

## GROUP 2

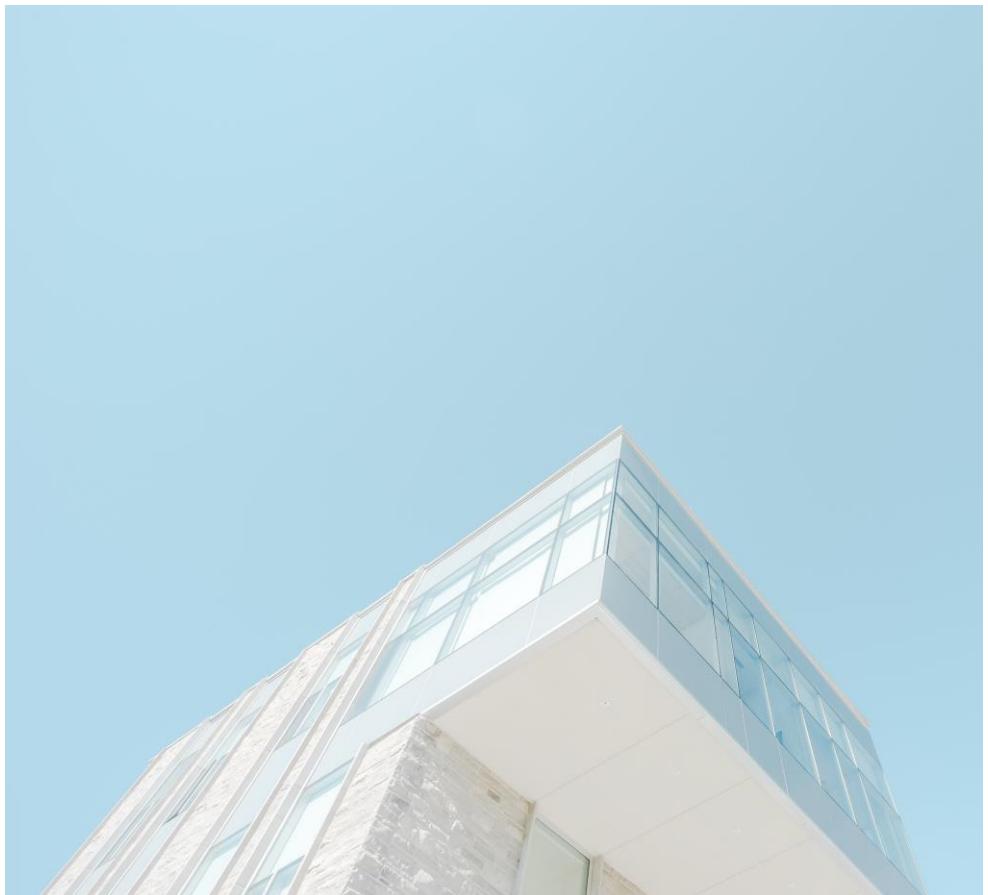
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# Urban Sequence

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A Revitalize  
Project at Dock  
Branch Park



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# ***Executive Summary***

The “Urban Sequence” regeneration report is produced for Maccreanor Lavington to guide the regeneration project of the Dock Branch in Birkenhead. This report is mainly including four stages analysis and a finally completed action plan. The aim of the “Urban Sequence” regeneration plan is to connect the dock branch tightly through industry updating, railway heritage reusing, green community to revitalize the dock branch industry and provide a sustainable, green and co-living environment for residents.

Through baseline analysis and site analysis, the core problems can be concluded. The dock branch face with the problems such as land not being well utilized, backward and scattered industries, shortage of housing and single types, few open green spaces for activities, and worrying health of residents. Thus, it is quite necessary to regenerating the dock branch for a whole new look.

Our regeneration plan mainly proposed three points. The first is upgrade the local industry from traditional manufacture to green innovation, forming complex to revitalizing the economy. The second is solving the housing problem by building mixed types of housing for different affordability and create co-living community. Another point is reusage of the railway heritage and constructed liner park to connect different district to stitch the city.

All the actions above will be supported by corresponding policies, and the budget and fundings have been carefully calculated. The whole regeneration plan is a seven+ years project which would be carried out according to the timescale and monitoring by the Wirral Council, Maccreanor Lavington, investors, local residents and other related stakeholders to ensure the dock branch in line with the council ambitions.

# ***Introduction***

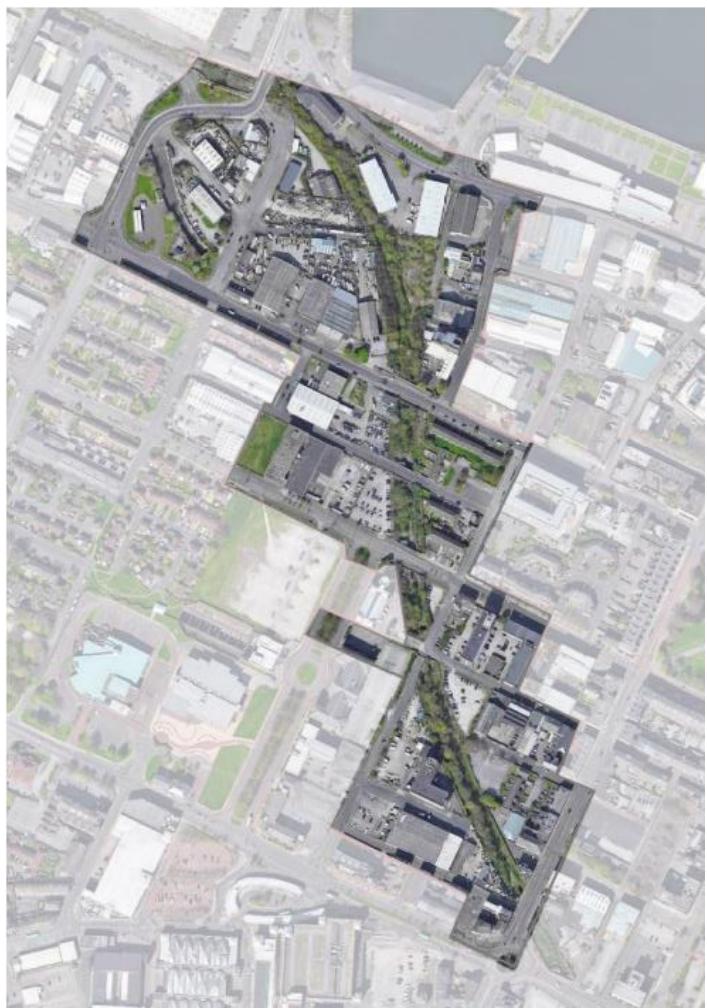
Maccreanor Lavington is an architectural office dedicated to creating high quality housing and public spaces for the city. Wirral Council has identified Birkenhead as a poorly developed area in terms of economic, educational, health and housing performance in comparison to the surrounding area requiring urban regeneration. Dock Branch Park area is one of eight redevelopment areas in Birkenhead Framework 2040 with an emphasis on the reuse of disused railways and the regeneration of surrounding features to form a green corridor linking Birkenhead to promote the development of new housing deterioration infrastructure (Wirral Council, 2021).

With the University of Liverpool team as one of the bidders for this project, this report is based on a social, economic and environmental analysis of the current site, identifying the current challenges it faces in terms of policy and data and establishing the relevant design principles. In addition, more specific design proposals were combined with examples of good practice to gauge the feasibility of implementation against the actual situation. Overall, this report provides a complete framework for the regeneration of the Dock Branch Park area through a comprehensive assessment, furthering the partnership with Maccreanor Lavington.

In this report we put forward four important design visions for Dock Branch Park:

- Attentiveness and legibility;
- Prosperity and sustainability;
- Continuity and connectivity;
- Livability and inclusiveness;
- Health and well-being,

which aim to create a Eco-friendly industrial park, community co-living and active high street in a multi-purpose urban center.



# 01

## BASELINE ANALYSIS

# 1. Baseline Analysis

## 1.1. Demographic Analysis

### Population

The population of Wirral in 2021 was 320,600, with a growth rate of 0.3% from 2011 to 2021 (Centres for cities, nd). Birkenhead's population has also been growing steadily over the last few decades, reaching 109,000 in 2022 (Lambert, nd), roughly one third of the Wirral's total population of 320,200 (Office for National Statistics, 2022). There are significant differences in Birkenhead's population density within each area. In the southern part of Birkenhead, the city centre commercial area has a higher population density of 7769-18538 people/km (Wirral Intelligence Service, 2023). In contrast, other areas of Birkenhead have relatively low population densities.

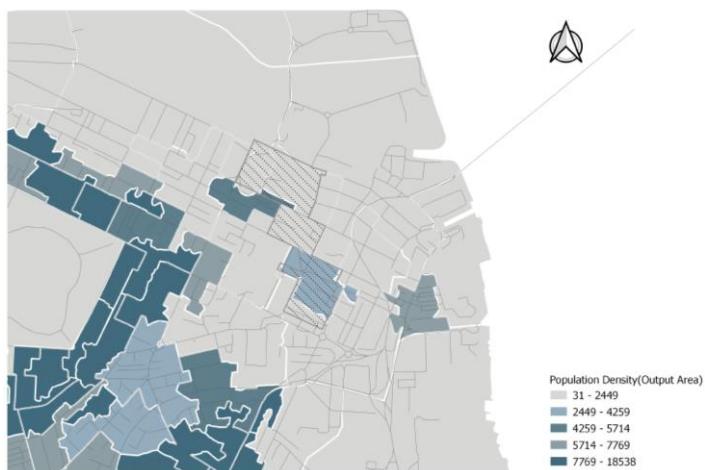


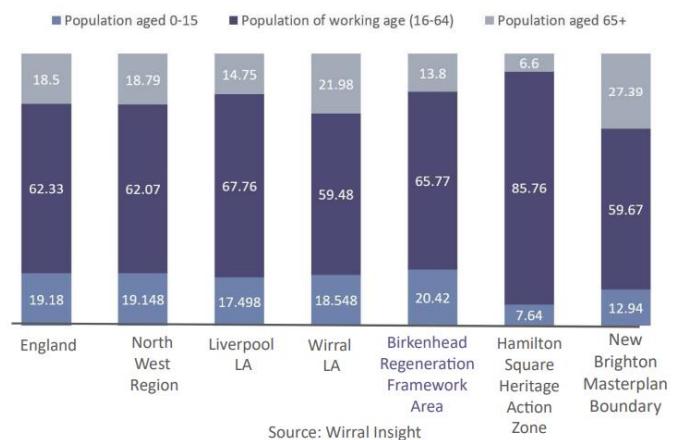
Figure 1: Population Density (Wirral Intelligence Service, 2023)

### Age

The majority of Birkenhead's population is in the working age 16-64 (65.77%), while the proportion of people aged 65+ is 13.8% (Wirral Intelligence Service, 2023). This compares to 59% of the working age population aged 16-64 and 21% of the population aged 65+ for the Wirral as a whole. This shows that Birkenhead is relatively low in ageing and has advantages over Wirral in terms of rejuvenation and employment.

The government could increase its support for youth employment and provide more opportunities for entrepreneurship to boost Birkenhead's economy and employment opportunities for young people.

### POPULATION AGE DISTRIBUTION (%)



Source: Wirral Insight  
Figure 2: Population age distribution (Wirral Intelligence Service, 2023)

### Gender

The gender distribution in Wirral is approximately equal for males and females at 48.4% and 51.6% respectively (Lginform, nd). The gender distribution in the Dock Branch Park area is similar to that of Wirral, with a relatively even split between males and females. The distribution of females in the graph shows that there are more female students in the north of the Dock Branch Park area than in the south, which suggests that there are more male students in the south.

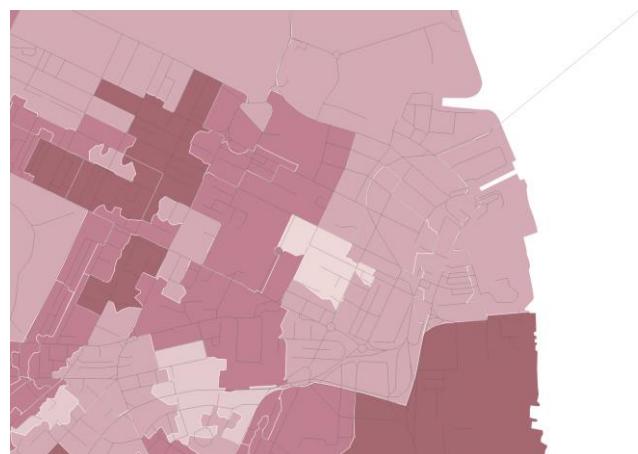


Figure 3: Distribution of female population (Wirral Intelligence Service, 2023)

## Ethnic

Birkenhead has a predominantly white population, with a relatively small population of Asians, blacks and other races. The ethnic composition of Dock Branch Park area is the same, showing some homogeneity and a relatively low level of multiculturalism. Whites make up the majority of the population, with numbers ranging from 124-269 (Wirral Intelligence Service, 2023).



Figure 4: Ethnic (Wirral Intelligence Service, 2023)

## 1.2. Health Analysis

### Access to Health Assets and Hazards (AHAH)

According to Access to Health Assets and Hazards (AHAH) map, Birkenhead, which includes Dock Branch Park area, performs poorly in terms of access to health assets and hazards, ranking very low (CDRC, 2023). This means that the community has poor health services, air quality, physical environment and retail environment, with people not having easy access to green spaces (Consumer data research centre, 2022).



Figure 5: Access to Healthy Assets and Hazards (AHAH) map

(CDRC, 2023)

Birkenhead emits 3.4t of CO<sub>2</sub> per capita in a year, which could have a negative impact on the health of its residents (Centres for cities,nd). In future urban regeneration, priority should be given to increasing the accessibility and quantity of high quality green public space in this community to ensure the physical well-being and quality of life of residents.

### Green Coverage

Birkenhead Town Centre, which contains Dock Branch Park area, has low green cover compared to the rest of the Wirral and is one of the least green areas in the whole of the Wirral. Dock Branch Park area has only 0.00% - 0.17% green cover (Wirral Intelligence Service, 2023)..

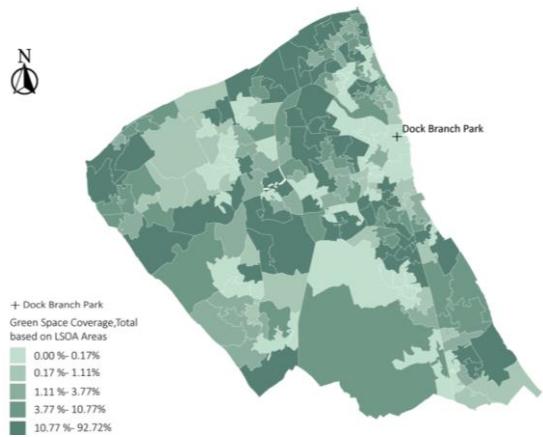


Figure 6: Green coverage (Wirral Intelligence Service, 2023)

### Disability

East Birkenhead has more disability than the west. The study area in Birkenhead east has between 28.1 and 47.2 disabled people, and the number of disabled people is higher in the south than in the north. This figure is moderately high within Birkenhead (Wirral Intelligence Service, 2023). These people with mobility problems should be taken into account in the following regeneration process by providing them with accessible facilities.

### 1.3. Economic Analysis

For example, the needs of people with disabilities should be taken into account in the construction of housing, providing accessible housing that considers physical accessibility, social accessibility and health support for the user, ensuring that updates include the interests of these vulnerable groups (Lakhani, et al, 2020).

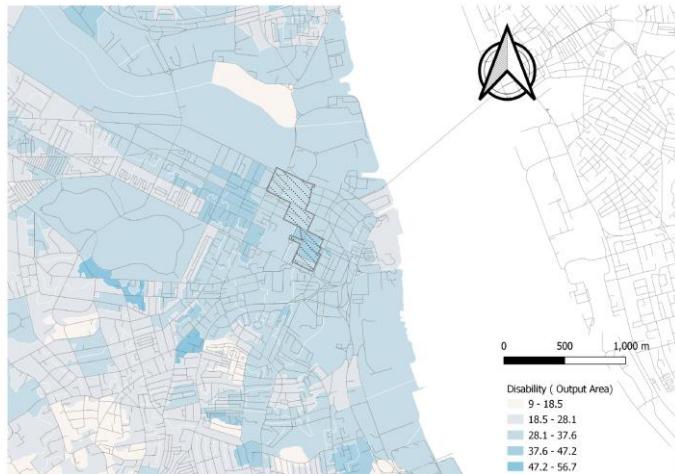


Figure 7: Disability (Wirral Intelligence Service, 2023)

#### Residential Mobility

The residential mobility in Dock Branch Park area is very high, approaching 40% per year, much higher than the rest of Birkenhead (CDRC, 2023). This means that a large number of people live in Dock Branch Park area for short periods of time or only on a transitional basis.

