage displays through the official viewing point, which provides the potential restrictions for the proposed developments in surrounding areas to protect the heritage assets and values visually. The document sets up an evaluation viewpoint for heritage but ignores that some groups have no emotion when observed at this point, namely, this has no value for them. Therefore, how to make visual assessment of heritage through public space to meet the needs of specific groups has become a problem that needs to be studied.

Cullen (1971) and Bosselmann (1998) deepen state that scale, massing and building materials interact as relatively static elements with public spaces, this is more largely dependent on the continuous movements, visual and social experiences that occur in the public. From this, the viewpoints cannot be fixed but need to design a series of continuous observation areas in public space to examine the building and pay attention to the feelings in the experience.

Thus, “visual perception” can be explained in two ways: the direct visualisation of the buildings and the visual interaction in the changing environment of movement. Additionally, when observing industrial heritage, perspective recognition should also include the lived experiences that industrial heritage attempts to convey to the public. These experiences are different according to the observers, the history and memory conveyed by the industrial heritage overlap with the social life

in public space, shaped a new visual perception. This perception should not and cannot be assessed by viewing points; they are formed by real social life and exist in the memories and experiences.

2.3.3 Diverse users, activities and events

The animation of the public space refers to supporting a wide range of potential uses and activities, it can be understood in terms of the interpret and use for different social groups, activities and events that the public space can provide to meet the needs of people.

In present, however, some industrial heritage does not show that it should be public. These industrial estates transfer ownership to privately stronger management or business departments for greater benefits, the more powerful departments use industrial heritage for private purposes and serve to the high-end group, the more profiting from it. Each department has the right to use public space according to the benefits it can provide, while some powerless sectors will lose their right to use. From these perspectives, it is important to intervene and negotiate with powerful sectors to make them aware of the needs of public groups for providing more public purposes of industrial heritage.

When it can be used for public purposes, the activities and events could be further considered as a way of engaging with public sectors and presenting the industrial heritage. The activities are particularly relevant to the history of industrial heritage and the memories and experiences of specific groups, through which the public can be made the socio-cultural significance of industrial heritage for the present era, and can present the values of industrial heritage into social interaction in public spaces, thereby keeps it meaningful to every-day urban life.

3. Interrelationship of industrial heritage and public space

Based on these concepts of industrial heritage and public space, this section summarises and proposes theoretical frameworks to explore their interrelationships in the presentation of publicness (Figure 2, 3).

3.1 Interrelationship of elements

From the conceptual discussion in the literature review, the relationship can be summarised as a framework that abstractly shows the relationship of each category. For example, the theory proposes the importance of public life for “visual perception”, for industrial heritage, it is the experiences of history and memory, thus the connection between “visual perception” and “history” and “memory” can be linked. The establishment of this connection is two-direction, and it can be created from two aspects.

Moreover, different elements in the same category can also interact. In the process of transformation, the interpretation of the "history" may affect the "memory" and experience that it conveys to the public, so the presentation of "physical fabric" may be indirectly affected by these factors. This effect varies according to time and space, and external interventions and explanations are considered in the long-term process.

3.2 Add the temporal dimension

Furthermore, the understanding of heritage is not stable and unchanged, the way of use changes through time and space as well. The concepts of temporality in industrial heritage transformation are vital to understanding the changeable process. In this sense, heritage can be interpreted, presented and conserved within any age. In the circumstance, the "process" shows the interpretation in temporal dimension rather than fixed and static intervention. Figure 3 explores the interrelation from the past to present, proposes a reasonable assumption for the future. The appearance of this influence in the process of urban development is subject to time constraints, such as the current intervention in industrial heritage may affect the public space in the future with development and configuration.

Based on this, the empirical analysis will focus on the literature review and Figure 2 to evaluate the relationship between industrial heritage and public space. Figure 3 is used to analyse the specific performance of the interrelationship in the development at different time periods. When there is a contradiction between the practical development process and the theoretical, it will open up the design intervention.

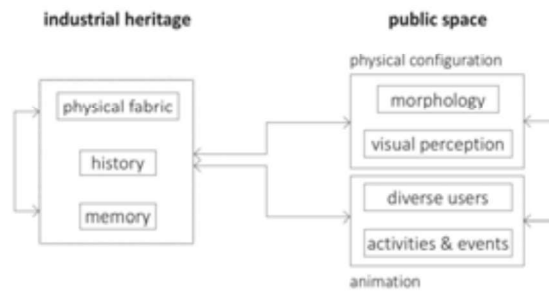


Figure 2. The interrelationship of industrial heritage and public space

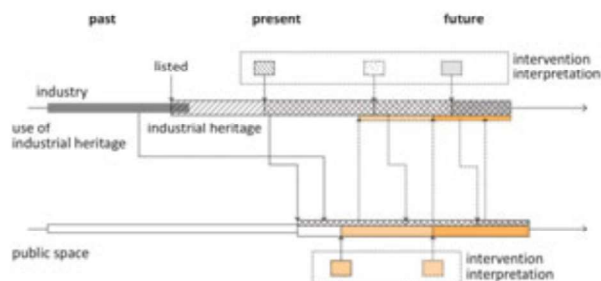


Figure 3. The interrelationship in a temporal dimension

4. Empirical analysis – site intervention and case study

The empirical analysis is divided into four parts. The main audiences of the research will be first addressed. Then the overview of the site (Battersea Power Station) and the case study (Tate Modern) will be introduced to compare the change and use of industrial heritage. Based on the theoretical framework, analysing and comparing the selected elements of public space related to the industrial heritage in two projects. Finally, to conclude the findings from the analysis, two concrete empirical frameworks will be formed and analysed based on the theoretical outcomes, evaluate the condition and degrees of the interrelationship between each element for the design process.

This research focuses on two groups of people – the minority and children – as the representation of the past and the future related to the public industrial heritage. Targeting the high-end property transformation project, the research will further explore how to present the values for these groups to retain the publicness of industrial heritage in the contemporary transformation (Figure 4).

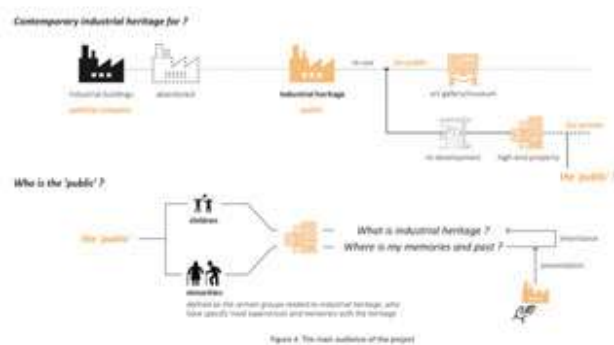


Figure 4. The main audience of the project

4.1 Overview and relation

Different types of industrial heritage transformation affect the degree of public value presentation. In order to amplify the difference and explore the relationship between transformation project and public space, this research selects Battersea Power Station as the site intervention and the Tate Modern as a case study for analysis and comparison.

These two projects are both in the development Opportunity Area in the central of London, which have the same status in the urban narrative. In terms of difference, the chosen projects show two extremes: a private profitable project and a public welfare project. Therefore, the difference is used as the context and purpose of the analysis to explore the presentation of the industrial heritage public values in the public space (Figure 5).