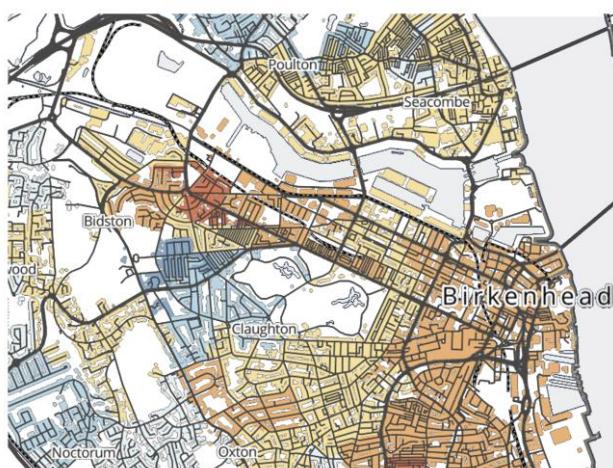


Figure 8: Residential mobility (CDRC, 2023)

#### Unemployment

The average unemployment rate in Wirral is 3.8% which is slowly decreasing (I live here, 2021). However, as can be seen from the figure, Birkenhead is an area with a high unemployment rate and is well above the Wirral average. The unemployment rate in Dock Branch Park area is one of the highest in Birkenhead, with unemployment levels ranging from 3.7% to 14.3% of the total population (Wirral Intelligence Service, 2023).

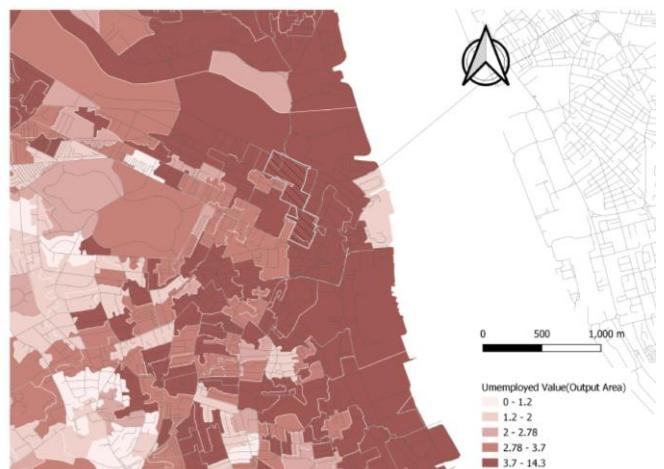


Figure 9: Unemployment (Wirral Intelligence Service, 2023)

## Student

Wirral Met College in Birkenhead is one of the significant educational institutions in the area whose existence provides the local population with a wider range of educational options. In figure, we can see that some of the college's buildings are located in darker coloured areas where the student population is higher, typically between 5.6 and 23.1% (Wirral Intelligence Service, 2023). We can also see that the southern part of Dock Branch Park area has a higher number of students than the northern part.

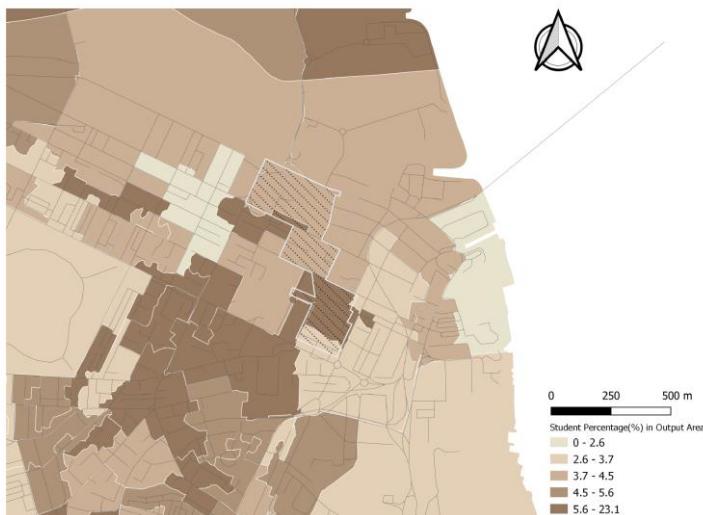


Figure 12: Student (Wirral Intelligence Service, 2023)

## 1.4. Housing Market Analysis



Figure 13: Dwelling Age (Wirral Intelligence Service, 2023)

### Housing price

House prices in the east of Birkenhead city centre are relatively cheap and well below those in other parts of Wirral. According to the data, house prices in Dock Branch Park area are typically between £37,375 and £185,105 (Wirral Intelligence Service, 2023).

Dock Branch Park area can take advantage of its low prices to attract more people to live there and to achieve urban regeneration.

### Vacant Dwelling

Birkenhead city centre has the highest vacancy rate for housing in the whole of the Wirral. According to figure, vacancy rates within Dock Branch Park area range from 5.3-71.4% (Wirral Intelligence Service, 2023), which is also higher than the UK average vacant dwelling stock of 2.7% (Ministry of Housing and Local Government, 2020). This result is in line with the vacant housing situation in Birkenhead Centre referred to in NPPF.

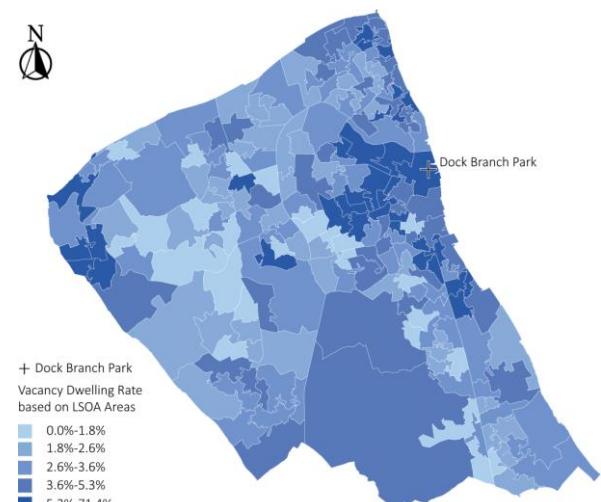
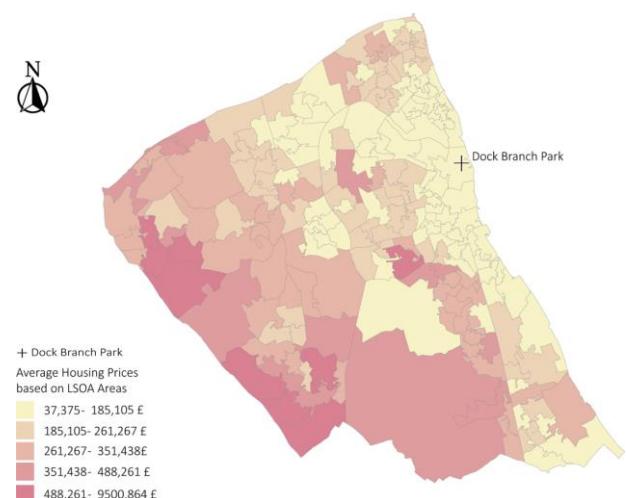


Figure 14: Housing price (Wirral Intelligence Service, 2023)



# 02

## SITE ANALYSIS

## 2.1. Economic Analysis: Industrial Fabrics and Functions

### 2.1.1. Fragmented urban fabrics

The urban form of Birkenhead is dominated by buildings that are modest in size, regular and oriented in the same direction, which gives the city an orderly and compact appearance. However, the north-western part of the regeneration area is characterised by small and fragmented buildings. This uncoordinated layout makes the whole city appear cluttered and uncoordinated with the rest of the building distribution. This incongruous building layout will not only affect the image of the city, but also the quality of life of the residents and the development of the city. Therefore, these buildings need to be properly renovated so that they can be harmonised with the overall layout of the city, improving the image of the city.



Figure 16: Urban form analysis

### 2.1.1. Traditional Industries In Need For Upgrading

Dock Branch Park area has a relatively high concentration of the automotive industry, which mainly covers various areas of the automotive industry, including sales, repair, manufacturing, cleaning and research and development. The largest proportion of this is in the automotive repair sector, indicating a high market demand for automotive repair services within the region. In contrast, the region has the smallest proportion of research in automotive parts, with technological innovation capabilities yet to be fully utilised. Overall, the existence of an automotive industry cluster in the area indicates that there is a strong industrial base and resource advantages within the region. The regeneration of this industrial cluster can lead to an increase in employment within the region, while providing a better space for innovation in the automotive industry.

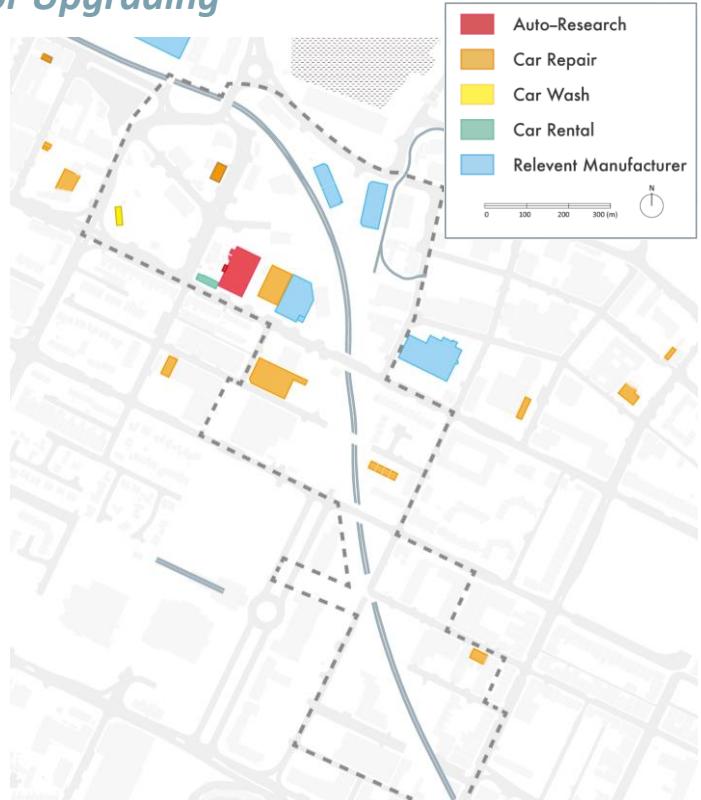


Figure 17: Car industry analysis

## 2.1. Social Analysis: Community, Facilities, and Commuting

### 2.1.1. Lack of “Sense of Community”

The area is very diverse in terms of the type of housing, mainly on the east and west sides. The majority of buildings in the eastern part of the area are mixed-use residential, often with retail, services or restaurants on the ground floor and residential areas above. The western part of the area is dominated by detached houses, semi-detached houses and townhouses. This distribution lacks rational planning, where different types of housing are scattered throughout the area and are not planned as a unit according to the community. This can lead to a lack of community cohesion in the area and may also affect the living experience.



Figure 18: Housing type analysis

### 2.1.2. Community Facilities

With the various amenities available, the area is a great place to live, work, and play. The presence of office businesses and a university provides access to employment and education opportunities, promoting the development of surrounding housing and amenities, leading to economic and cultural development in the community. Markets and shopping malls in the south of the area offer a wide range of services such as supermarkets, pharmacies, and restaurants..

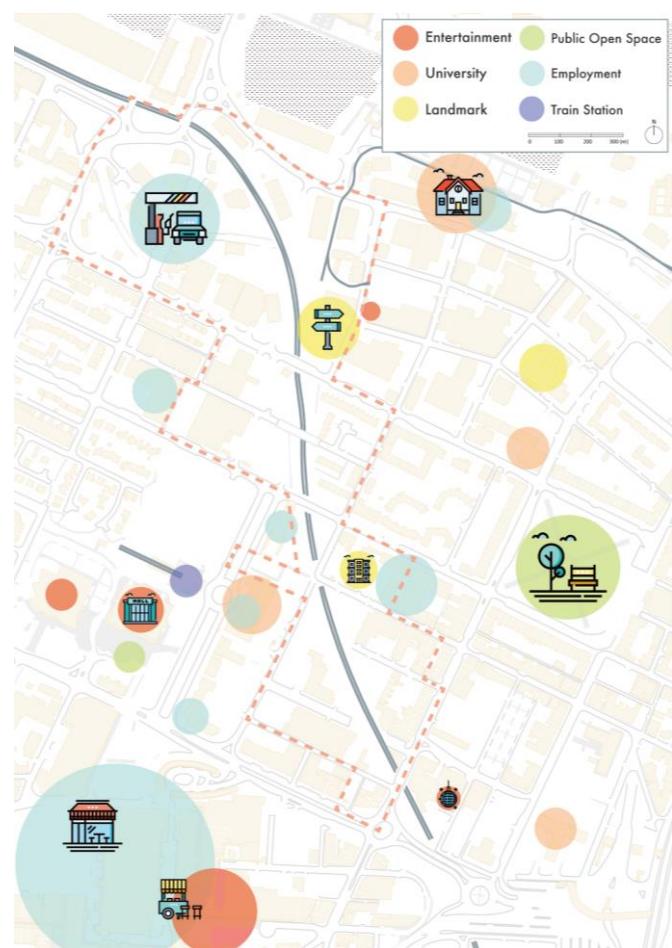


Figure 19: Facilities analysis

## 2.2. Social Analysis: Community, Facilities, and Commuting

### 2.2.3. Commuting Patterns

In addition to local residents, many people from the neighbouring city of Liverpool also choose to live in Birkenhead. Although Birkenhead is not as prosperous as Liverpool, it is well connected by transport links, including the train line and Queensway Tunnel, which can be easily reached in just ten minutes. This ease of access has attracted many people working in Liverpool to choose to live in Birkenhead, where housing prices are relatively low.

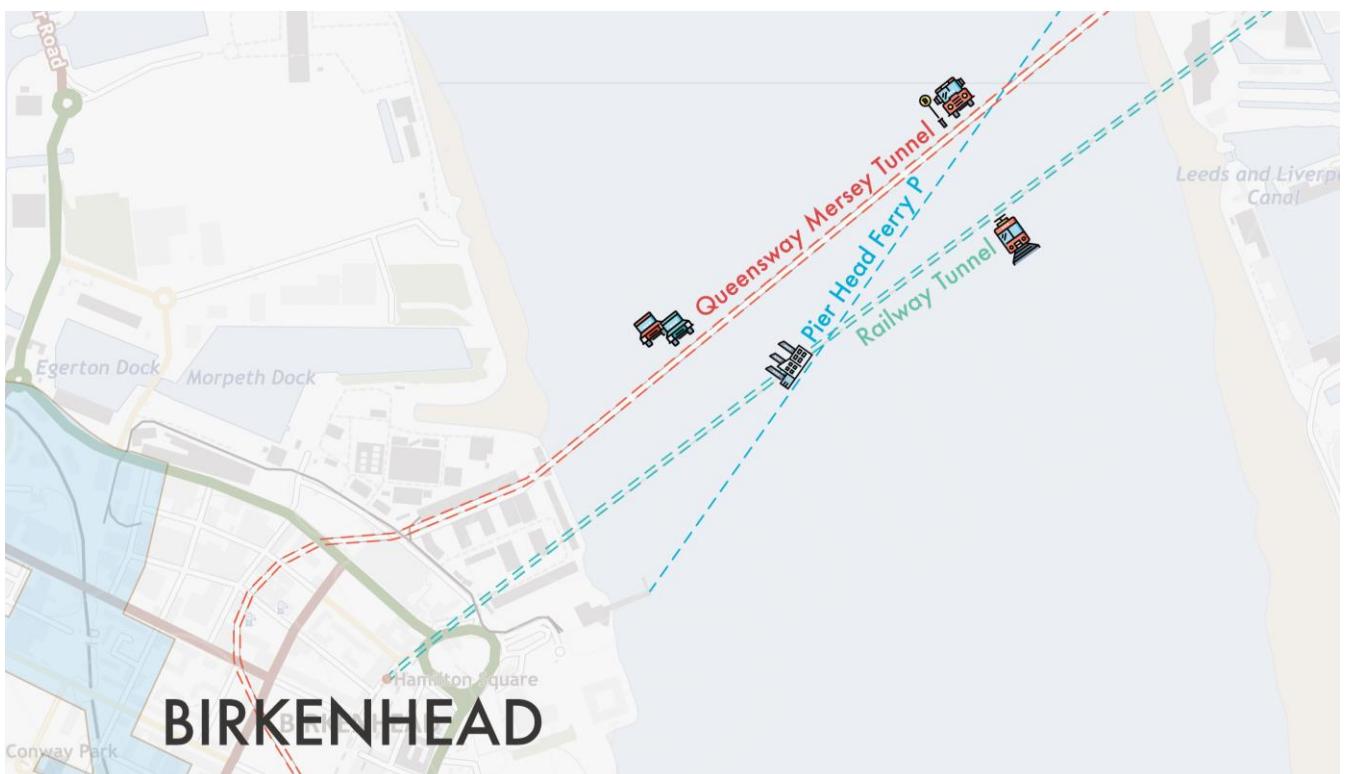


Figure 21: Transport methods analysis

## 2.3. Urban Design Analysis: Green Spaces

### 2.3.1. Small Green Spaces

There is limited community green space coverage in Dock Branch Park area, resulting in a lack of fitness facilities for residents to exercise. In addition, most of the courtyard gardens in the area are fenced off and not open to the public. This situation has led to a poor AHAH (section 1.2) representing the well-being of the people in the area. Therefore, the community needs accessible and open green spaces that everyone can access.