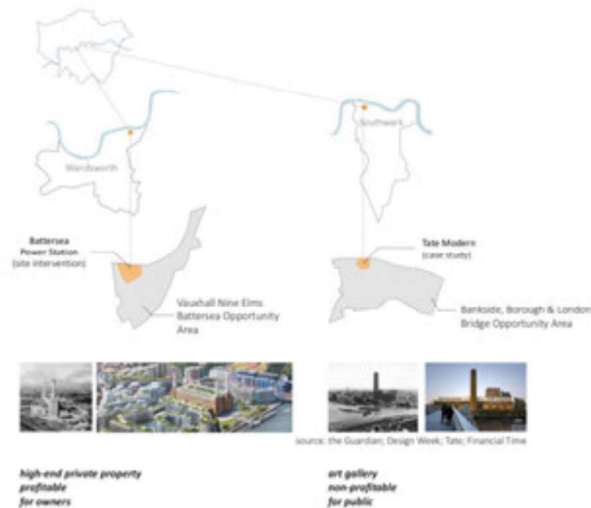


Figure 5. The basic information of site intervention and case study

The Battersea Power Station (BPS) is a regeneration unfinished project located in the centre of London. As a listed British industrial heritage and iconic building in London, BPS is purchased by three overseas investment companies and transforming into the high-end residential and commercial private property from 2011 to 2022. Its private ownership shows that the values of industrial heritage can only be used for a specific type of groups. Differently, as a former power station transformed into a new functional building in 2000, the Tate Modern (TM) is a well-known gallery and the most-visited tourist attraction in London, focusing more on the public sector. With the extension project finished in 2016, TM provides more opportunities and places engaging with the public groups as well as balancing the functions for different users (Figure 6).

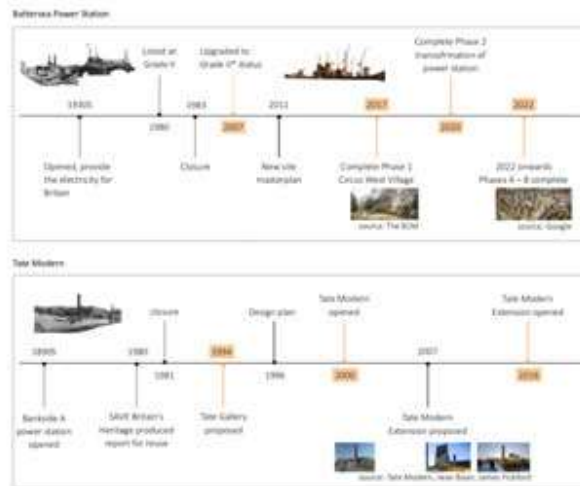


Figure 6. The process of development in Battersea Power Station and Tate Modern.

Key time points are selected in different development projects as a context for each project to further detailed analysing the relationship between elements in public space and the intervention of industrial heritage.

4.2 Focused analysis

4.2.1 Morphology

With the development of the VNEB Opportunity Area and the vital position of BPS in the development, the morphology of public space around BPS changed significantly. The brownfields form a systematic public space network, including the linear park and the riverfront trail, cater to the surrounding open spaces. However, the open spaces in BPS are separate from the linear park, shown as the morphology of public space determined by the forms of new buildings (Figure 7).

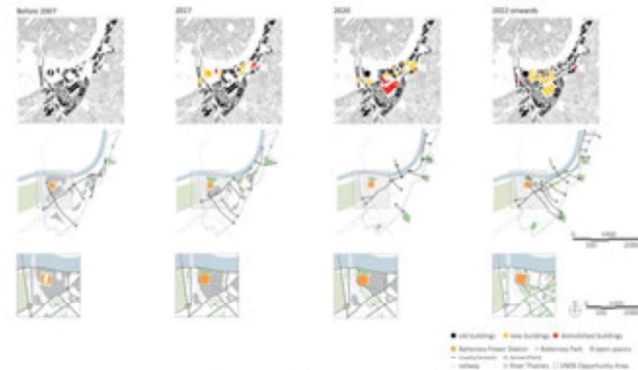


Figure 7. Building changes and morphological changes of public space in BPS

In contrast, the public spaces in the BBLB Opportunity Area are dispersed. With the development of new projects including the extension, the number of public spaces in TM surrounding areas has increased while no obvious morphological changes (Figure 8).



Figure 8. Building changes and morphological changes of public space in TM

4.2.2 Visual perception

In terms of view perception, the document Seeing the History in the View provide guidance of heritage view assessment.

It can be seen through the official Viewing Point that the BPS in 2022 will change the skyline of the River Thames. Lower than the four chimneys, the new development buildings will form the backdrop of its urban environment and serve as a foil for the industrial heritage, visually enhance the unique architectural skyline. Meanwhile, the industrial heritage is the new architectural background, is consumed by the new building with its uniqueness and legibility.

Conversely, from the temporal dimension, the view perception of BPS itself is gradually decreasing. With the development of the site, the changing skyline only highlights its chimneys, the heritage building is hidden in the new buildings, the contrast between old and new buildings can only be distinguished through the materials of the buildings (Figure 9). However, the official viewing point is often the optimum locations for heritage observations but is rarely visited by minorities, it cannot be used to obtain visual memory from this location.



Figure 9. Skyline changes from official viewing point in BPS

Therefore, two political viewing points are also selected in public spaces for minorities, which are in Battersea Park and Chelsea Bridge. It can be clearly seen that the visual perception of the heritage buildings in these two public spaces has reduced obviously. The half or even all the main heritage building are obscured by the new buildings, only use four chimneys as symbols for highlighting the industrial heritage (Figure 10).

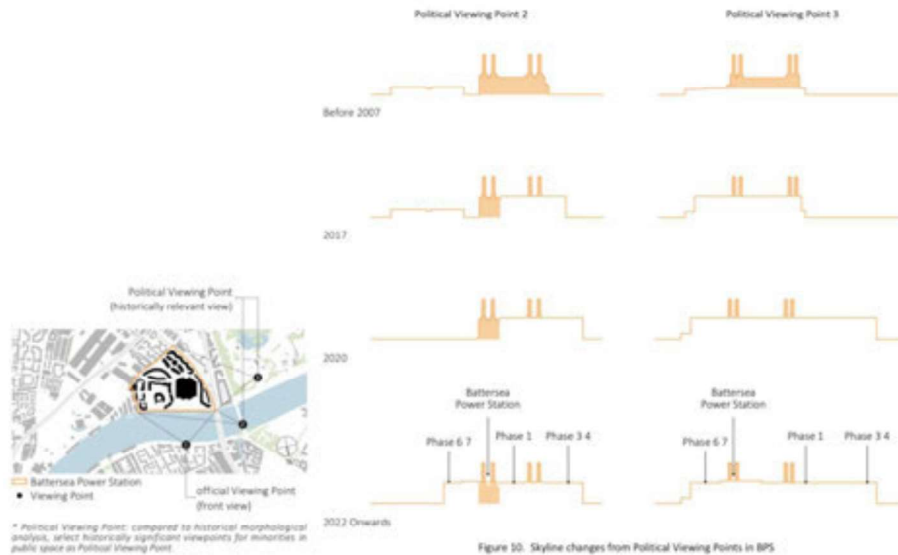


Figure 50. Skyline changes from Political Viewing Points in BPS

The skyline changes in TM are mainly reflected in the extension project and Neo Bankside development after 2016. The new building enhances the public's visual perception both from official Viewing Point and the Political, it contrasted with the main building in volume and height, stands out from the background skyline. For the visual perception from the Political Viewing Point, the new building destroys the original visual perception but to a certain extent, it enhances the recognition of TM in the skyline change (Figure 11).