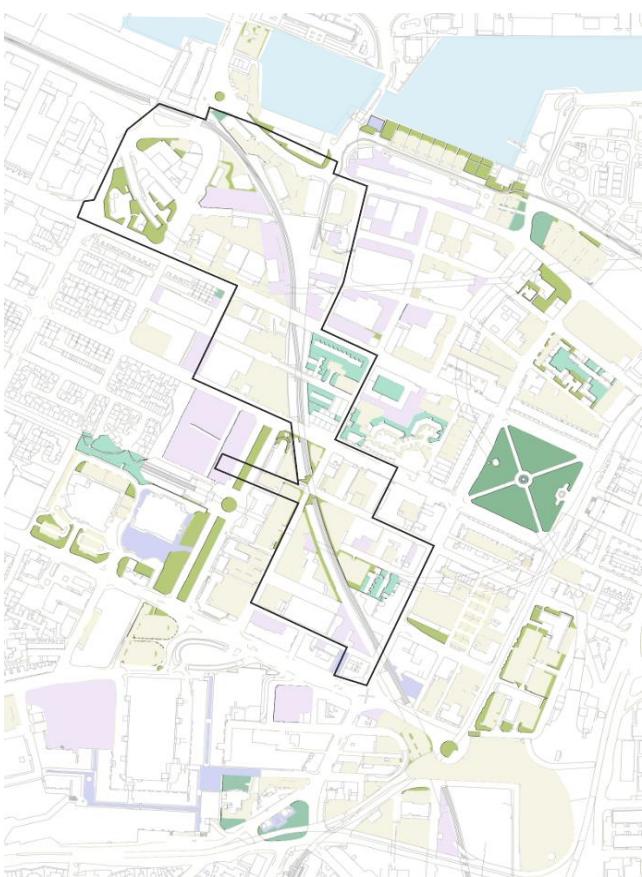


Figure 22: Community green space analysis

### 2.3.2. Regional Park Systems

Currently there are two large green spaces with specific functions around the regeneration area, Hamilton Square and Birkenhead Park. While these green spaces could provide respite for the surrounding factory workers and bring environmental benefits to the whole area, they are too limited in number and do not reach all the industrial clusters in Dock Branch Park area. Therefore, the creation of large green spaces with similar functions within Dock Branch Park area would be a great option. These large green spaces could provide somewhere for the workers to relax and bring some social activities to the regeneration area.

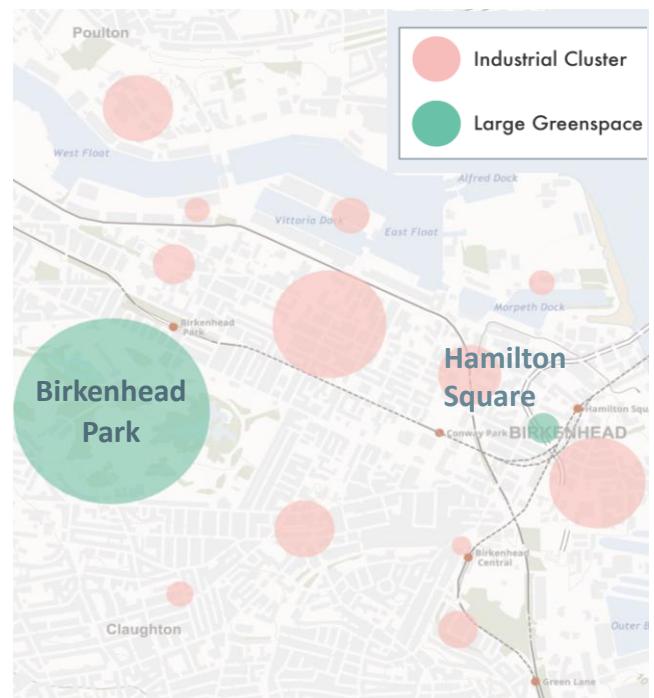


Figure 24: Large green space networks

## 2.4. SWOT Analysis

S

Wirral has several large sectors of employment (Wirral Council b, 2021).

Wirral's housing associations are committed to providing greater access to affordable housing (Wirral and HATCH, 2021).

Housing project delivered at Conway Park (The Wirral Partnership, 2020).

There are strong links between the existing and established neighbourhoods in Wirral (Keep Wirral Well, 2021).

There is a wealth of local history and cultural heritage (CounterCulture, 2021).

Wirral has an integrated health system that reinforces health partnerships (Keep Wirral Well, 2022).

Wirral's CO2 emissions in recent years have continued a trend of slow decrease (Cool Wirral, 2019).

Dock Branch area currently has relatively low housing price.

There is a large number of youngsters in the Dock Branch area, higher than Birkenhead and Wirral.

The government has tax incentives to stimulate industrial innovation and start-ups (Wirral Council b, 2021).

Wirral has an integrated transport network throughout the region and with links to other cities, including road (M53, M56 and A41) and rail (Hatch, 2021; The Wirral Partnership, 2020).

The Wirral is an influential centre for holding cultural and artistic events (Wirral Council b, 2021).

W

The poor performance of the AHAH in the area around Quay Branch Park represents a decline in the health of the population.

Less attractive to local residents, with many tending to stay temporarily.

The local unemployment rate and multiple deprivation index profiles are bleak.

The number of local internet users is lower compared to other places.

Lack of cohesion in local communities.

The local population has a low level of education and lacks employable skilled personnel (Wirral Council et al., 2021).

Town centres and shopping streets have experienced declines (Wirral and HATCH, 2021).

Lower housing confidence and low affordability for local residents (Wirral Council et al., 2021).

Housing supply is slow and local people do not have a selection for the type and quality of housing (Wirral and HATCH, 2021).

Poor tourist experience in local areas and inadequate public transport infrastructure for the 'last mile' (Wirral and HATCH, 2021).

The low-quality local public spaces diminish people's movements and increase anti-social behaviours (Wirral and HATCH, 2021).

## 2.4. SWOT Analysis

O

High special requirements in the Dock Branch area (disabled persons need concern).

High local housing vacancy rate and few old buildings offering potential for development.

Local authorities given more management competence over regeneration budgets (Wirral and HATCH, 2021).

Encourage mixed-use zones and night-time economies to boost diverse town centres (Wirral and HATCH, 2021).

Extensive sources of funding: public funds of UK and LCR, Levelling up fund, Transforming Cities Fund, etc. (Wirral and HATCH, 2021; Wirral, 2020; CounterCulture, 2021).

Encourage sustainable mixed-use home communities and neighbourhood regeneration (Wirral Council et al., 2021).

Wirral suggests diversification of housing and securing affordable housing as a priority (Wirral Council b, 2021).

The existing railway sites are of significant cultural interest for tourists (The Wirral Partnership, 2020).

T

Growing online retail will constantly undermine the local brick and mortar economy (Wirral and HATCH, 2021).

Future continued funding for tourism and housing is still unclear (Wirral and HATCH, 2021; CounterCulture, 2021; Wirral and HATCH, 2021).

There may be poor coordination between stakeholders in the development process and lack of efficient place-making methods (Wirral and HATCH, 2021).

Potentially competitive with surrounding area attractions (Birkenhead Park), causing a reduction in Dock Branch's popularity and tourists.

High levels of local population out-migration, with potential for relocation of public sector employment (Wirral and HATCH, 2021).

# 03

## PLANNING AND POLICY CONTEXT



**WIRRAL**

REBALANCING BRITAIN: POLICY OR SLOGAN?

Liverpool City Region - Building on its Strengths:  
An independent report.

The Rt Hon the Lord Heseltine CH and Sir Terry Leahy.  
October 2011

**WIRRAL LOCAL  
PLAN 2021 - 2037**

SUMMARY DOCUMENT (MAY 2022)



# 3. Policy Context

## 3.1. National Policy

### National Planning Policy Framework (NPPF)



#### 2. Achieving sustainable development

2. 8. (b): Provide sufficient accommodation to satisfy the demands of succeeding generations and support community development; create new high quality and safe open spaces to better deliver services and bolster the health, social and cultural wellbeing of the community (Ministry of Housing, Communities and Local Government, 2019).

#### 6. Building a strong, competitive economy

6. 82. (c): Planning policies ought to tackle the challenges to investment, including inefficient infrastructure and poor circumstances.

#### 7. Ensuring the vitality of town centres

7. 86. (a): Identify a hierarchy of town centres that promotes their long-term vitality and viability, encourages diversification in response to fast changing retail and leisure sectors, supports appropriate mixed use including housing and reflects characteristics.

#### 8. Promoting healthy and safe communities

8. 92. (a): Promote multiple-use developments, dynamic neighbourhoods, and cyclist-friendly street layouts to connect each area.

#### 11. Making effective use of land

11. 119: Protect and preserve the environment and offer safe and healthy living conditions for residential and other purposes through efficient land use.

#### 12. Achieving well-designed places

12. 130. (c): Place making should be guided by local history and characteristics, such as the adjacent built landscape and environment, whilst encouraging appropriate scale of innovation.

### Levelling Up and Regeneration



Ministry of Housing,  
Communities &  
Local Government



The official document stimulates the consolidation and renewal of land through a variety of actions. In addition, it is proposed that local governments be given more competence in land use development, including the adaptation of brownfield conversion utilisation and compulsory acquisition permissions (Department for Levelling Up, Housing & Communities, 2022).

#### Relevance and assessment (Why relate?)

The analysis of the site reveals that the area around Dock Branch Park presents a poor and unattractive urban landscape, with many abandoned sites and dilapidated houses. Levelling Up's decentralisation of land use and compulsory acquisition regulations will facilitate the Wirral authorities to formulate a variety of actions to improve land management and regeneration, particularly in relation to the use of brownfield sites.

## 3.2. Regional Level

### Liverpool City Region Spatial Planning Statement of Common Ground

#### Cycling and walking

4.20 The LCR Rights of Way Improvement Plan is dedicated to tackling the concerns of residents and visitors, for instance, enhancing the public rights of way system specifically for walkers and cyclists to deliver a greater experience (Liverpool City Region, 2019).

4.21 LCR Local Cycling and Walking Infrastructure Plan (LCWIP) is in the designation phase and comprises: the identification of priority routes and core areas for walking and cycling;

#### Health and Wellbeing

The Liverpool City Region Partnership recognises that the planning process has a significant impact on healthy places and living options, and can reduce the impact of environmental inequalities on wellbeing and quality of life by attempting to improve through the following measures:

- Adopting suitable design criteria to promote health and wellbeing.
- Improve infrastructure to encourage healthy and sustainable modes of travel, such as walking and cycling.
- Provide green infrastructure and spaces to walk, cycle, and outdoor recreation.



Liverpool City Region is strengthening the rights of way network, walking and cycling infrastructure, outdoor spaces and promenades under the NPPF's proposal to encourage healthy and sustainable travel patterns. This will underpin the construction of healthy travel patterns and active open spaces.

#### Liverpool City Region - Building on its Strengths: An independent report

Birkenhead Docks (Wirral Waters) is one of Liverpool's enterprise parks, with plans to capture business and service sector employment at scale and is set to deliver high-value complementary services to the city centre's business district (Heseltine and Leahy, 2011).

Liverpool should conduct a pilot to request benefit claimants to engage in community work to obtain their benefits. Such as using vacant land to create a garden city. We ought also to utilise disused properties as an occasion for unemployed people in developing construction expertise. These measures will be integrated with the proposals of DWP in Community Action Programme and Work Programme (Heseltine and Leahy, 2011).

### **3.3. Local Level**

#### **Wirral Local Plan 2021 to 2037**

##### **Policy WS 1.3**

The facilities listed below will be implemented during the Local Plan process (Wirral Council, 2022):

1. an exclusive network for walking and cycling to ensure people commute safely to work and leisure facilities throughout the Borough.
2. a new public transport system in Birkenhead to strengthen the links between new communities and current key locations
3. a new multi-use greenway.

##### **Policy WS 4.4**

Open access for development within or adjacent to the development of tourist areas to maintain or strengthen: 1. unobstructed public access to the Wirral waterfront and coast. 2. the character and visitor attractiveness of the area's tourism industry.

Appropriate development in the current coastal access to increase public access to the Wirral coastline and surrounding areas, whilst complying with environmental regulations (Wirral Council, 2022).

##### **Policy WS 5.1**

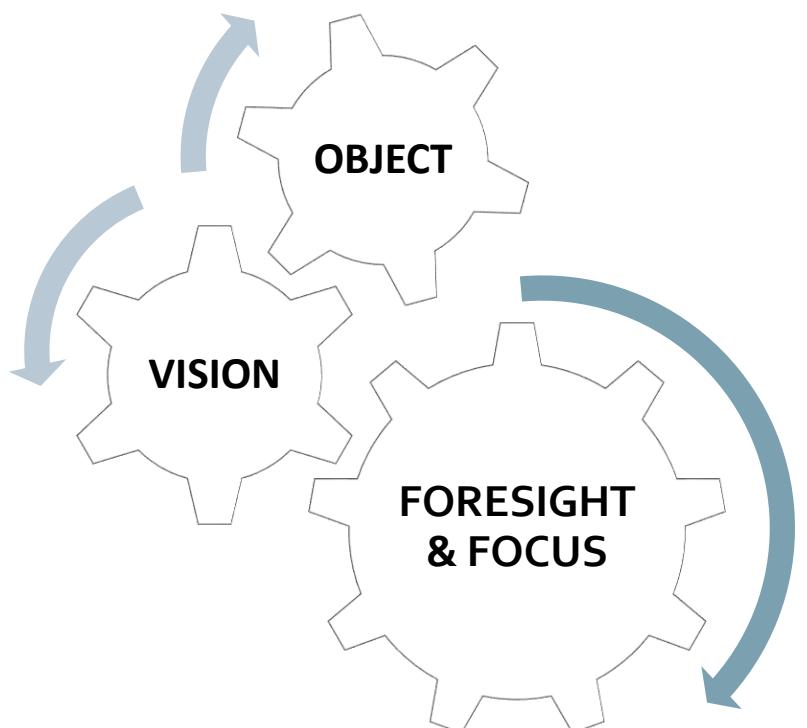
The proposal states that a high quality and coherent blue and green infrastructure system will be established in Wirral (Wirral Council, 2022): 3. create new Bluegreen facilities to optimise the landscape setting of the development and to support urban greening measures such as sustainable drainage systems. 4. strengthen the links between eco facilities and the surrounding built environment, such as greenway regeneration, blue and green corridors and cycle paths.  
5. Strengthen the routine maintenance of blue and green infrastructure properties.

##### **Policy WS 6.1**

Adhere to the following principles of development-friendly local planning by (Wirral Council, 2022): 1. encourage high quality and aesthetic development that supports healthy living patterns and actively promotes the effective revitalisation and renewal of current communities. 3. provide waterfront access by offering secure and attractive routes to enhance permeability within the site and to integrate with neighbouring communities and public spaces, where pertinent and safe. 4. facilitate and deliver, where appropriate, strategic amenities to provide public realm and leisure provision, retail, education and health services.

# 04

## VISION AND OBJECTIVES



# 4. Vision and Objectives

Based on the preliminary analysis and the quantitative chord diagram, the vision, objectives and specific elements for Dock Branch Park will be presented as follows:

## Vision 1: Attractiveness and Legibility

Bringing attention back to the area by enhancing accessibility to the Dock Branch train heritage, connectivity and repurposing of landmarks. In addition, we will reinvent the dilapidated local heritage landmarks, transforming them into iconic symbols of the local heritage and features to draw tourists to the area, while contributing to the regeneration of the urban landscape.

## Vision 2: Prosperity and Sustainability

Consolidating and upgrading the local mono-industrial structure. Based on the traditional train heritage of the area, we will incorporate high-tech industries such as the manufacturing of modern electric automobiles into the local industrial structure, which will upgrade the industry while absorbing more employment and will stimulate local housing demand and social diversification. Moreover, green infrastructure will be implemented to ensure the upgrading of the industry while minimising its negative impacts on the environment.

## Vision 3: Continuity and Connectivity

Responding to the current fragmented urban texture of the Dock Branch, we will initiate the concept of 'Urban Sequence' to support the development and renewal of linear spaces, reinforcing local continuity and connectivity. Integrating the fragmented urban blocks and transforming them into coherent, pleasing and sustainable fabrics along multiple dimensions, such as functionality.

## Vision 4: Livability and Inclusiveness

Following the previous three visions, the perspective gradually shifts from macro to specifics. We will reinvent the decaying communities of Dock Branch and the surroundings by creating a sense of community and belonging, providing housing for a diverse range of income groups and concentrating on people's health to enhance livability and inclusion.

## Vision 5: Health and Well-being

Regarding health and wellbeing, we wish to promote green mobility in the area. we will establish accessible pedestrian and cycling paths in and around Dock Branch Park to encourage the use of sustainable travel. Greenery and public amenities throughout Dock Branch Park will be a priority in our vision. Multiple plantings and art installations will be installed aiming to offer excellent amenity services for all ages whilst reshaping the land.