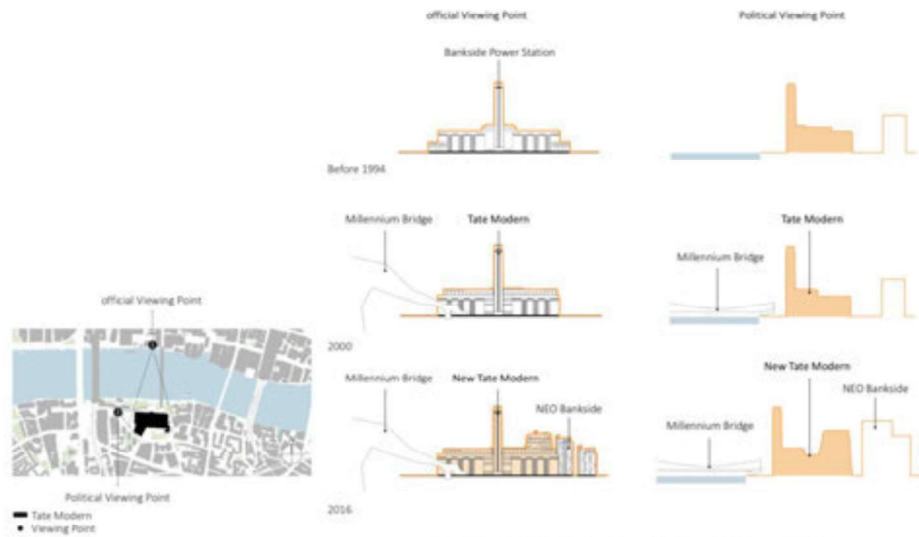


Figure 11. Skyline changes from official Viewing Point and Political Viewing Point in TMI

4.2.3 Diverse users

For BPS, the VNEB Opportunity Area development indirectly affects the type of transformation. As a landmark, BPS is positioned as high-end residential and office areas, which will be supported by policies and economically. Meanwhile, such transformation will attract investors and developers with private economic benefits, at this stage, the authority and developers have a common interest. The impact of public groups' economic value is very weak, which leading to these public groups that can use industrial heritage are ignored by the common interests (Figure 12).

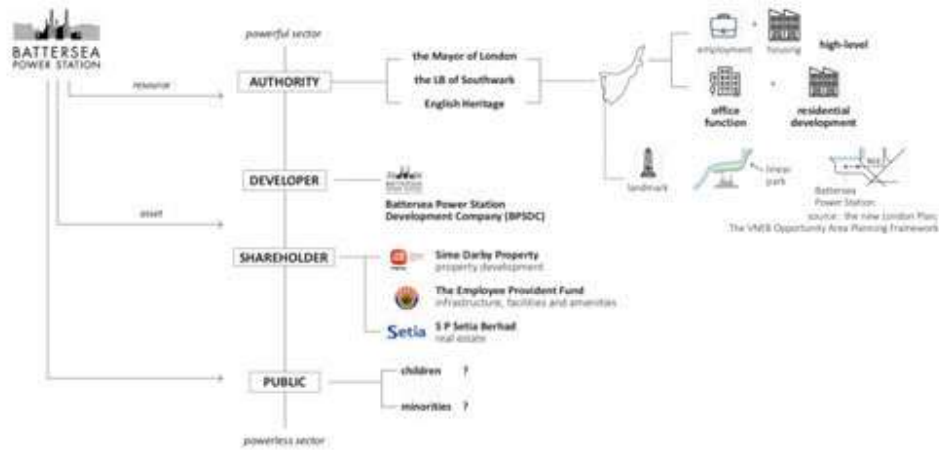


Figure 12. Diverse users in BPS.

In comparison, the positioning of TM in the Opportunity Area determines the degree of publicness. As a local attraction, TM is used for the public while serving the tourists. As an NGO, Tate has received policy and economic support developing culture and activities that have made children benefit from it. While for minorities, TM pays more attention to the use of new features rather than provide services for them (Figure 13).

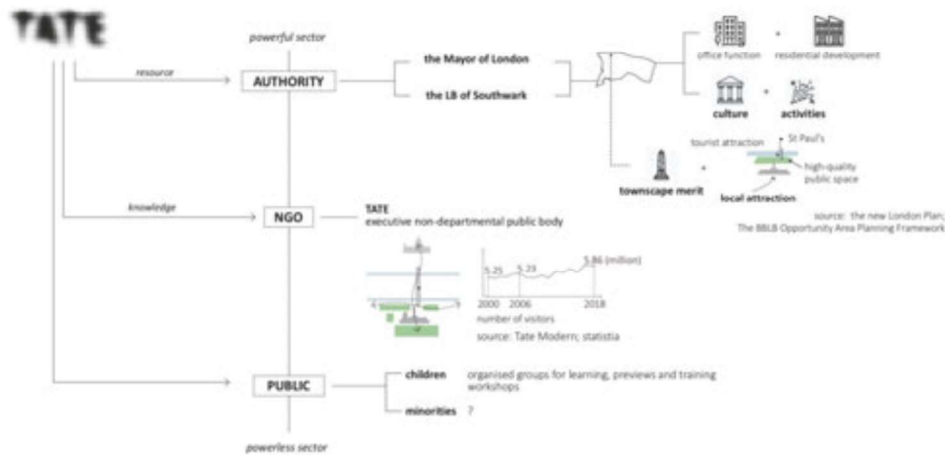


Figure 13. Diverse users in TM

4.2.4 Activities and events

Based on different users, this section further analysed the activities and events of children in the TM public space. Different activities in the north square attract more visitors that come from St Paul's through the Millennium Bridge without any visual obstruction. The riverside also links residential areas in west and east, which provides a linear space for exercising.

In contrast, the southern public space is much quieter. Although it provides places for the public do activities, it is hard to link with TM, the interrelationship between industrial heritage and public space is weak (Figure 14 15).

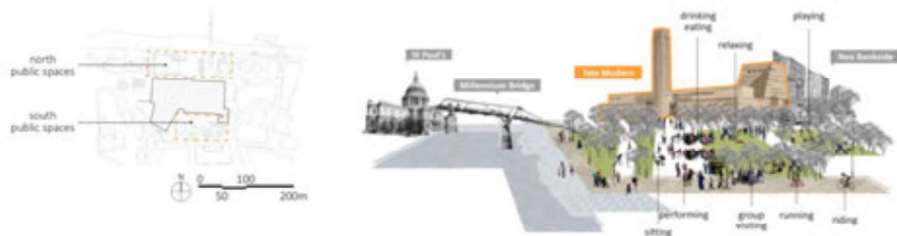


Figure 14. Activities and events of children in TM north public spaces



Figure 15. Activities and events of children in TM south public spaces

Specifically, in the north public space, the bench and chairs provide a place for children relaxing and playing at different times, trees are used as borders separated different spaces for different users. However, due to the visitors, it does not explicitly consider the space dedicated to children.

While in the south public space, the usage is distributed at noon and afternoons. Activities change according to time, basically are resting, chatting and picnics (Figure 16).



Figure 16. Activities and events of children in different times in TM

4.3 Findings of analysis

Through the analysis of industrial heritage and public space, two concrete interrelationship frameworks are summarised for BPS and TM.

As Figure 17 shown, the degree of interrelationship between BPS and its public space is concluded based on the theoretical analysis. However, by analysing the process of development, somehow reality shows conflicts and contradictions between each element.