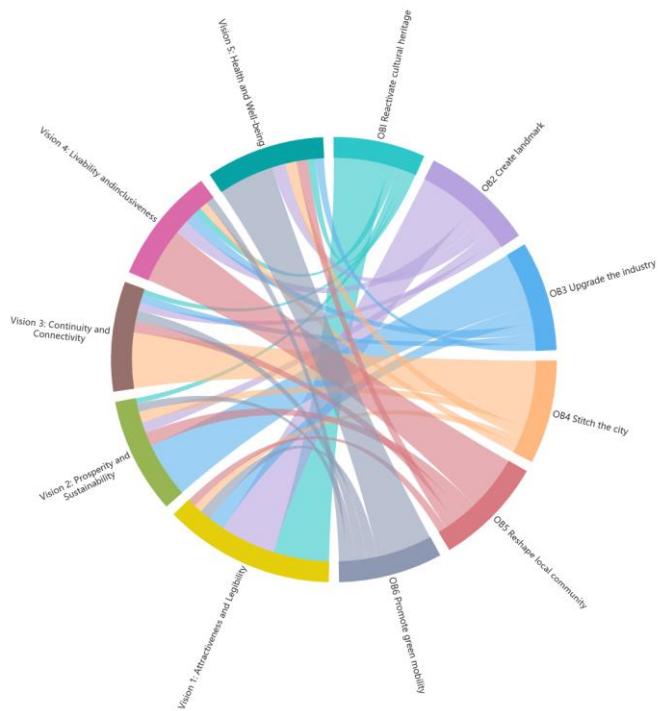
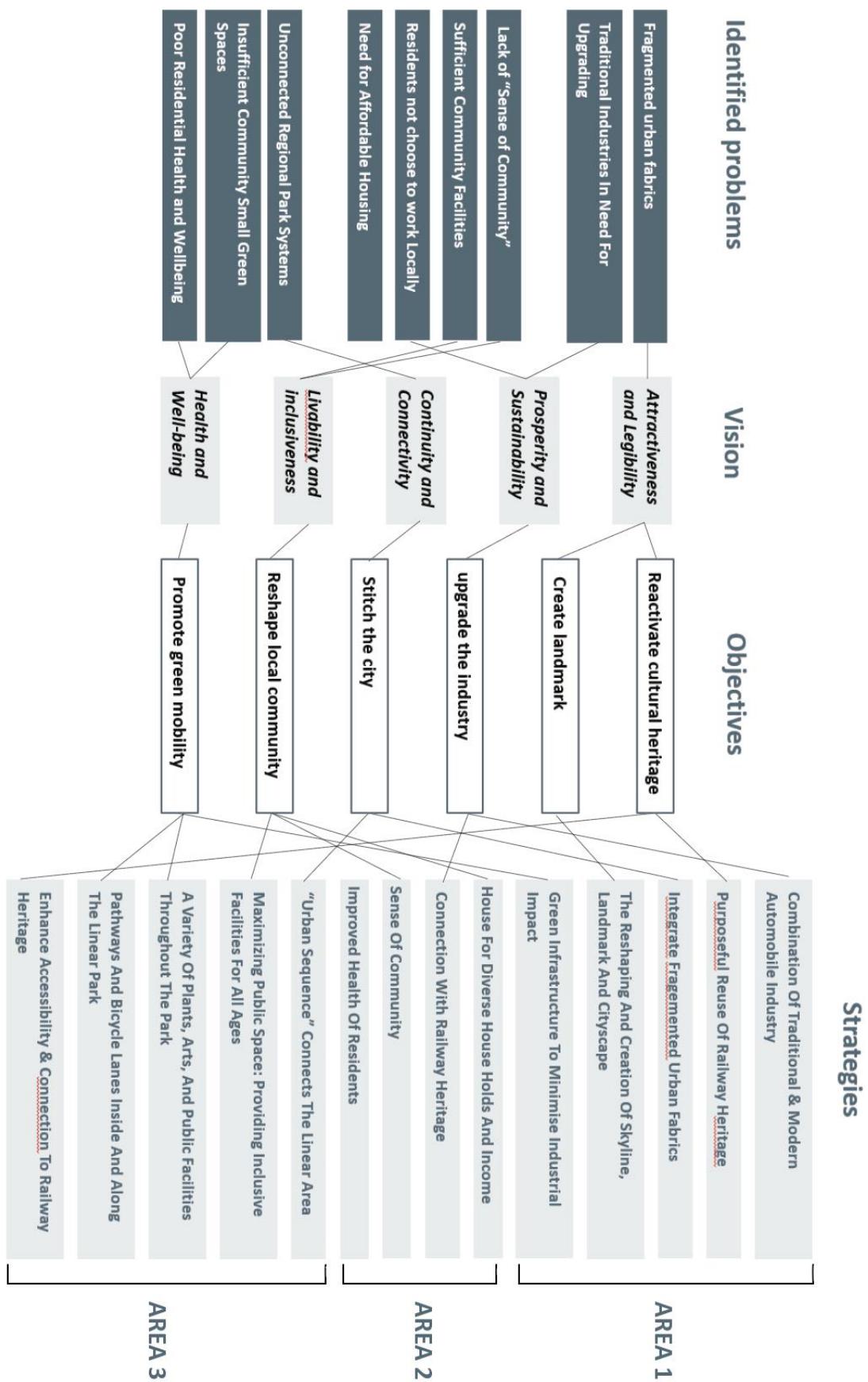


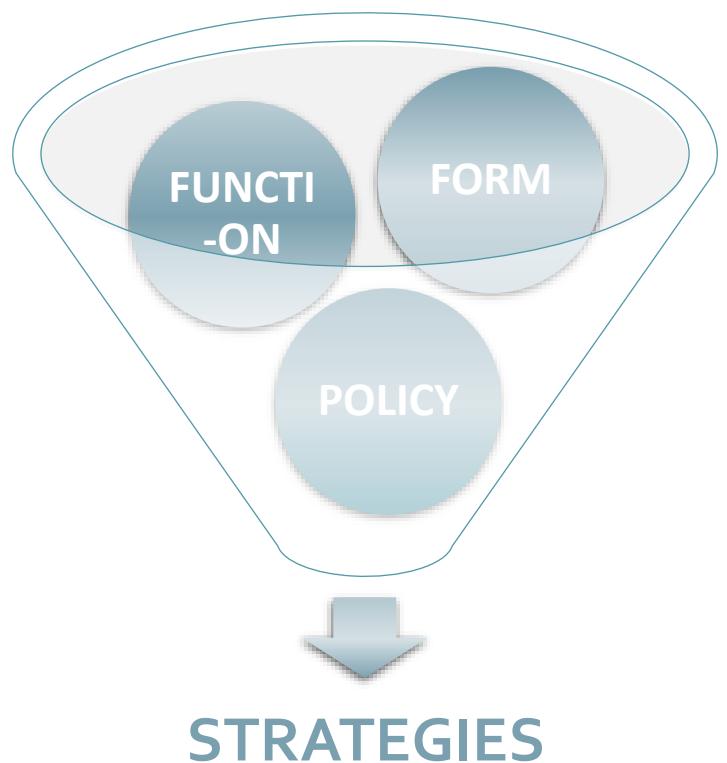
Figure 25 Chord diagram for relations within visions and objectives

# 4. Vision and Objectives



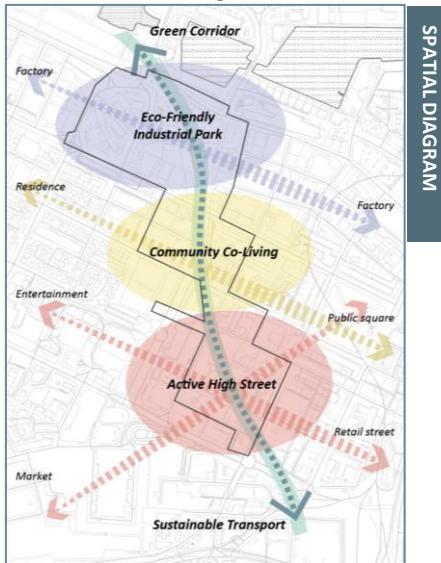
# 05

## AREA-WIDE STRATEGIES

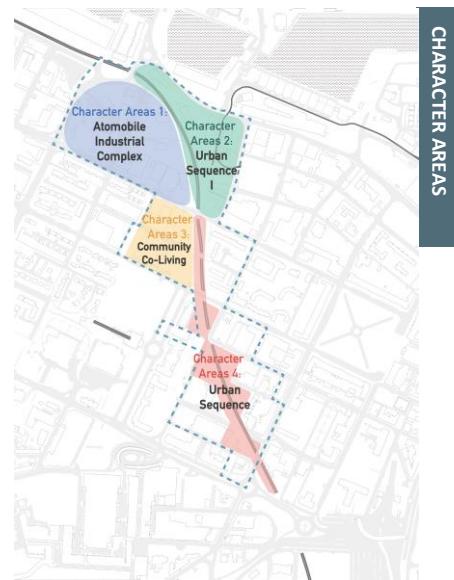


# 5. Area wide strategies

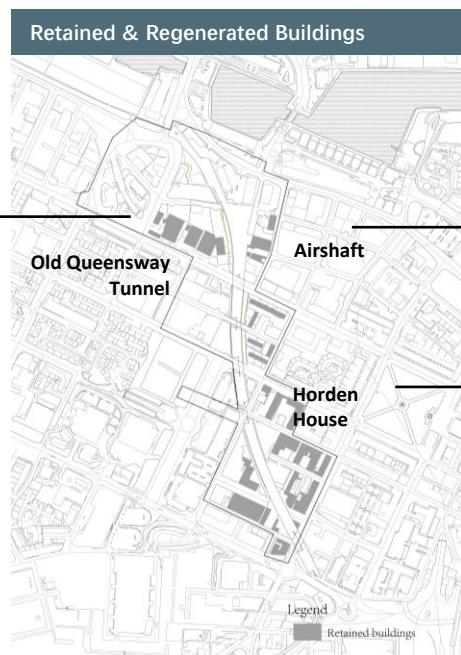
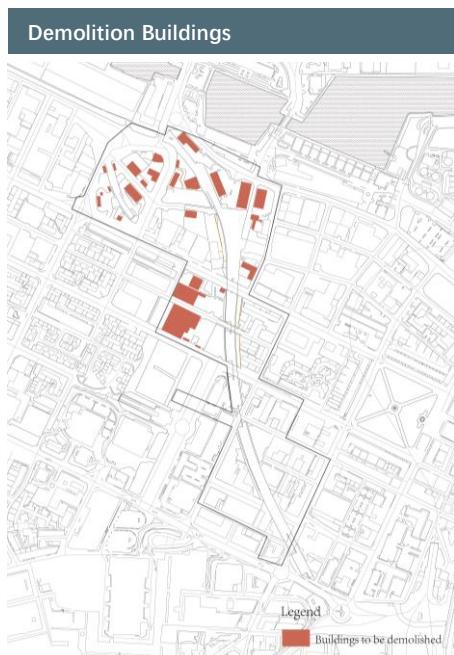
In order to better realise the development objectives of the area, Dock Branch Park area has been divided into three main spatial zones: Eco-friendly industrial park, community co-living and active high street. These three areas will each have a different function intended to enhance the attractiveness of the whole area. In addition, we have transformed the derelict railway in the intervening area into a green corridor to connect the entire area. In order to better organise the land uses,



Dock Branch Park area is divided into four character areas, including the Automobile Industrial Complex, Urban Sequence I, Community Co-living and Urban Sequence II. Through these divisions, the new land uses are designed to not only attract pedestrian traffic along the railway line, but also to be consistent with the functional zoning of the railway line, thus leading to economic development and community revitalisation along the railway line.



## 5.1. Pre-development strategy



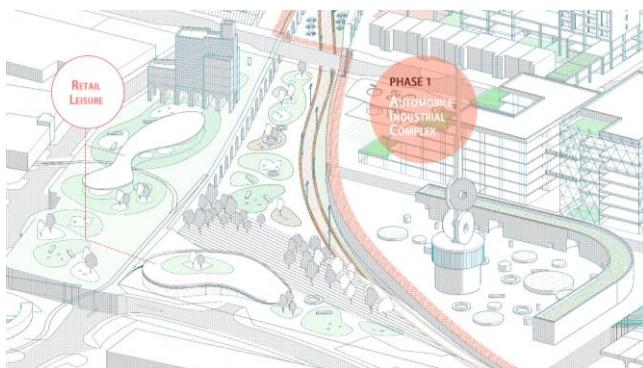
The buildings of the industrial cluster in the north of Dock Branch Park area are facing serious problems of deterioration. These buildings no longer meet the needs of modern society making a considerable impact on the lives and health of the surrounding residents. We therefore plan to carry out a major demolition of the buildings in the area

to make way for a larger development area and a more pleasant landscape. Other buildings in the area such as public or administrative buildings that contribute to local development will be retained and renovated as necessary to ensure that their property values are preserved.

## 5.2. New Land Use

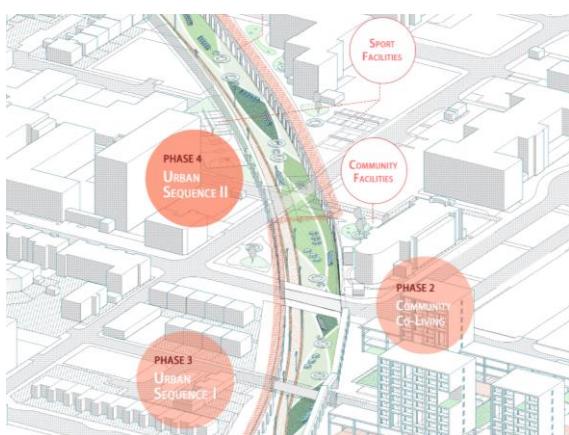
### Northern part: Eco-Industrial Park

- Connect separated industrial buildings to enhance the connection within and outside the site;
- Consolidate fragmented and haphazard urban fabric to improve the overall functionality and permeability;
- Upgrade the buildings to support the emerging renewable energy sector required by policy agenda.



### Middle part: Community Co-living

- Repurpose warehouses and industrial facilities to offer **new forms of accommodation** (town house & apartment).
- Connect the **Hamilton square and residential** areas to provide a cohesive surrounding environment.
- Preserve property rights and provide various **affordable housing** options to attract more residents to work and live in the area.



### Southern part: Active high street

- Demolish some of the warehouses and industrial facilities while **preserving and replicating the perimeter blocks** and the **mixed-use** buildings.



## 5.3. Linear Park Planning

### Area 1: Northern Entrance Plaza

- Prime location for commercial activities.
- Build tiered seating space and performance venue using natural height difference.
- Serve as transitional space for downward sloping linear park.
- Provide commercial space for dining and retail.
- Create landmark with cultural significance using recycled materials from automotive industry



### Area 2: Public Sports and Fitness Area

- Convenient for nearby residents to enjoy.
- Preserve track and transform it into jogging and walking trail.
- Provide fitness area for visitors.
- Divide area into scattered regions and add public sports facilities.
- Retain most of the plants and trees within the site and appropriately trim them.
- Scattered seating and rest areas.



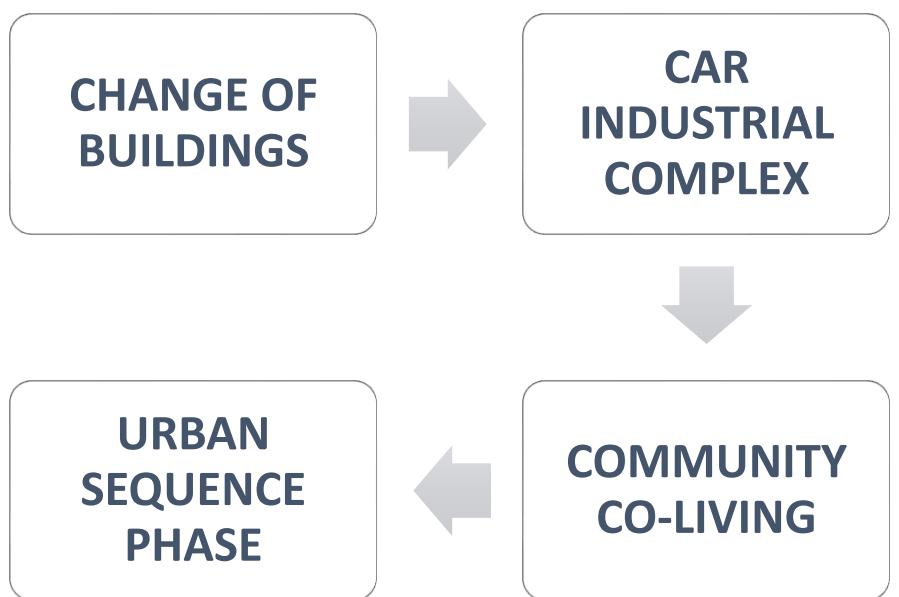
### Area 3: Art & Culture Area

- Utilize existing art and cultural foundation and wall recesses preserved by railway heritage.
- Invite muralists to create art telling the story of British railway.
- Transform and build pubs, cafes, and other facilities in railway tunnels and other vacant spaces.
- Strengthen security management and cleaning services to ensure cleanliness and safety.