4.3.1 Memory & history – activities & events – diverse users

The relation between “history” “memory” and “activities and events” should be strong enough to use different activities engaging the public and presenting BPS and industrial revolution and the memory form the public. Represented as an industrial icon in London, the history of BPS constitutes evidence of cultural, social and economic evolution, it documents and interprets public life that contained in urban changes. However, history is not presented in public space through the process of transformation, and the analysis of “diverse users” of BPS also shows the lack of “activities and events” in public life for children and minorities, which can be interpreted through the cut off the connection between these two (line 1 in Figure 17).

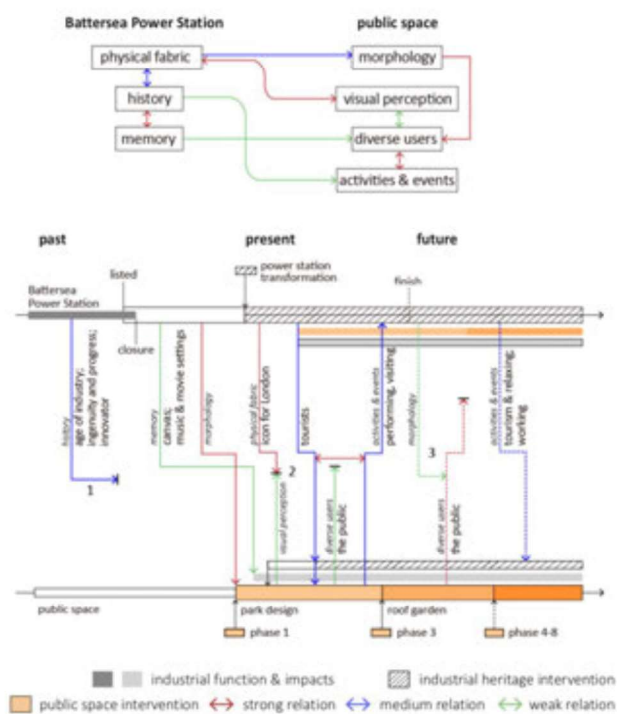


Figure 17. Interrelationship framework of BPS and public space

4.3.2 Physical fabric – visual perception

Similarly, the interrelation of “physical fabric” and “visual perception” is not interrelated with each other through different phases (line 2 in Figure 17). The transformation preserved four chimneys of BPS, which is an iconic symbol in London cityscape, the open space in front of the building indeed reduced obstructions for the visualisation of heritage. Though, in the green space and buildings that developed at different phases, with the regard to the analysis of “visual perception”, the visual line obstacles caused by the higher floors, make it impossible for the minorities to obtain visual interaction with the power station from the political viewpoints in public space.

4.3.3 Morphology – diverse users

Based on the morphological analysis and existing information, the “morphology” of the public space after BPS completed will further influence the public's use of BPS (line 3 in Figure 17). It can be seen from the masterplan that the new building will affect the morphological expression of the public space. It cuts off the spatial and visual connection between BPS and the surrounding

area, including the buildings obstacle BPS from the public space, and the public space inside the project does not cater to the public space network and the linear park in the Opportunity Area, makes it difficult for the children and minorities to visually enter and physically use BPS through continuous public space.

In contrast, the interrelationships in TM are more solid and specific. Based on the analysis of “diverse users” and “activities and events”, the relationship between industrial heritage and public space can be established through these two aspects. The simultaneous provision of external and internal public spaces increases the maximum use of industrial buildings in public spaces and increases the interaction of the public, especially the children. Meanwhile, the linkage can also be built in the same category (line 1 in Figure 18) by providing “activities and events” that focus on children.

However, for the minorities, the new features of TM did not present the history or memory of Bankside Power Station. The history and memory that TM displays are related to its new function and transformation status without discussing the relationship with minorities, cut off the linkage between TM and minorities in the public space (line 2 Figure 18).

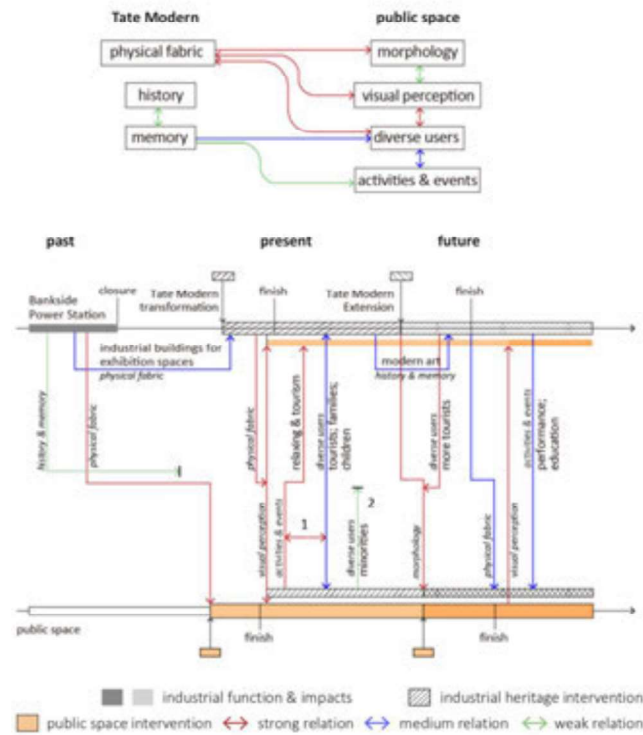


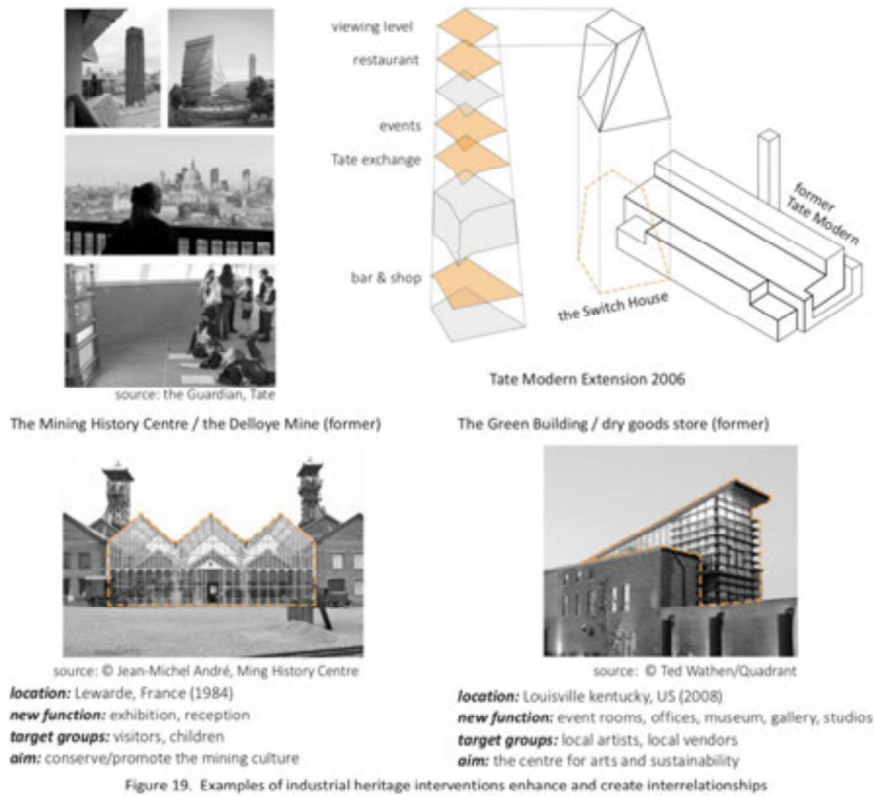
Figure 18. Interrelationship framework of TM and public space

5 Design process

5.1 Types of creating relationship

5.1.1 Industrial heritage interventions

The industrial heritage interventions provide physical spaces and indirectly affect the morphology of public space, which can link to the use of the public. The extension project in TM and the other two projects provide more opportunities and options for the children to get involved with the culture and history of industrial heritage indirectly. TM use new building provide more space for events and workshop, while Mining History Centre and the Green Building focus on culture and art, use the building preserve and promote the mining culture and local arts for the next generation (Figure 19).



However, it is important to consider the conditions of the surrounding areas. The height and volume of new buildings need to reduce the effects to residential buildings to protect the view corridors of residents.

5.1.2 Public space interventions

Different kinds of detail design make public space play different roles. The publicity display in contrast with the colour of the industrial heritage itself can attract people who are observed in the distance. Temporary exhibitions and events guarantee the public's, it also enables the heritage to integrate with the development, meet the art culture related to its own nature. Furniture is the most direct link between industrial heritage and pedestrians, which should have some practicality and not relevant to its own attributes. The benches and cafes, to a certain extent, can attract pedestrians who do not understand the heritage. It is also a chance to convey information to the public and introduce themselves to people.

These details design and activities in the public space are the most direct display and contact between the industrial heritage and the public. It needs to introduce the past and present to the public with the simplest design methods, which is closely related to its own history and culture. It should serve the public who have a special feeling for it and become the purest historical and cultural space within the entire industrial heritage. (Figure 20).

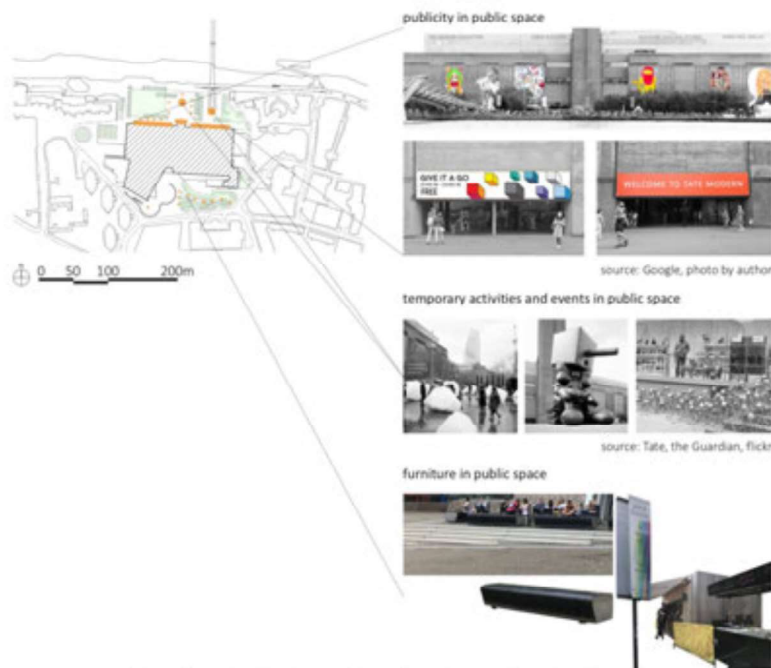


Figure 20. Examples of public space interventions enhance and create interrelationships

5.1.3 External condition influences

In addition, external conditions such as transportation and policies indirectly affect the interrelationships.

The Millennium Bridge and the Thames connect TM to other directions, the Thames cruise routes also link TM to the main tourist attractions on both sides of the river. The status of TM in the Central Activities Zone potentially affects the control of morphological public space and the services of heritage buildings to tourists.

The London View Management Framework emphasizes and protects the important historic buildings through viewings. However, the “assessment point” in this document ignores that some groups have no feelings for the heritage observed at this so-called point, they do not pass through

this point in their daily life, nor do they examine the heritage at this point, this is of no value to some groups. From this and based on the empirical analysis of "view perception", this research believes that the assessment point in the document is detrimental to the evaluation of industrial heritage to a certain extent, it is necessary to explore a new viewpoint that targets specific groups and could reflect public life related to industrial heritage (Figure 21).

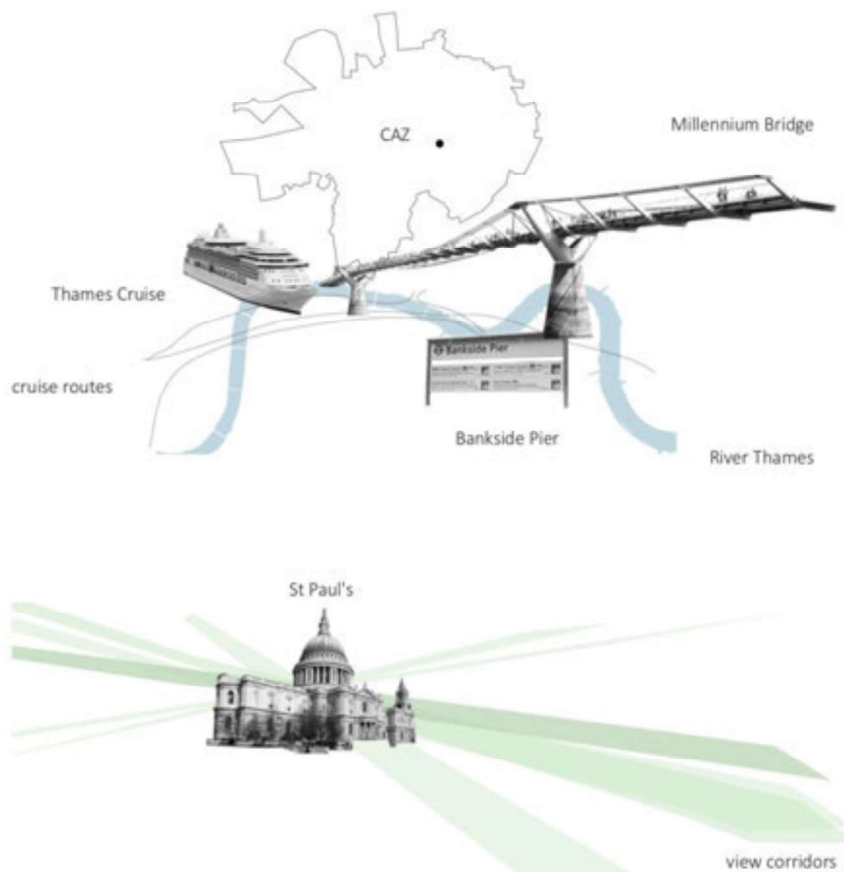


Figure 21. Examples of external condition influences enhance and create interrelationships

5.2 Design brief

Based on the conclusions of BPS analysis, the design begins with a summary of the three interventions in the TM and precedent. The industrial heritage intervention is characterised by

physical morphological changes, including buildings and open spaces, which can enhance the connection related to "morphology" and "physical fabric". Public space interventions enhance the use of public life and different groups by increasing activities and events, it can be summed up to the social dimension. The external condition influence comes from restrictions such as policies and regulations, mainly manifested by the influence of viewing. To conclude, based on the different type of interventions, three directions of strategy are proposed and explored how they enhance and create a relationship between BPS and public space (Figure 22).