# 06

## CHARACTER AREA PROPOSAL



# POLICY ORIENTATION

## ACTION PLAN AREA 1 *Car Industrial Complex*

### Action area 1 policy

At present, The national government aims to promote new energy technology innovation and demonstration with the launch of the sixth round of the Energy Entrepreneurs Fund (HM Government, 2022). Additionally, the government has indicated its continuous support for the development of the electric vehicle industry, aiming to possess a comprehensive vehicle supply chain and reputation (HM Government b, 2023). UK committed to ending fuel car sales completely by 2030 and all vehicles will be zero emission by 2035 (HM Government c, 2021).

## ACTION PLAN AREA 2 *Community Co-living*

### Action area 2 policy

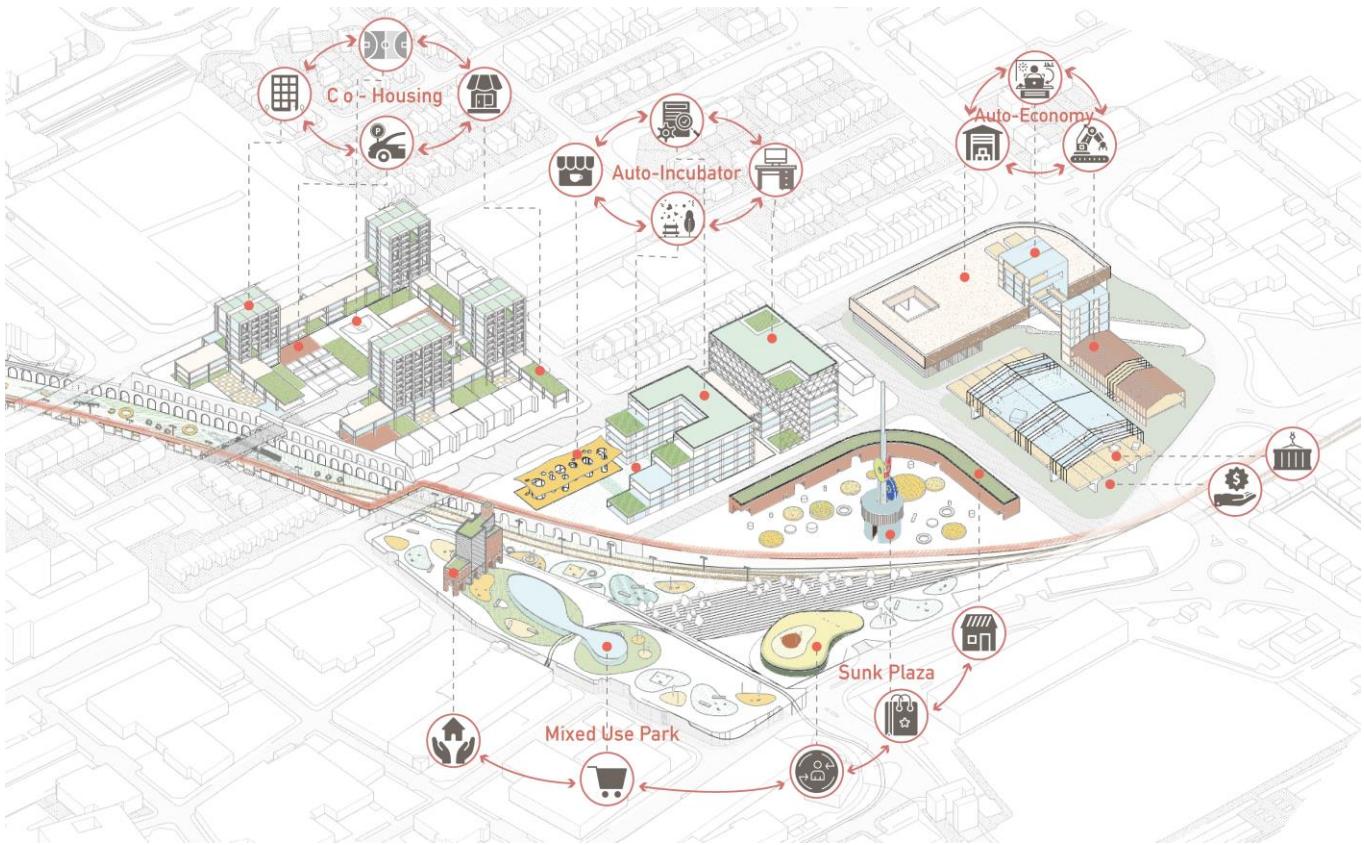
The Government will increase the provision of affordable and rental housing in areas where the market is not active through investment products and create a competitive residential market (Homes England, 2018).

## ACTION PLAN AREA 3 *Urban Sequence*

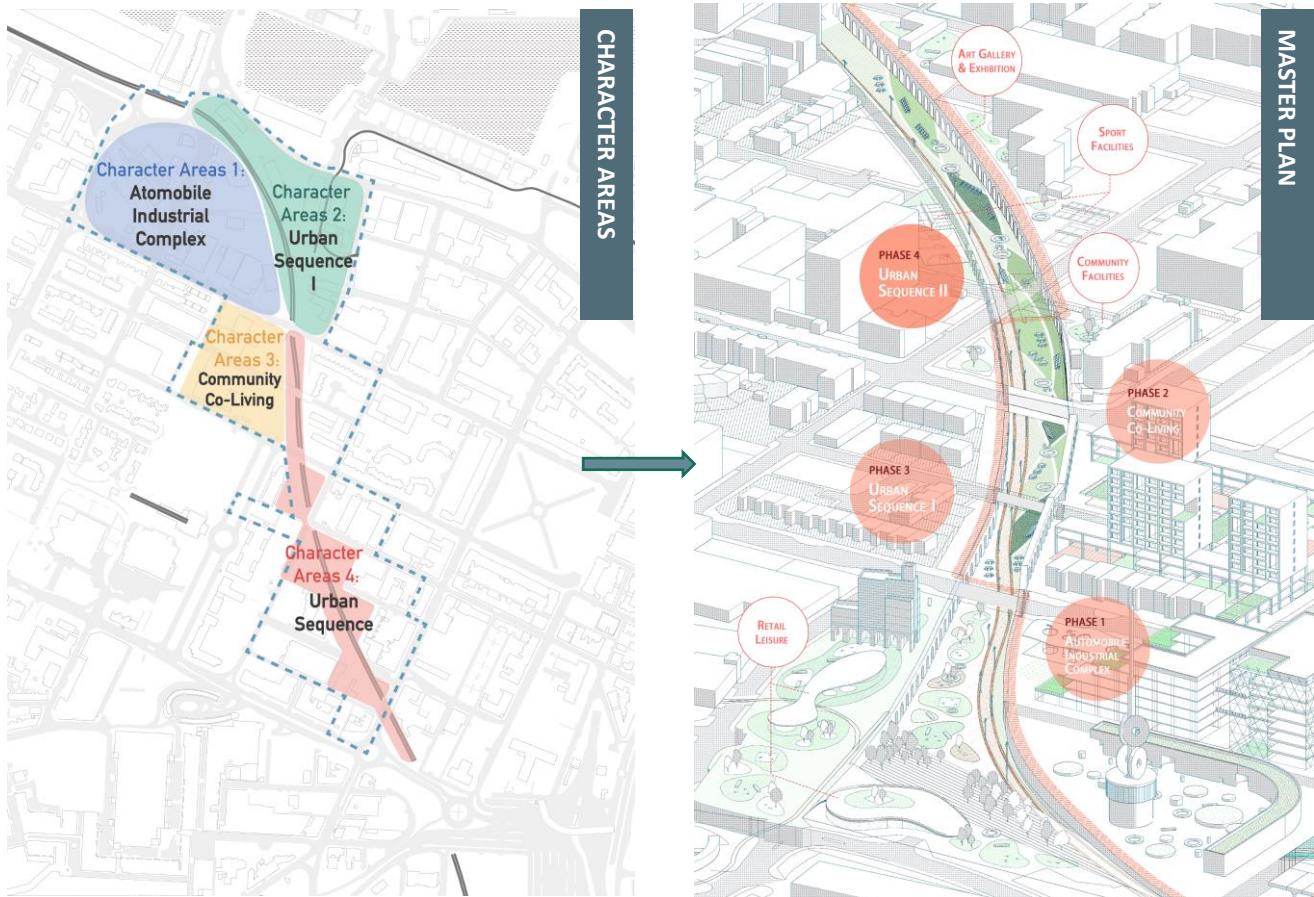
### Action area 3 policy

Urban Greening Factor standard is intended as a response to the increasingly challenging impact of high urban spatial density on local identity and livability and requires local authorities to protect and upgrade green spaces and green infrastructure (Natural England, 2023).

## OVERVIEW OF CHARACTER AREA 1-3

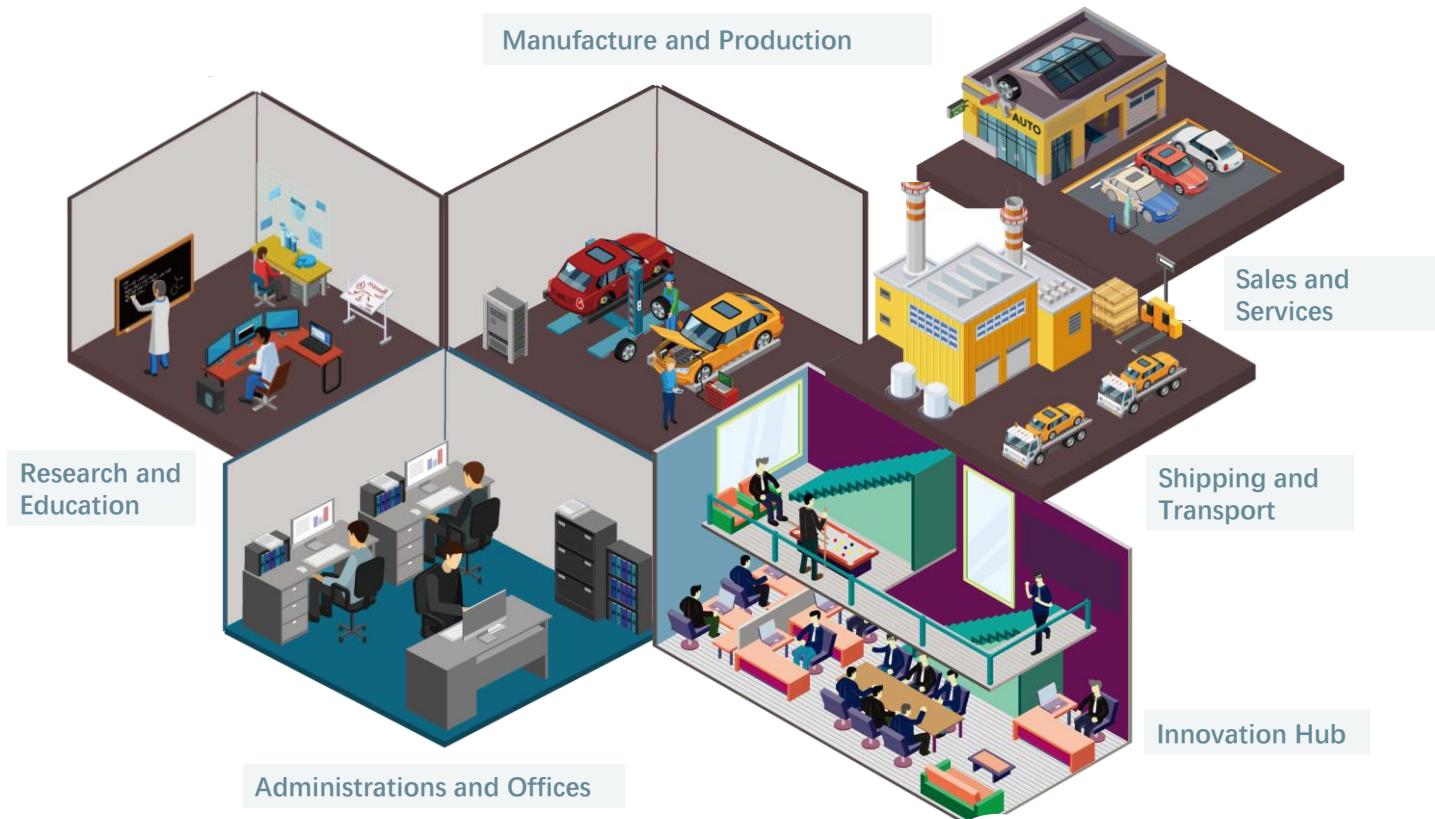


## OVERVIEW OF CHARACTER AREA 4



# 6.1 ACTION PLAN AREA 1: Car Industrial Complex

## CONCEPTUAL DIAGRAM



### **6.1.1 Combination of Traditional & Modern Automobile Industry**

We have established a new automobile industry cluster with two main functional groups consisting of six functions. The first group provides end-to-end services including research and development, manufacturing, storage, and sales (see in the above **Conceptual Diagram**), aiming to create a new destination for automobile production and purchase. To achieve these functions, we have implemented the corresponding spatial strategies.

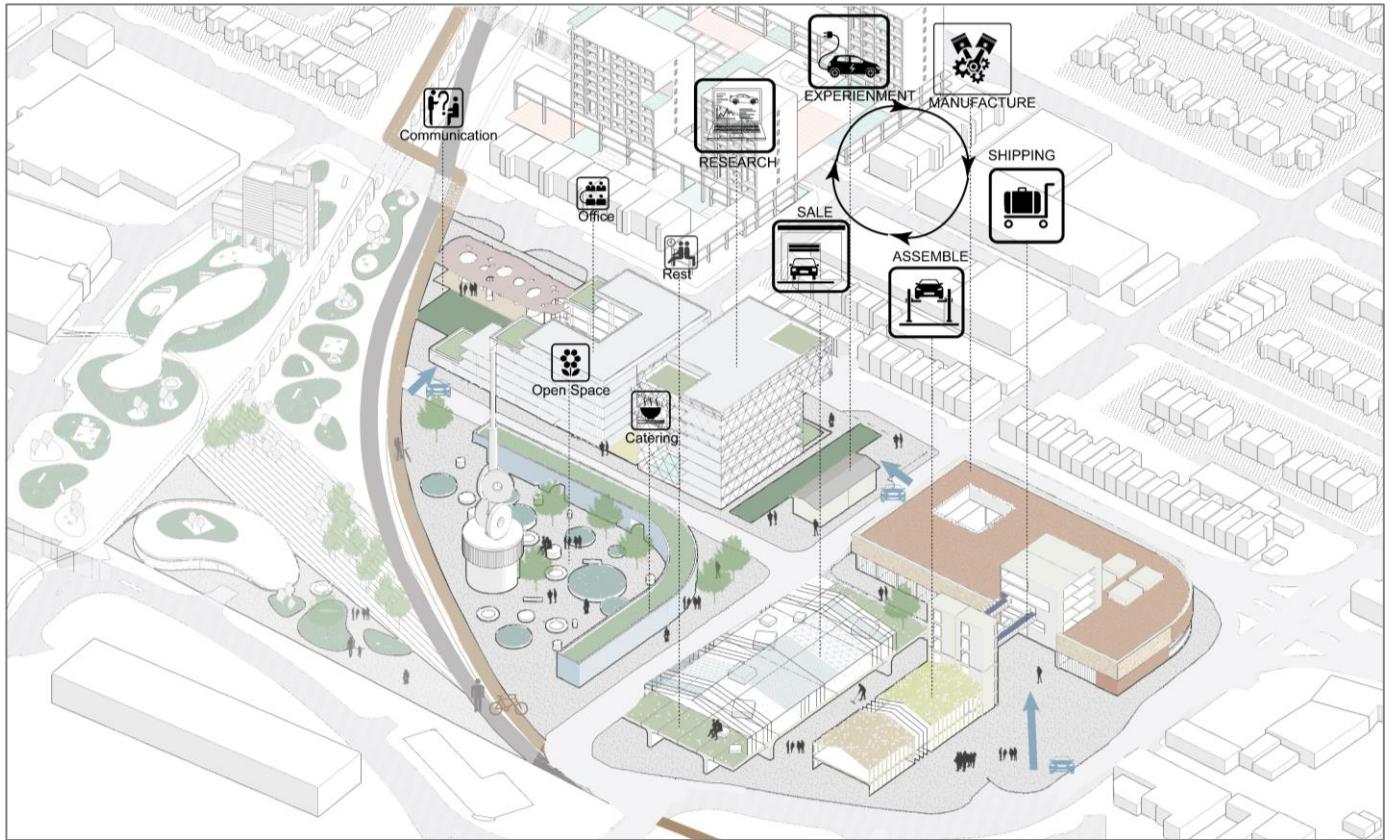
A successful example of similar revitalization is Tesla's Fremont factory in California. By transforming a closed manufacturing facility into an innovative hub for electric vehicles, Tesla not only created jobs but also contributed to the growth of the electric vehicle market. This showcases the potential of adaptive reuse and strategic planning in revitalizing industrial areas for future industries.