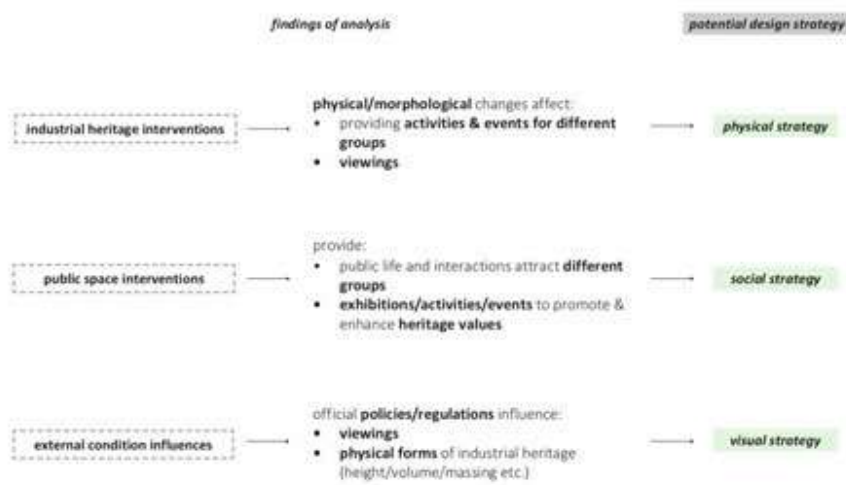


Figure 22. Diagram of design brief

5.3 Visual strategy – defining political viewing system

5.3.1 Process of finding political viewing system

Based on the empirical analysis of "visual perception" and the official document guided in viewing assessment, the strategy tries to apply the conceptual Political Viewing Point in the existing assessment methodology, as an assessment point for evaluating the viewing of industrial heritage for minorities.

For minorities, viewing is not only an intuitive observation but also a reflection of the meaningful public life in public space. Political viewing points are the combination of viewing and public life that it needs to discuss and propose (Figure 23).

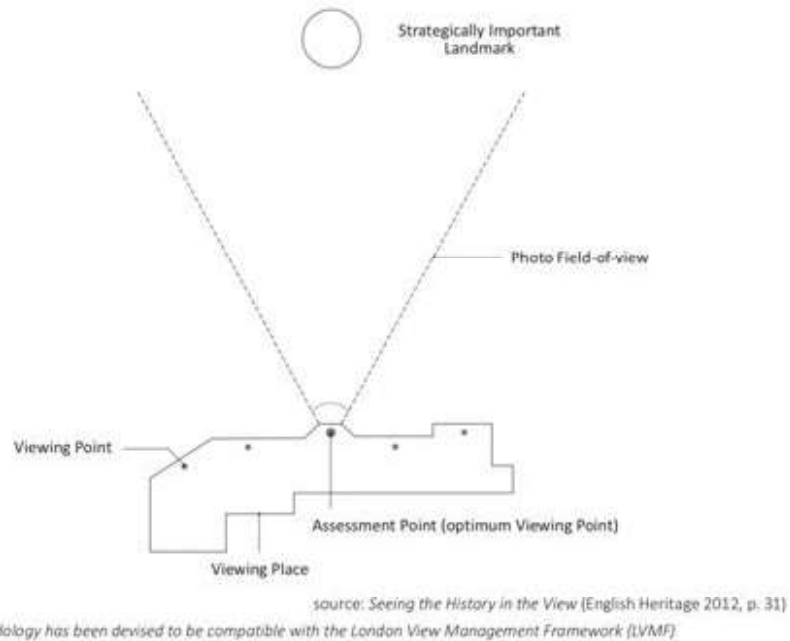


Figure 23. Viewing methodology defined in official document

According to official explanation and empirical analysis, this strategy revises the methodology specifically for an industrial heritage site and the minorities. Compared to the public space historical morphological analysis, the historically significant viewpoints are selected for minorities in public space as "Political Viewing Point". It contains the meaningful public life of minorities related to industrial heritage during viewing, this public space is defined as "Political Viewing Place" (Figure 24).

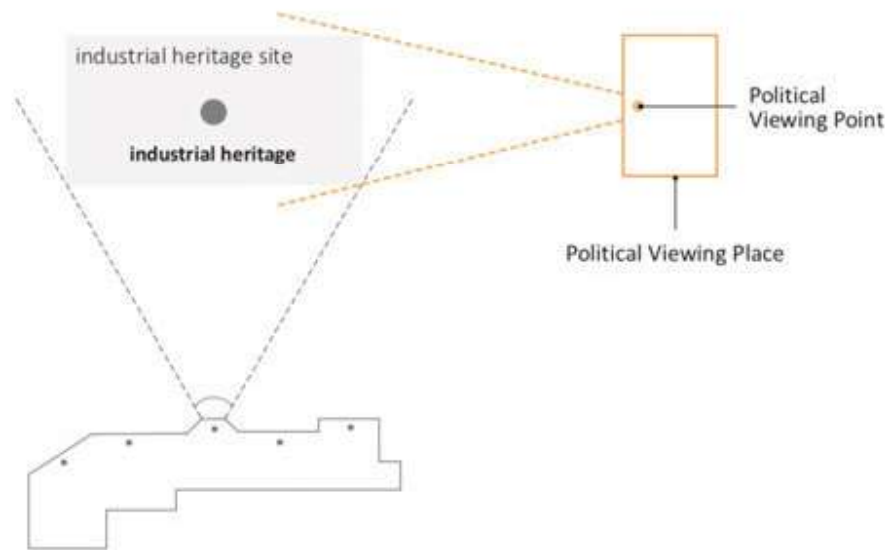


Figure 24. Viewing methodology defined in political viewing system

However, based on the previous page analysis, the political viewpoints cannot treat as the static points such as Assessment Point to express complete social life and vivid memories of minorities, their locations cannot be accurately expressed in the diagram. From this point, the strategy further discusses in another way (Figure 25).

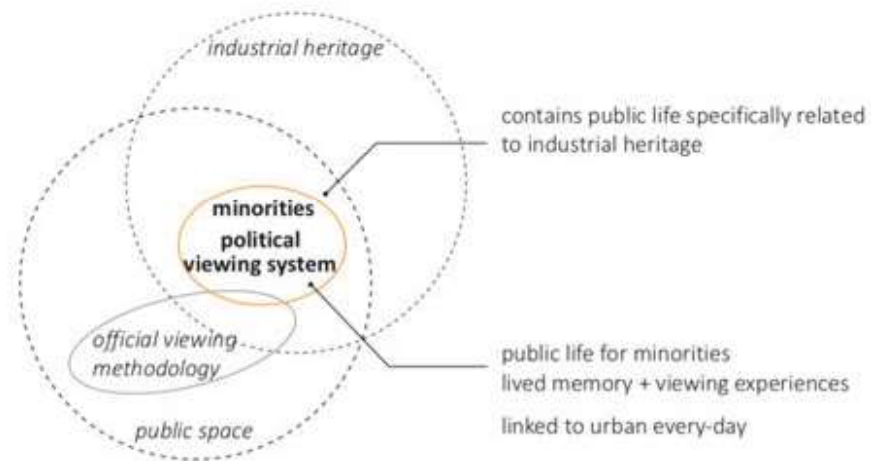


Figure 25. Relationship of official viewing methodology and political viewing system

Figure 26 presents the steps for selecting a political viewing system. Its goal is to establish a combination of visual and social experiences for minorities. The Political Viewing Routes replace the previous viewing point, which is represented as a series of points related to life and experience rather than fixed individual viewpoints. The routes at this stage require engaging with minorities to figure out their living experiences in every-day life to achieve accurate and targeted.

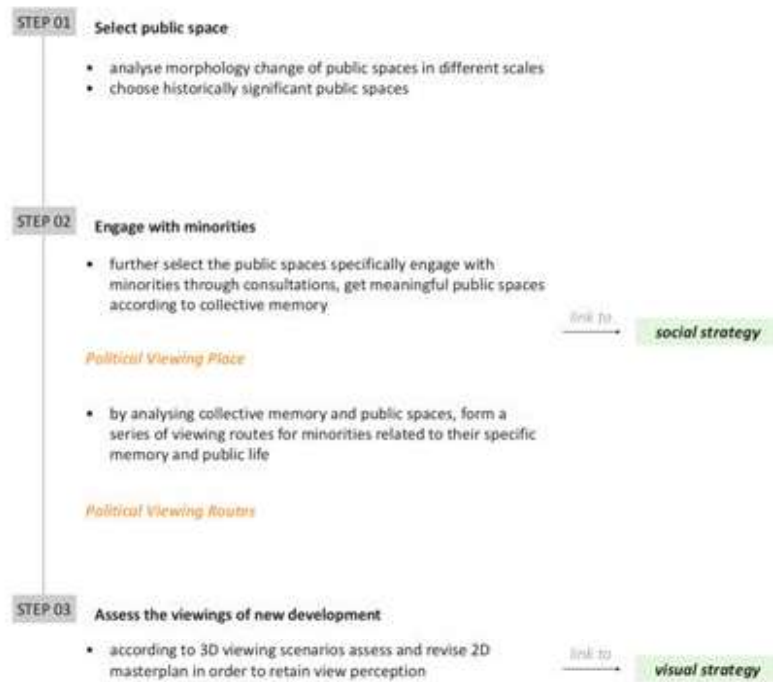
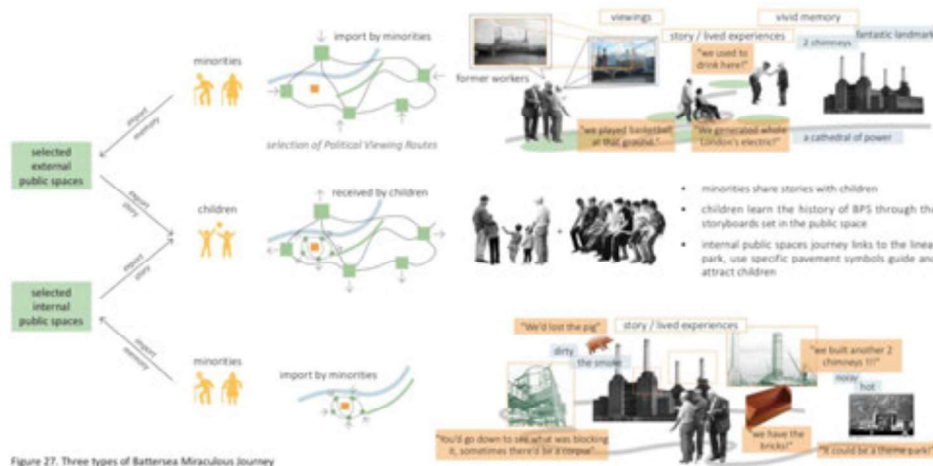


Figure 26. Flowchart of define political viewing system

Regarding with BPS, step 2 can be related to the social strategy that impact on public spaces for minorities, while step 3 is more focusing on the morphology of new development project.

5.4 Social strategy – Battersea Miraculous Journey

The social strategy proposes an event contains three specific events engage with minorities and children, to get the definition of political viewing system in BPS and enhancing the relationship related to activities and events (Figure 27).



The promotion contains three steps. Firstly, finds four potential sectors for supporting and organising the activity. The roles and reasons are as below:

Regarding developers, the event can be a promotional approach that shows how they realise the importance of participating in and promoting public sector activities in the context of private development, expanding their visibility and influence to get more projects and funding, thereby get maximised profits.

Secondly, divided into physical publicity and apps and websites, the event makes posters and booklets at the beginning for propaganda, and posts them on the websites, such as BPS Community Forum and development official website.

Figure 28 shows the timetable of the events for different groups. The experiences and stories that they share during walking tours can be used as data for defining political viewing system. The annual event takes place based on the schools and children, it engages with both minorities and children to share the stories and memories from one generation to another.

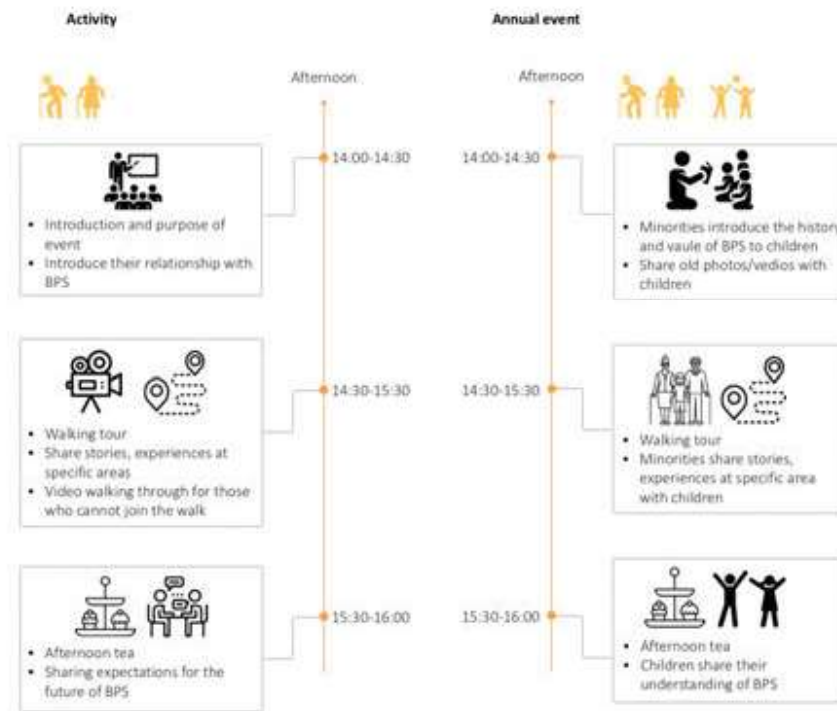


Figure 28. The timetable of Battersea Miraculous Journey Event

5.5 Physical/spatial strategy – testing masterplan

Based on the empirical analysis, the physical strategy proposes new masterplan for BPS, as a way of retaining the viewings in external public space, and the use of children with the public space, which links to the linear park and BPS in the Opportunity Area.

The strategy uses 3D viewing scenarios to assess and revise the 2D masterplan. In the context of the VNEB Opportunity Area Planning Framework, the linear park will provide activities and open space for entertainment and other public life for the children, it is vital that the open space link to BPS get evolve and attract more children (Figure 29. 30. 31).

The second scenario retains the same amount of massing as the existing plan, placing the commercial space underground, and vertically increasing the public life for minority groups and children through the morphological and topographical change of the square and green space. Similar to activities analysis in literature review (see p. 10) and in TM open space (p. 23), the public sector, which is children and minorities can play and rest in this space. At the same time, this space

can also be used as part of the walking tour space in social strategy. Through the display and promotion of billboards, minority groups can communicate with children, including one-way communication in publicity and two-way interaction in activities.