#### CASE STUDY 1: THE TESLA'S FREMONT FACTORY, FREMONT, CALIFORNIA

Comprehensive industry line and local-based production



### 6.1.1 Combination of Traditional & Modern Automobile Industry



At the site's eastern entrance, the primary buildings house production facilities that cleverly integrate office and manufacturing spaces while maintaining a traditional factory structure. Office buildings are strategically placed at the end of the factory, promoting collaboration within the automotive industry's supply chain. These adaptable factories can accommodate traditional automotive sectors and prepare for future production facilities needed for the transition to new energy sources.

On the western side, two tall buildings serve as research centers and offices, specifically designed to meet the needs of high-tech industries. Our focus is on creating attractive spaces for talented individuals and fostering communication and work. Through infrastructure updates, we aim to revitalize the industrial park economy, with a particular emphasis on new energy vehicles.

The Tonsley Innovation District in Adelaide, Australia, transformed a former car manufacturing site into a mixed-use innovation hub, focusing on advanced manufacturing, clean technology, and research and development. To attract investment and high-tech

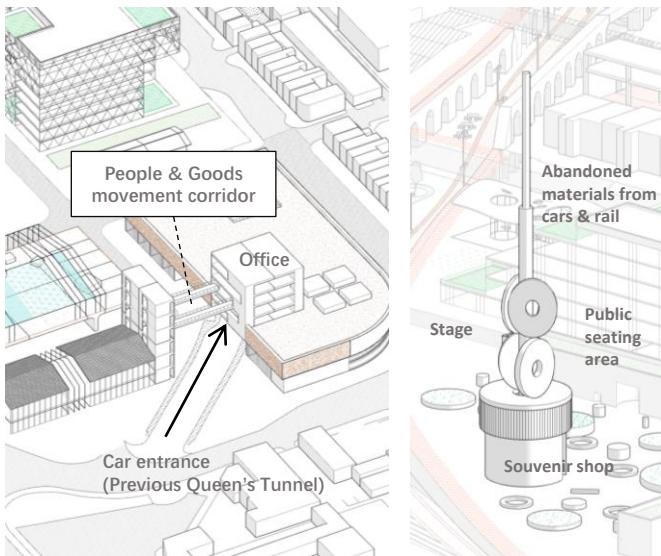
talent, the project combines research, working, and living spaces. The key lesson is to integrate industry, institution, and housing to create a functional and sustainable urban zone, including industrial activities with residential and institutional. Developers can create a cohesive and integrated industry complex that supports economic growth and social cohesion through careful planning and designing of the spatial layout. This approach benefits both residents and businesses, offering a holistic approach to urban regeneration.

#### CASE STUDY 2: THE TONSLEY INNOVATION DISTRICT, ADELAIDE, SOUTH AUSTRALIA

[Combine industry, institution, housing](#)



## 6.1.2. Purposeful Reuse of Railway Heritage



We incorporated landmarks, small rest areas, and public spaces to cater to the needs of office staff, tourists, and potential customers while linking with the heritage park and supplementing the overall functions of the cluster. Through spatial design, we repurposed the site's heritage, such as the abandoned Queens Tunnel, as the entrance to the underground parking lot of the warehouse, effectively utilizing the heritage and providing sufficient parking spaces to attract more workers to build the automobile industry.

### CASE STUDY 3: THE ZOLLVEREIN COAL MINE INDUSTRIAL COMPLEX, ESSEN, GERMANY

Creating landmark through waste materials



The Zollverein Coal Mine Industrial Complex in Essen, Germany is a prime example of revitalizing old infrastructure into functional landmarks that create a unique and sustainable urban environment. By utilizing railway heritage and creating a landmark using coal infrastructure shapes, the project showcases its transformation and history while emphasizing the importance of integrating heritage into new developments and preserving the original character to enhance the community's value.

## 6.1.3. Integrate Fragmented Urban Fabrics



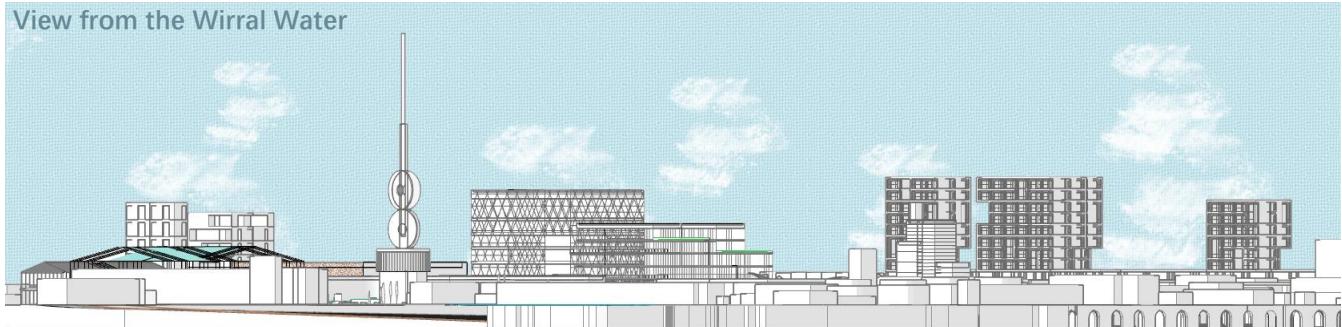
After demolishing the original building structure, we integrated the city's texture while creating a new skyline to maintain consistency with the surrounding urban environment. The renewal of the urban texture continues the form of the surrounding road network and improves permeability and connectivity, replacing the previous disorder with a regular block form to make the industrial park accessible by various modes of transportation.



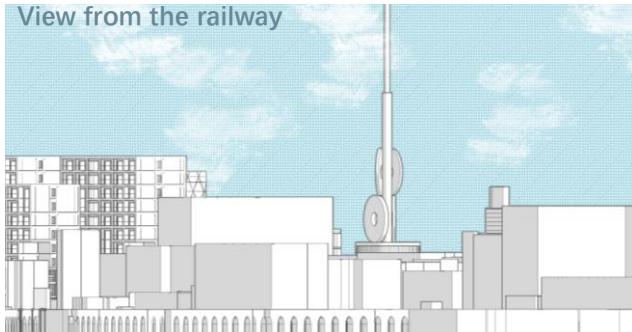
At the same time, we pay attention to the diversity of urban texture, combining large buildings with small green spaces and retail spaces to promote street vitality and meet the activity needs of different groups of people. Although the large-scale renewal of urban texture may cause damage to the local community or lead to gentrification, it is indeed a key strategy to attract external flow and revitalize the industrial park economy.

#### **6.1.4. The Reshaping and Creation of Skyline, Landmark and Cityscape**

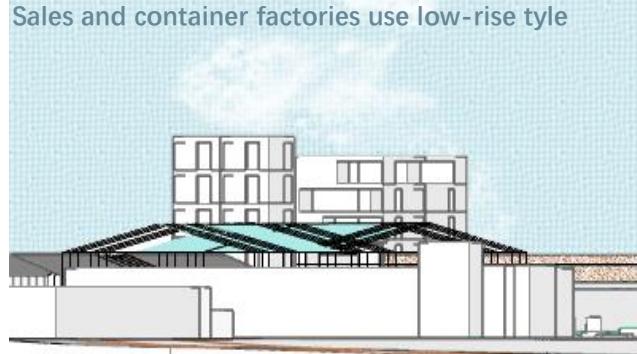
**View from the Wirral Water**



**View from the railway**



**Sales and container factories use low-rise style**



We have set up a landmark up to 80 meters high on the east side of the industrial park, which is conceptually derived from abandoned car and train parts. Industrial heritage shapes the city skyline in the form of landmarks and is directly connected to contemporary urban life and community culture. This is also conducive to the realization of the circular economy, increasing the sense of place and establishing a distinct identity for the industrial park

in the region. In this way, railway heritage can not only be effectively protected but also be developed into cultural symbol assets to revitalize the local economy by attracting more tourists to consume. Furthermore, we ensured that our sales and container factories use a common low-rise style to differentiate them from the production facilities, which have a more industrialized architectural design focused on research and development.

#### **6.1.5. Green Infrastructure To Minimise Industrial Impact**

To mitigate the environmental impact on the surrounding community, we have incorporated some green and eco-friendly facilities and functions, including green factories that combine half of the factory space with green facilities.

Five Cail in Lille is a sustainable industrial park regeneration project that repurposes industrial areas for ecologically-minded urban communities. It features modern gardens and rainwater collection systems, utilizing small spaces like roofs for green infrastructure. We learn from Five Cail that urban renewal can create healthier green spaces by integrating ecosystems and buildings with urban gardens, and green infrastructure on building roofs, such as gardens, can reduce the heat island effect and collect rainwater while providing resting space.

##### **CASE STUDY 4: THE FIVES CAILS, LILLE, FRANCE**

Green Infrastructure Implementation



## **6.1.5. Green Infrastructure To Minimise Industrial Impact**

The concept of sustainable and green infrastructure is integrated into the design of buildings and industrial parks. We designed part of the warehouse space as a green vegetation belt with transparent roofs, dedicated to providing employees with rest spaces. This semi-open and highly transparent design means that the factory not only has a production purpose but also carries a purpose to be observed, which is also an important part of our development of cultural tourism. The role of green infrastructure in factories

is reflected in pollution purification, temperature regulation, energy-saving, and emission reduction. Small rooftop gardens and large central green spaces are also set up in office buildings, directly connected to the entrance of Dock Branch Park. Different types of green public spaces are set up around the landmark, some of which are meadows for performances, some are rain gardens, and some are planting troughs, surrounding the souvenir shop under the landmark.

### **TYPES OF GREEN INFRASTRUCTURE**



**Green Roof, Rain Gardens And Meadows**



**Mixed Hedge Planting**

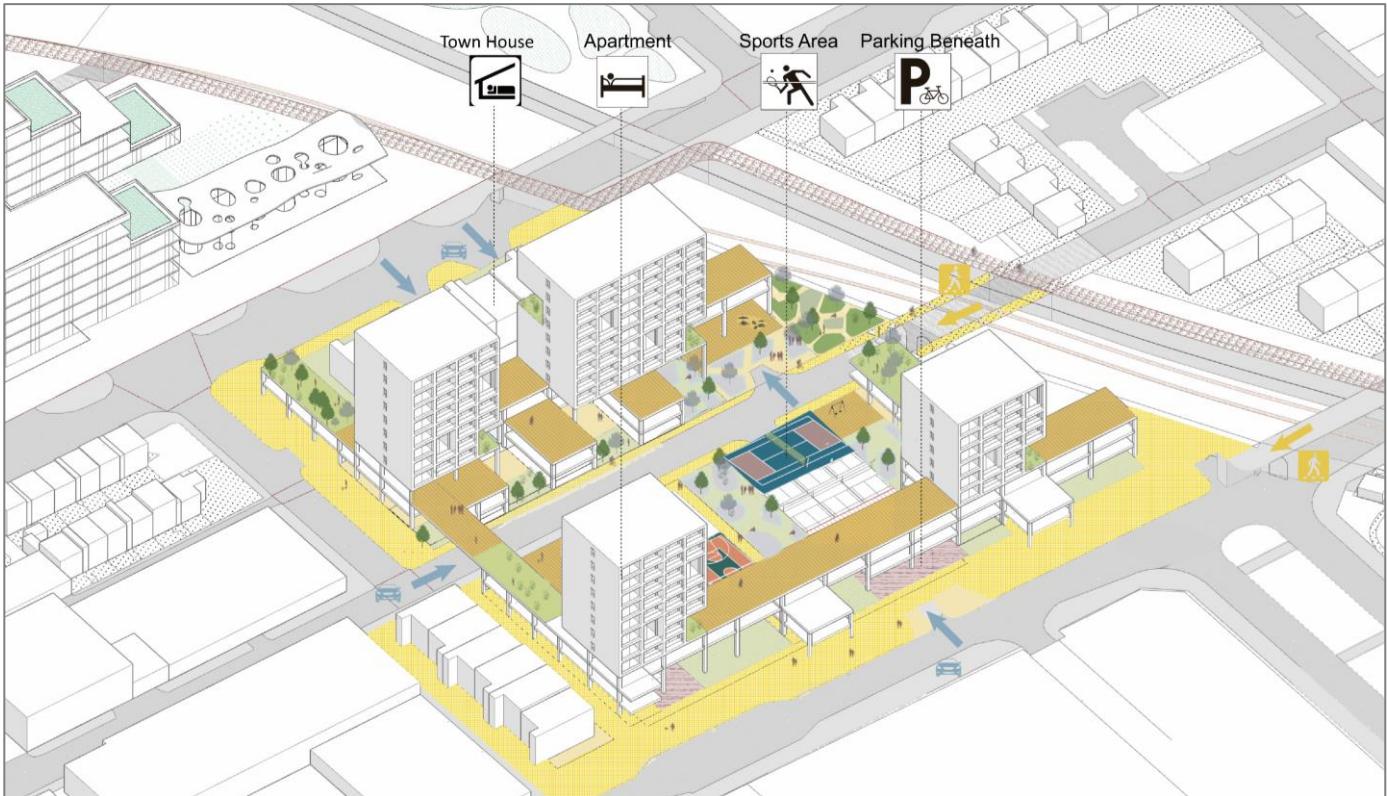


**Amenity Ground & Roof Planting**



**Standard Semi-mature Trees**

## 6.2 ACTION PLAN AREA 2: *Co-living Community*



We designed a mixed-use residential development to the south of the industrial complex and to the west of the railway ruins. The old fragmented, underutilised factory and unused warehouses would be demolished

and replaced with four high-rise flats and two rows of townhouses. Our site is anticipated to fulfil the following goals with the building of this housing

### CASE STUDY1: NEW GROUND CO-HOUSING, UK

#### **1. Brief Description**

New Ground Cohousing in Barnet, UK is a community-led housing project consisting of 26 self-contained flats and a communal house designed to create a supportive and sustainable community for women over 50. The project prioritizes social interaction and mutual support among residents who share tasks such as cooking and gardening, promoting social cohesion and sustainability.

#### **2. How it is related**

As we want to realize a co-living community in dock branch, the creation of the sense of community is quite important. The New Ground Cohousing project uses the concept of cohousing to build a bridge for neighbours to get along and help with each other.

#### **3. Lessons learned**

The key lesson learned is the importance of creating a sense of community in residential areas. It can be achieved by incorporating diverse building types to cater to different households and income levels. Additionally, the concept of Cohousing, where



residents actively participate in the management and upkeep of their community can foster a strong sense of social cohesion and neighbourly relationships. Open space and green space are also crucial elements in creating a liveable urban environment, providing residents with access to outdoor areas for recreation and relaxation.

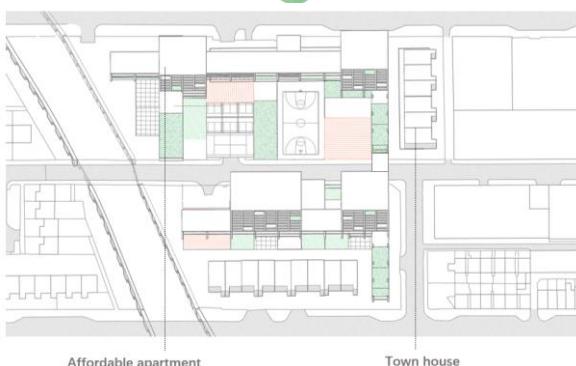
# WHAT COMMUNITY CO-LIVING DELIVERS?



Our housing stock design philosophy is to create an inclusive, diversified, and vibrant residential environment. So, in order to accommodate people of all economic levels and walks of life, we provide three types of ownership: leasehold, full ownership, and shared ownership.

## 6.2.1 Sense of Community

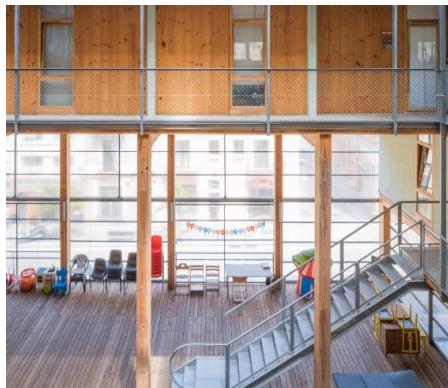
In terms of spatial form, we built a pattern of buildings surrounding the community's public space, as well as a green sky promenade where residents may walk through and stay between the apartment buildings, where they can rest and collaborate to build a public garden. This will contribute to a stronger sense of community. Furthermore, we have abandoned conventional British residential areas' private gardens and private parking spaces in favour of placing parking spaces and public spaces on the ground floor of the residential building, making effective use of the ground floor.



## 6.2.2 House for diverse house holds and income

Our housing stock design philosophy is to create an inclusive, diversified, and vibrant residential environment. So, in order to accommodate people of all economic levels and walks of life, we provide three types of ownership: leasehold, full ownership, and shared ownership.

## Case study2: La Borda, Barcelona



### 1. Brief Description

La Borda is a cooperative housing project in Barcelona, with 28 apartments owned and managed by residents. It prioritizes community participation, social cohesion, and sustainability, featuring solar panels, rainwater collection, and a community garden.

### 2. How it is related

As the public space for community in dock branch is quite limited, it is important to leave some space for residents to do some sports or other activities. The La Borda project of which the first floor was erected to form a free space for community activities.