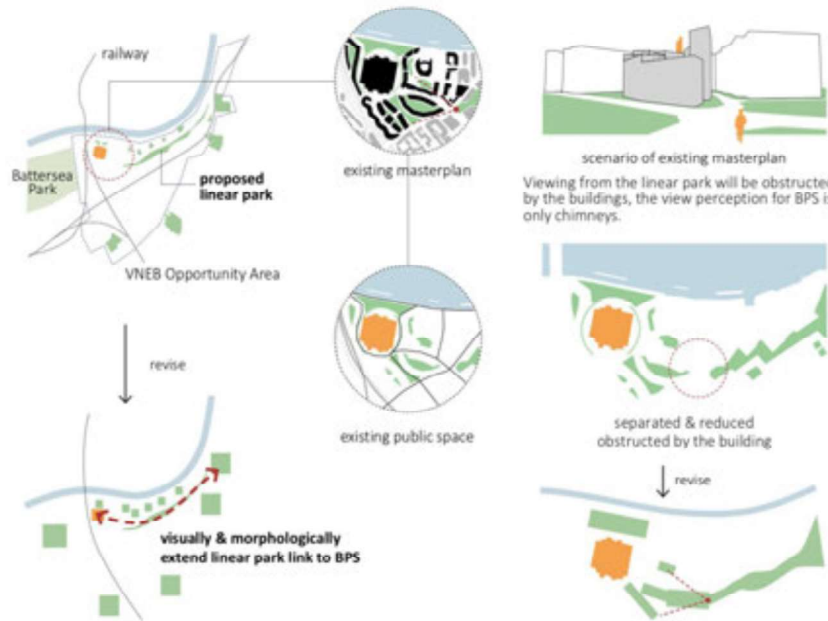


Figure 29. Initial concept of changing masterplan

Figure 30. Existing masterplan analysis for changing public space

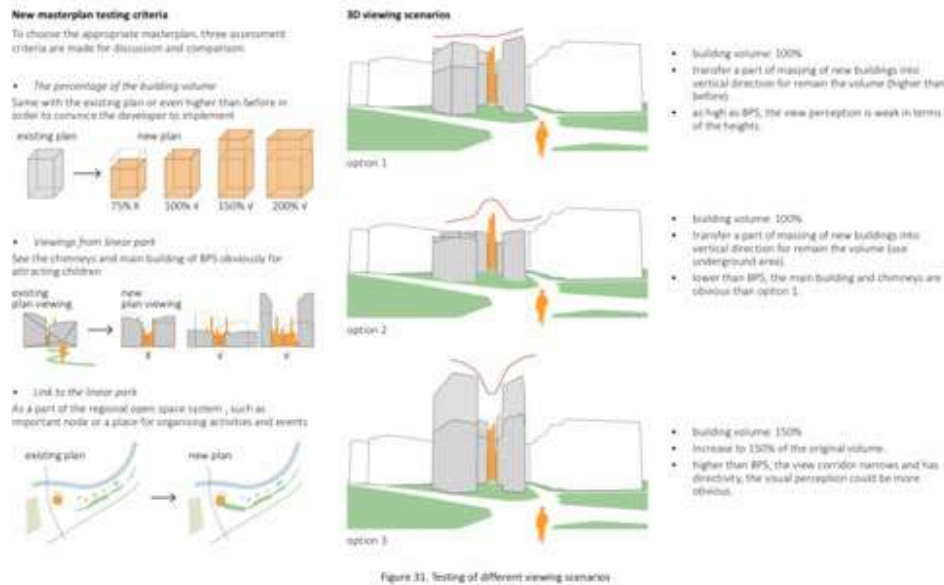


Figure 31. Testing of different viewing scenarios

The evaluation of each plan can be summarised as follows:

Strengths:

The underground commercial can increase continuity and space, it can also increase the types of businesses.

Vertical changes in the public space provide opportunities for interaction between different public groups and stimulate activities.

The sinking square can visually enhance the connection between BPS and public space.

Weakness:

The construction of underground space is inconvenient, and the cost is high.

Strengths:

The underground commercial area is bigger.

Similar to the roof garden, the public space provides the public with activities and green space, the hill can attract people visually to come from the linear park.

The hill can visually enhance the connection between BPS and public space, form a viewing axis.

The cost is lower than the first one.

Weakness:

Large events such as performances or exhibitions will be restricted due to the topography.

The third scenario continues to increase the height of the building, regard case studies as a reference, the increased space is used for residential area and the activities for minorities and children. Activity area includes exhibitions, art gallery and historical pavilions to present the culture of the Industrial Revolution and the history of BPS by photography and paintings.

The evaluation of this plan can be summarised as follows:

Strengths:

Expanding amount of residential areas and indoor activity areas.

Increased space can be used as the platform for industrial heritage presentation for the public.

The viewing level also increases the visual perception of BPS for minorities and children.

Weaknesses:

The plan needs to consider local regulations and policies which control the height of new buildings

In the process of using, it should further explore the tension between residents and minority groups and children.

6. Conclusion

This research focuses on the interrelationship of industrial heritage and public space in order to retain the publicness of industrial heritage specifically for minorities and children, namely, how the industrial heritage shapes and influences the public space, and in what way the public space reflects and responds to the public value of industrial heritage in the transformation process.

Regard to the research aim, the project reviews relevant literature to discuss and analyse the concept "physical fabric", "history" and "memory" of industrial heritage as public values, and further related these concepts to the "morphology", "visual perception" and "activities and events" of public space to study and explore how the concepts of industrial heritage shape and influence in public space, which is concluded into establishing the interrelationship framework of these two aspects. The conclusion can be used as a basis for further specifically evaluated by a case study in order to further understand in what ways that public space demonstration the interrelationships in the practical cases.

The project selects Tate Modern as a case study and Battersea Power Station as the site intervention. Based on the literature review and particularly focuses on the minorities and children in the public, the project focuses on the concrete analysis of elements in public space in the cases and combined with secondary data related to the development of industrial heritage transformation, thus formed the empirical interrelationship framework, including the specific relations and degrees of each element. By analysing the case and precedent studies, the results show that the interrelationship can be enhanced and created by intervening public space in three ways: the visual intervention related to politics and regulations, social intervention including activities and events, and the physical and morphological intervention. These findings answer the research questions to a certain degree.

Based on the findings of the literature review and case study analysis, the design proposal focuses on dealing with the interrelationship framework of BPS, in which shows conflicts and obstructs regard to the development process, and needs to enhance and create the interrelationship visually, socially and physically, the findings help as a reference to come up with three specific strategies for BPS. The visual strategy engages with minorities for a way to enhance and make awareness of the visual perception of industrial heritage on public space. The social strategy gives an opportunity for minorities to introduce history and memory, by interacting with children it also promotes the attractions of industrial heritage to the next generation. The physical strategy is related to regional development planning, the morphological changes of new buildings and public spaces in BPS can enhance and provide more opportunity for industrial heritage presentation for both minorities and children visually and socially.

This research provides a reference for the ways of industrial heritage presentation in private profitable transformation projects. In the context of London, the projects have the same urban narrative, but each project itself also different from BPS, including the local policies and regulations, economic status and development direction of transformation, and the unique socio-cultural values of industrial heritage. Further in the global context, there will be differences in the performance of the elements in this research in different political and development context, but in terms of methodology, the project and research could be the same. As a framework, this research provides a conceptual way to think and examine the relationship between industrial heritage and public space, which meanwhile opens up new research ideas for different projects to explore specific ways in the different context.

For a wider context, such as capitalist cities and developer-driven planning systems, industrial heritage development represents the interests and powers that are controlled by the powerful sector, limit the use and expression. This research and the design strategy redefine industrial heritage from a critical perspective as publicness, representing the equal rights of the public to use it visually, socially and physically. Industrial heritage in capitalist cities needs to highlight its public status, and it needs to explore the publicness expressions of different cultural, social and political contexts, including its targeting groups, the relationship with the urban spaces in different cities in order to maximise its values.

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