### 3. Lessons learned

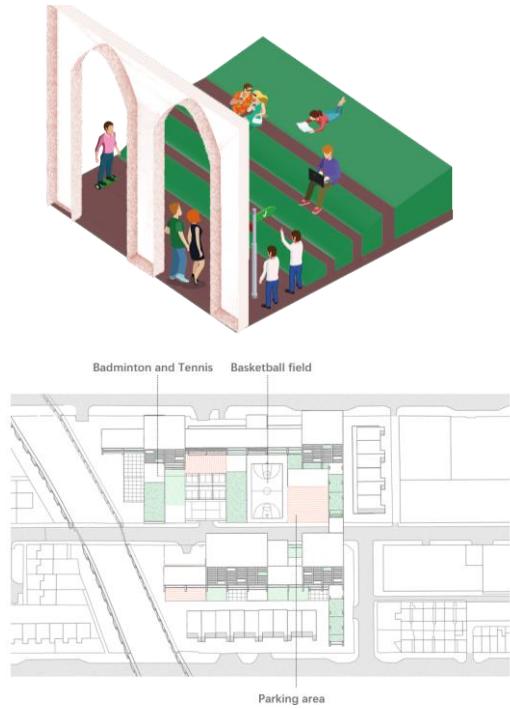
An important lesson learned is the use of fragmentary space inside or around buildings to supply sports facilities within walking distance. By incorporating sports facilities such as basketball courts, outdoor gyms, and running tracks, residents can enjoy easy access to exercise options without having to travel far. Furthermore, by utilizing underutilized spaces around buildings, these facilities can be built without sacrificing valuable land.

# WHAT COMMUNITY CO-LIVING DELIVERS?



## 6.2.3 Improved health of residents

Within the community, we have redesigned features such as basketball and badminton courts to enhance the health and well-being of the residents, as well as upgrading the green landscape in terms of form and function, and using the green space as an entry point to lead people to the Heritage Linear Park, with the hope of enhancing the places where residents can exercise and exercise, thus improving the health of the residents in the area



## 6.2.4 Connection with railway heritage

Because of the residential neighbourhood's proximity to the Heritage Linear Park, the task was to increase the connectivity between the area and the park without disturbing the people. To begin, we have adopted a green link that, on the one hand, leads to a pedestrian approach rather than a car, reducing the impact on residents, and on the other hand, reduces the number of people driving through the entrance.

Based on this, the entrance in the residential area will primarily serve the surrounding community, and on the other hand, we will design both lifts and stairs to provide easy access for various groups of people.

### *Case study 3: The Paul-Gerhardt-Allee Apartments, Berlin, Germany*

#### **1. Brief Description**

The Paul-Gerhardt-Allee Apartments in Berlin offer affordable and sustainable housing with 142 of the 230 apartments subsidized for low-income families. The project shaped the area with its inter-connected blocks.

#### **2. How it is related**

The housing type in dock branch is quite simple and monotonous, which could not attract residents to move into the area. The case of the Paul-Gerhardt-Allee Apartments project solve the problem by building apartments of different heights, and it also provide space for the possibility of community retails.



#### **3. Lessons learned**

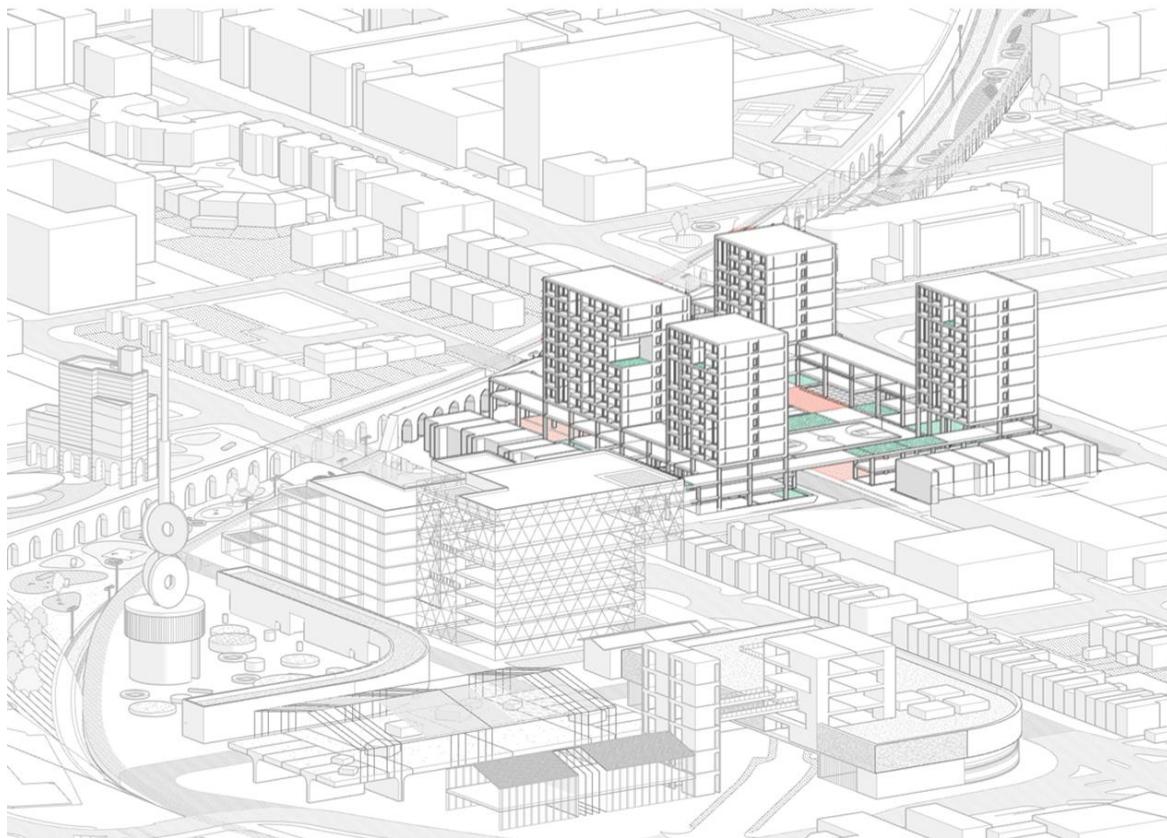
The key lessons learned is using the mixed-use buildings to create a convenient and liveable urban environment. By integrating commercial and residential spaces, these buildings can form a life circle that provides residents with easy access to work, shopping, and other essential amenities. Additionally, by incorporating diverse building types, such as affordable housing, family housing, and senior living, these buildings can break the monotonous pattern of urban development and meet the varied housing needs of different people.

## WHAT COMMUNITY CO-LIVING DELIVERS?

### 6.2.5 New buildings forms to break the monotonous pattern

In order to minimise the disruption of the proposed design to the surrounding heritage landscape and the original site landscape, we have ensured in the design

process, for example through aerial views, that a variety of vibrant residential areas are provided while maintaining consistency and uniformity in building height and plan urban grain, and that the views ensure that the heritage park is visible and obvious to passers-by and residents. On the basis of this, we propose a novel architectural shape that improves the area's readability and feeling of recall.



## 6.3 ACTION PLAN AREA 3: *The Linear Park*

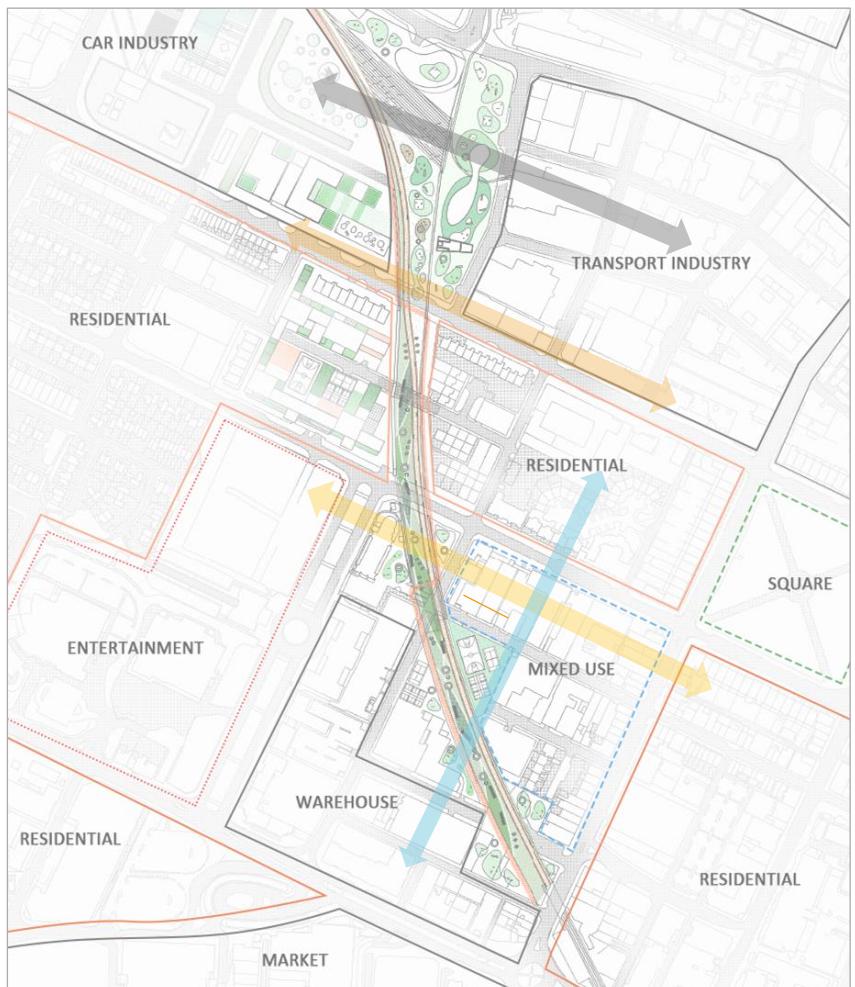


Figure: The original concept of the Park

Figure: The way urban blocks stiches and permeate

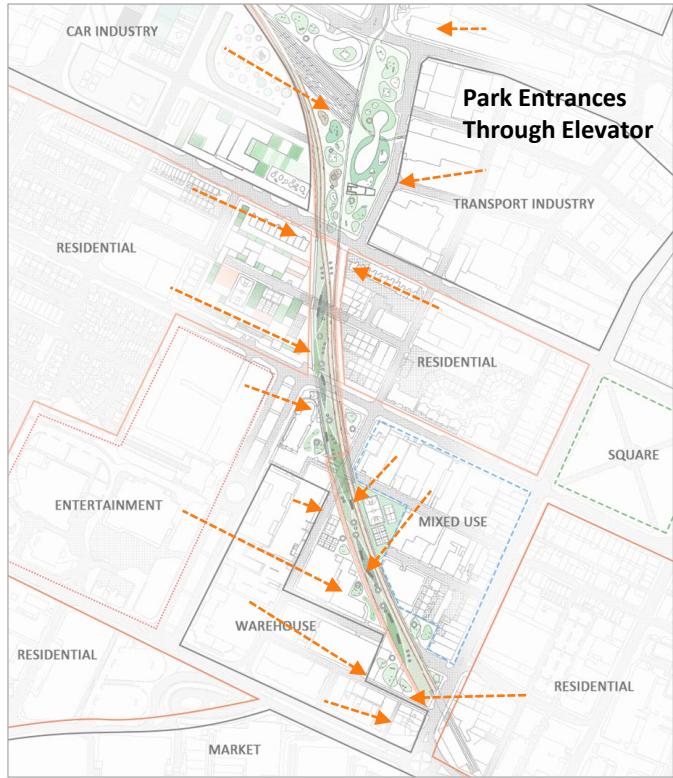


Figure: The entrances of the linear park

### 6.3.1 "URBAN SEQUENCE" CONNECTS THE LINEAR AREA

#### CASE 1: YIYANG RAILWAY LANDSCAPE REDESIGN



The proposal seeks to preserve the rich historical railway heritage by creating a linear park in its original sunken railway site. This park retains the site's original features while incorporating additional amenities, pathways, and connectivity, serving as a comprehensive network linking various areas of the city.

Inspired by the successful Yiyang Railway Landscape Redesign project, the design emphasizes the integration of green spaces, ecology, cultural elements, and recreational activities.

The Yiyang Railway in Shouguang, Shandong Province, has posed urban planning challenges due to city development. To address this, the "Colourful Dream Station, Green Journey" initiative proposes transforming the railway into a green ecological corridor with distinct zones like History Memorial, Urban Shuttle, and Natural Journey.

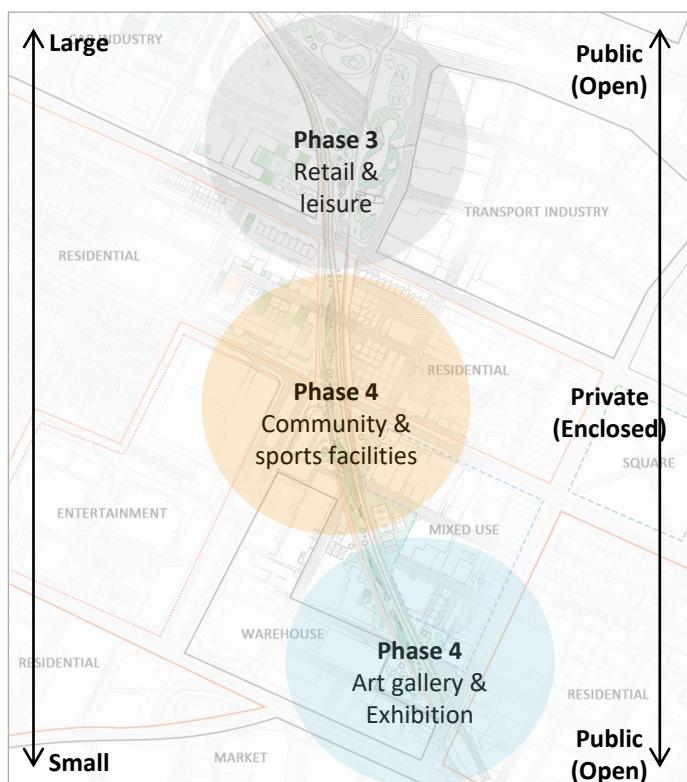


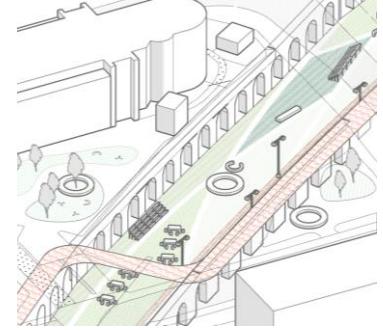
Figure: Characteristic area within the park

This transformation will connect green spaces and serve ecological, landscape, cultural, and recreational purposes.

#### Maximizing Public Space: Providing Inclusive Facilities for All Ages



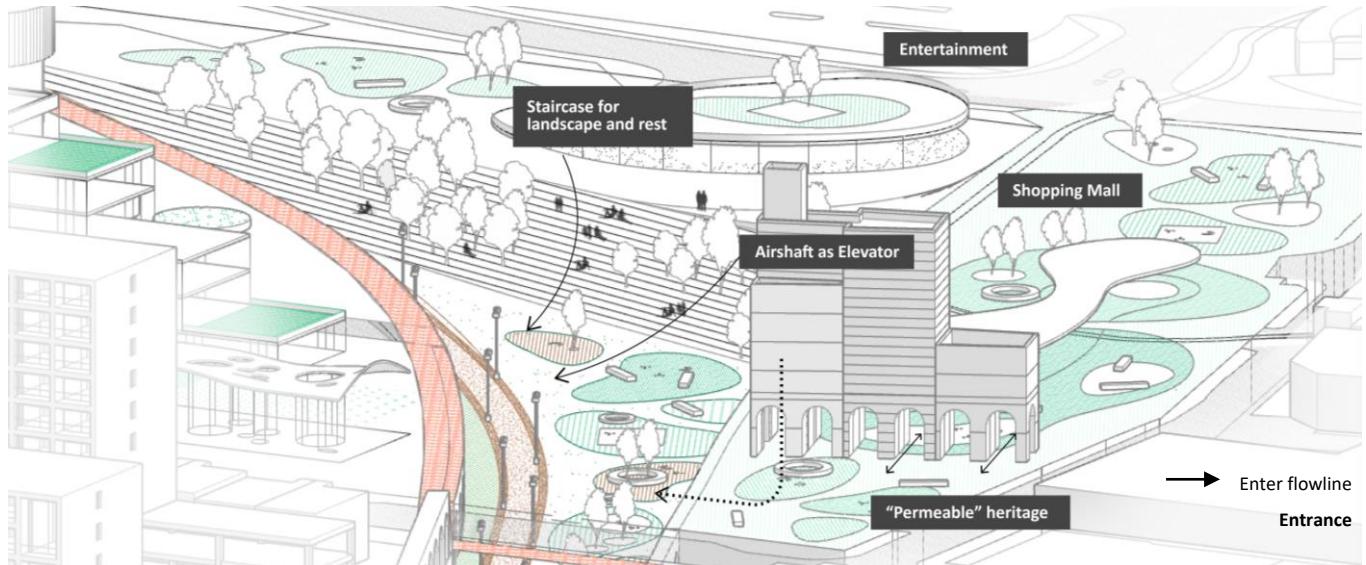
a. Transform vacant spaces into sports field



b. Transform left-over spaces in front of building into entrance squares

The linear park design follows a gradual narrowing pattern from north to south, transitioning from an industrial park to a residential area and an open commercial zone. Divided into three functional areas—retail and leisure, community service facilities, and art exhibitions—the park utilizes previously vacant areas as entrance plazas and distributed sports facilities. These additions not only provide year-round sports and leisure spaces but also optimize urban space utilization, effectively connecting the city from all directions.

### 6.3.2 Gateway to Serenity: The Staircase in the north



#### CASE 2: BATTERY PARK CITY

To connect the park with the industrial city at the north end, we have designed a large staircase that provides easy access for visitors or users coming from all directions to enter the park and rest or enjoy the scenery. In addition to the staircase landscape, this location serves as the most open entrance to the linear park and is the site of the railway ventilation heritage building, making it of exceptional commercial and cultural value. Therefore, it is ideal for the construction of related souvenir shops and shopping malls. The inspiration for this design comes from The Battery Park City Master Plan, which has successfully facilitated the development of commercial and residential spaces, as well as open spaces in lower Manhattan, creating a neighborhood with a balanced mix of uses and diverse architecture that blends seamlessly with the existing New York City street grid.



### 6.3.3 A Harmonious Blend of Nature, Heritage, and Community

#### CASE 3: THE RAIL PARK IN PHILADELPHIA



#### CASE 4: LA PETITE CEINTURE



#### CASE 5: CAOYANG CENTENNIAL PARK



## A Variety Of Plants, Arts, and Public Facilities Throughout The Park



Our design concept focuses on promoting green travel and a healthy lifestyle through the implementation of pathways and bicycle lanes within the linear park. Taking inspiration from successful case studies such as the Caoyang Centennial Park, Petite Ceinture in Paris, and Philadelphia's Rail Park, we aim to create a vibrant green space that combines nature, heritage, and community well-being.

Drawing from the Caoyang Centennial Park, we will repurpose existing railway tracks to construct pathways. Similar to the park's approach, we will lay a plastic running track on top of the rails, providing a safe and enjoyable walking and running experience for residents. By transforming the railway infrastructure, we pay homage to the region's history while creating a serene escape from the city.

Incorporating the bicycle lane design from Petite Ceinture in Paris, we will create dedicated lanes at the same level as the upper buildings and roads. This approach will facilitate eco-friendly transportation options, encouraging residents to opt for cycling as a sustainable mode of travel. By seamlessly integrating these lanes with the park's overall design, we create a harmonious blend of functionality and aesthetics.

Taking inspiration from Philadelphia's Rail Park, we will enhance the park's ambiance by planting a variety of plants and trees throughout the area. By creating a lush green environment, we contribute to a cleaner and healthier atmosphere for park visitors. Additionally, we will install public facilities such as tables and chairs, providing convenient resting spots for people to relax and enjoy their surroundings.

## Pathways And Bicycle Lanes Inside And Along The Linear Park

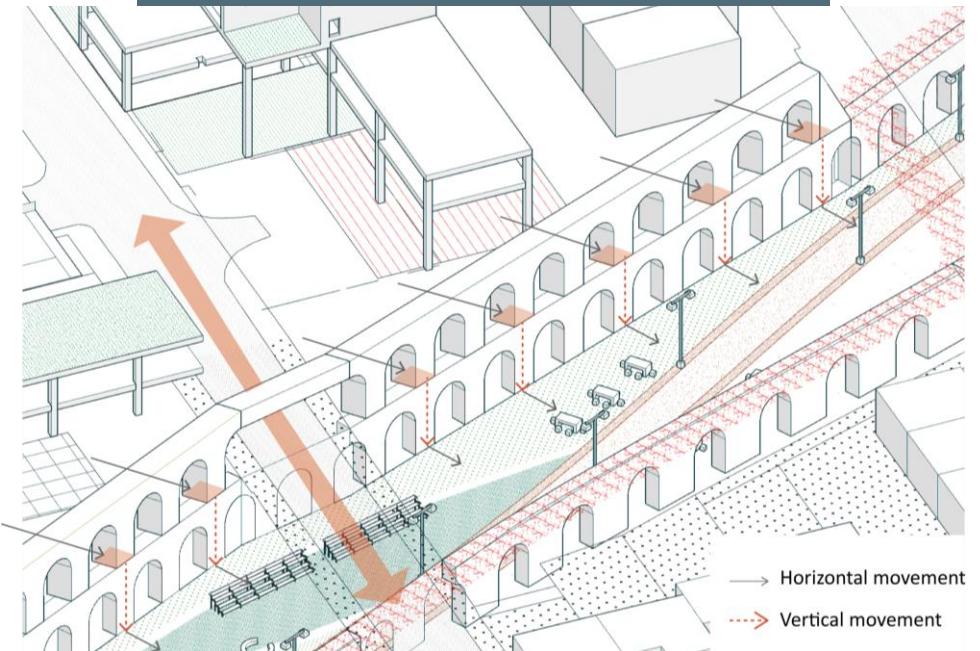


To add cultural identity and pride to the park, we will invite local mural artists and public art creators to paint on selected arches, similar to the approach taken in Philadelphia's Rail Park. These artworks will tell the story of the region and its railway heritage, providing a visual representation of the local community's identity while enhancing the park's aesthetic appeal.

By combining the best practices from these case studies, we aim to create a transformative linear park that revitalizes the urban landscape, preserves heritage, fosters a connection with nature, and promotes sustainable design principles. This captivating environment will serve as a timeless sanctuary, attracting residents and tourists alike, while promoting a greener and healthier way of living.

To enhance accessibility, we've utilized the arch recesses and constructed stairs from the ground, making it easier for people to descend into the sunken space of the park. These stairs ensure seamless entry, catering to individuals of all ages and abilities. Handrails, clear signage, and proper lighting further enhance the accessibility and inclusivity of the park.

#### Enhance Accessibility & Connection to railway heritage



# 07

## DELIVERY MECHANISM

# 7. Delivery

## 7.1. Project Schedule

The timeline of the whole project is shown in the figure below. It will be mainly divided into three phases of which the first two phase time is partly coincident to make sure the project will be moving into top gear on time and the whole project is scheduled for more than seven years.

Phase 1 is from 2023 to 2027, the task in this period is mainly related to the demolition of designated buildings and new construction. Most of the scattered and cluttered warehouses will be first demolished and then clear the construction waste. Then, separate the zones and build new buildings and constructions according to the proposals in the action plan one by one.

Phase 2 is from 2025 to 2035, actions will be taken to provide intermediate supplement with further and holistic amenities during the periods. After building some new constructions, some related facilities and open spaces will get on the agenda. The project provides a mix of facilities that cater to the diverse needs of the residents. For example, community

centres, sports facilities, and green spaces for social interaction and physical activity, healthcare facilities, educational institutions, and job training centres for economic opportunities. Last but not least, some accessible facilities will also be turned into practice in this phase.

Phase 3 is from 2027 to 2040+ and even till the future, at that time the whole project will be almost all finished, and what still needs to be done is project review and further maintenance and improvement. In this phase, a comprehensive analysis will evaluate the project's impact on the community and economic viability first. Based on both quantitative and qualitative data, areas needing improvement will be identified, such as structural or maintenance issues, enhancing functionality, or implementing new features. Finally, future improvements will be considered, including new amenities, emerging technologies, and partnerships for long-term sustainability.

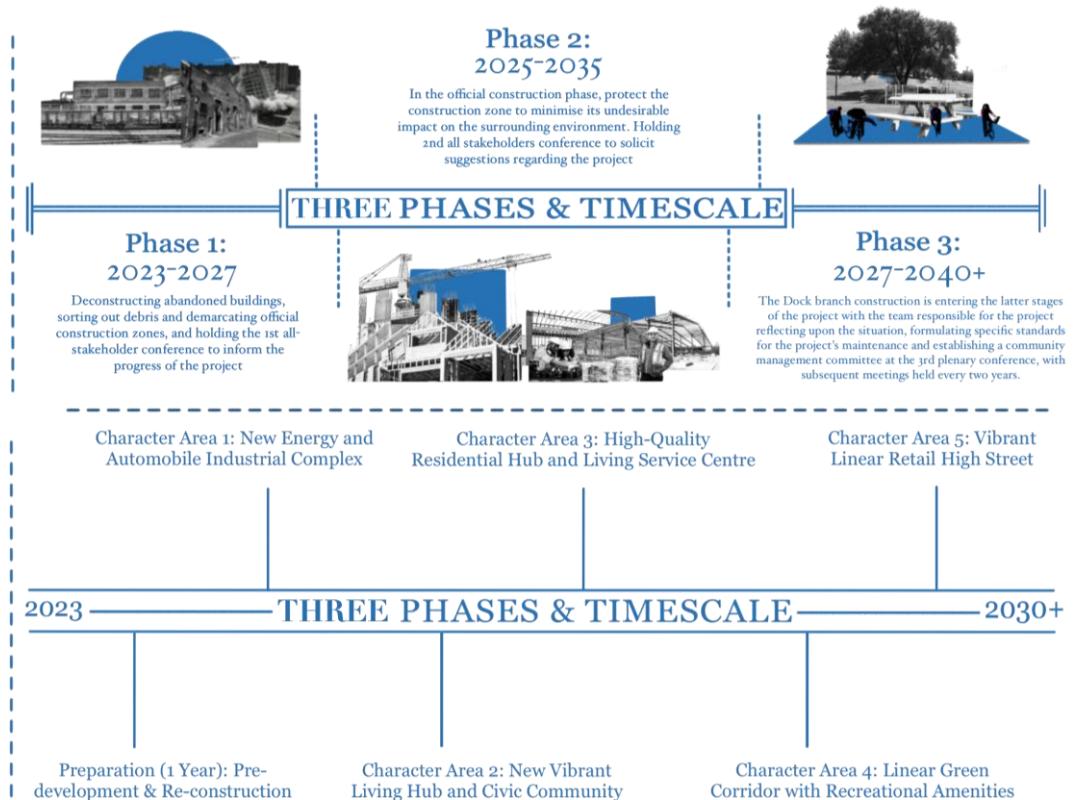


Figure: Three phases & Timescale

In order to execute the three phases more effectively, more detailed milestones and project orders are set. First, using about one year for pre-development and reconstruction from 2023. Then, character area 1: New energy and automobile industrial complex will start construction. After it is finished, character area 2: A new vibrant living hub and civic community will begin to build, while the first area will enter into phase 2 during the same period. Follow this crossed timeline to move down

the remaining projects which are character area 3: A high-quality residential hub and living service centre, character area 4: A linear green corridor with recreational amenities, and character area 5: A vibrant linear retail high street. Finally, all these character areas will be finished and entered into daily use in about 2030. In this way, the whole regeneration project will be carried out step by step efficiently.

## 7.2. Financial Cost Analysis

Based on construction cost statistics for typical structures in the UK (CostModelling, 2023), The following costs apply to the building only (i.e. no external works) and include upfront payments, contractor's overheads and profit set at 5.5%. All costs are exclusive of land purchase, fees, VAT and

any fittings, furnishings and equipment provided by the client. Figure 73 depicts a rough construction budget for the structure. The overall budget, including outdoor open space, is estimated to be around £ 17.5 million.

*Auto Industrial Complex: 6721699 £*

Building Entities	£/m2	Area/Quantity	Cost
Offices, air-conditioned: 6+ storey	2,850 - 3,170	1600	4560000
Vehicle repair and maintenance buildings	1,710 - 1,910	500	855000
Vehicle showrooms with workshops	1,600 - 1,780	400	640000
Advance factories/offices: mixed facilities	1,500 - 1,660	600	900000
Warehouses/stores: generally	1,050 - 1,170	450	472500
Distribution centre/warehouse 16m to 24m high (10000m <sup>2</sup> footprint)	570 - 630	100	57000
Outdoor eating Area	214.95	20	4299
Bench	100	15	1500
Tree	30	30	900

*Co-living Community 6130950 £*

Building Entities	£/m2	Area/Quantity	Cost
Estate housing: terraced: 2 storey 1,340 - 1,500	1,340 - 1,500	585	783900
Flats/apartments with lifts: 6+ storey	2,020 - 2,240	891	1799820
Mixed commercial developments	1330-1490	1486	1976380
Links, corridors,	2,700 - 3,000	565	1525500
Grass	20	760	15200
Trees	30	40	1200
Footpath	29.4	20	4299
Lamp Post	113.1	20	2262
Sports Area	30	870	26100

## Urban Sequence: 4751561 £

Building Entities	£/m2	Area/Quantity	Cost
Art galleries, facilities for special displays	3,770 - 4,170	120	452400
Visitors centres	3,440 - 3,820	560	1926400
Mixed recreations buildings, holiday camps, caravan site buildings, etc	2,600 - 2,880	860	2236000
Links, corridors,	2,700 - 3,000	340	91800
Grass	20	1860	37200
Trees	30	40	1200
Footpath	29.4	20	4299
Lamp Post	113.1	20	2262

Surface Cover Type	Area	Factor	Total
Mixed hedge planting (8)	1366.46	× 0.6	819.876
Amenity ground cover Planting (9)	3404.88	× 0.5	1702.44
Standard / semi-mature trees (3)	2866.73	× 0.9	2580.057
Native hedgerow planting (4)	16546.40	× 0.8	13237.12
Intensive green roof (11)	2921.08	× 0.8	2336.864
Open aggregate and granular Paving (20)	4509.70	× 0.2	901.94
		Total	21578.297
		Total Site Area	39707.69
		UGF	0.5434 (0.54)
		(21578.297 / 39707.69)	

Major development meets National **Urban Greening Factors** of at least 0.3 for commercial development, 0.4 for residential development, (and, where appropriate, 0.5 for residential greenfield development).

## 7.3. Partnership and Funding

### Public Partnership



METRO MAYOR  
LIVERPOOL CITY REGION

Based on the spatial planning, Liverpool City Region hopes that to use unused land to develop the idea of garden city, and it provide **UK public funds and LCR public**, and **Transforming Cities Fund et al.** (LCR, 2019).



The Wirral Council will support the strategy as its spiritual of adding more outdoor sports space and green infrastructure for eco-friendly city, and the **Future High Streets and Town Deal funds** highlight community wealth growth and long-term sustainability (Wirral, 2020).



LEVELLING  
— UP —

Invest  
Hull

The National Planning Policy Framework point out the principle of promoting healthy and safe communities, and to support the facilitate land assembly and regeneration, the Bill suggests a variety of actions and there is a **Levelling up and Regeneration fund**. (Levelling up, 2022)

## Private Partnership



**Merseyrail:** Major railway operators in the Merseyside area include Birkenhead, which currently owns the heritage site. They may be interested in collaborating on a rail heritage project to promote the local rail network calendar.

The **Nissan** plan to offer totalling **£ 61m investment** for continuing work by UK Government on a package of support in areas such as skills, R&D and innovation in electronic mobile industry. (DBEIS, 2019)

### Funding:



**National Lottery Heritage Fund:** The National Lottery Heritage Fund is a UK-wide organisation that provides funding for heritage projects, including those focused on historic buildings, landscapes and cultural heritage.



Thanks to an 8.3 million pound investment from the Liverpool City Area Combined Authority's Urban Transformation FundThe campaign will then unlock Hind Street brownfield site for housing and commercial development, build hundreds of new homes and make it a more attractive gateway into the city centre.

## 7.4. Communicating and Reporting

First, the analysis and action plan will be provided to Maccreanor Lavington and Wirral Council, after gaining recognition and improved advice, the edited reporting templates would be separated to local residents and published online to gain the interest of investors and opinions of the public. Before the constriction, the stakeholders such as Maccreanor Lavington, Wirral Council, investors, suppliers, contractors and public representatives will gather together to negotiate with details of planning

to make sure the interest of all the stakeholders are taken into account maxim.

During the project, we will regularly communicate with and report provide updates, maintain transparency, and help stakeholders understand the project progress. Using different ways such as in-person chat, having meetings online, and using social media or websites for open advice and monitoring.

## 7.5. Contingency Plan

The first problem that may occur is the delays in obtaining permits and approvals from the local government. In order to avoid this situation happening, we prepared our regeneration plan in detail and completely to get approvals obtained as early as possible.

The second obstacle that may postpone the schedule is the ownership of some buildings or lands can be unclear (Wirral Council *et al.*, 2021). To ensure not fall behind schedule, it is quite necessary to figure out the land's ownership before construction as accurately as possible.

Moreover, most demolished buildings are factories or

warehouses, how to persuade the existing people and companies to move out can be another point. Targeted at this problem we will communicate with these people to figure out their requirements and negotiate to reach their conditions as much as possible within the budget.

The last risk can be budget overruns. As the continued public sector investment from the left bank is unable to secure (Wirral and HATCH, 2021) and there may occur unexpectedly expenses, regularly monitoring expenses and adjusting the plan is really needed.

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