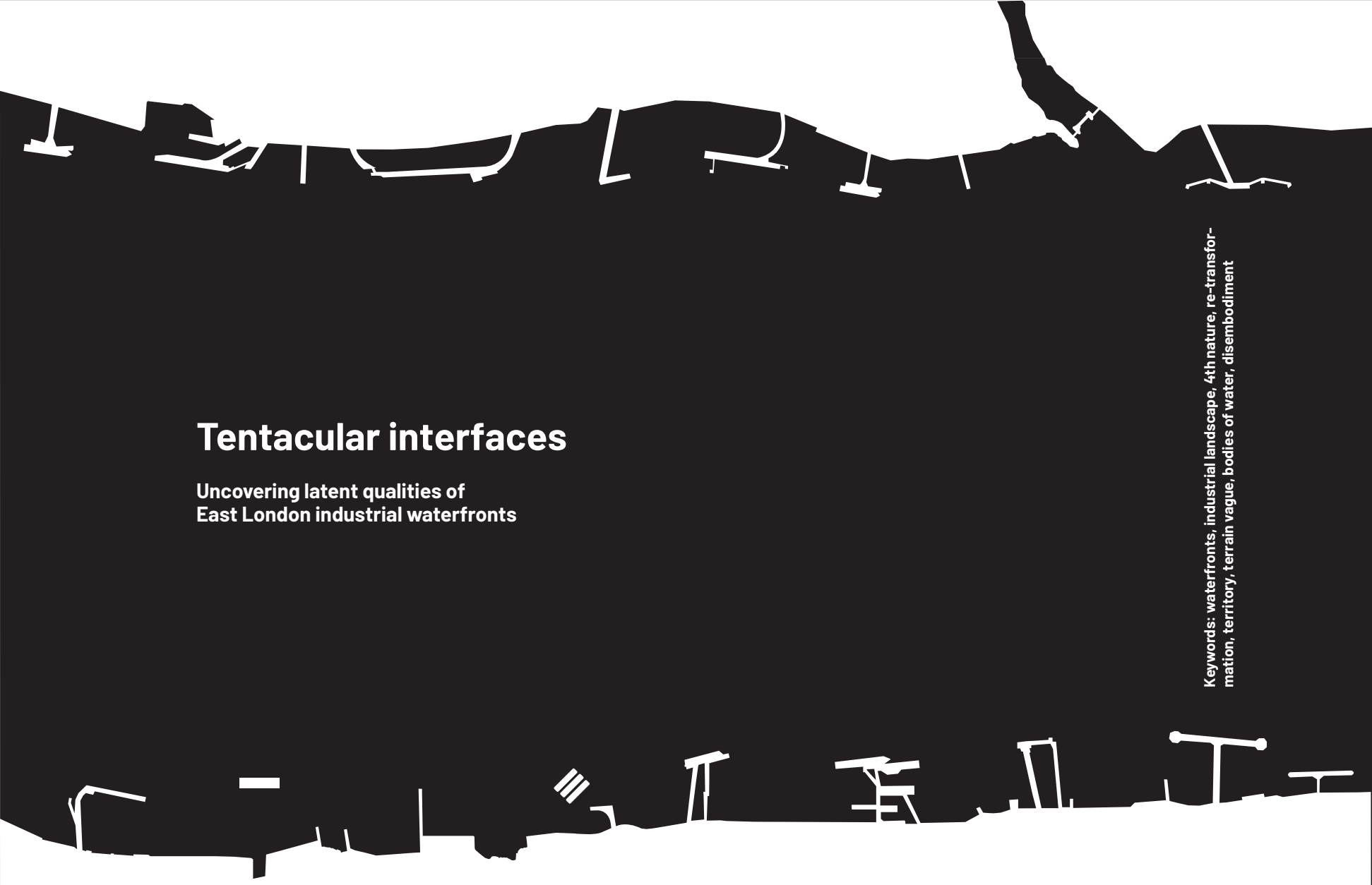

Tentacular interfaces

Uncovering latent qualities of East London industrial waterfronts

Keywords: waterfronts, industrial landscape, 4th nature, re-transformation, territory, terrain vague, bodies of water, disembodiment

Research Paper
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Heterogenous City:
Architectural Design Crossovers
Graduation Studio
2022/2023

There is something hypnotizing about watching infrastructural landscapes. Specifically, working waterfronts in the cities have always fascinated me. Once the dense area of urban blocks is left behind, a new territory of giant machines, vessels and cranes begin. A realm of metal, overgrown by wild grass and surrounded by water. A space where multi-armed machines, formed specifically to do their job, extend their limbs to grab impossibly heavy pieces and turn them into scrap within a moment. Metal clashing, engines roaring, lights blinking. Next to that, long, tentacular piers extend far to the depths of the river, hosting even the biggest ships with the biggest loads. Cargo, coal, scrap, people, anything you want. Endless supply of the cities flows. Ready to go back. Repeat.

I have seen a photograph. People, sand, tides splashing. People move their blankets time and time again just a bit further from the tide. First, in the water come feet, then legs, corps, and limbs. Immersed. Floating. Drifting calmly in the center of the fast metropolis. Is that even possible? Did this happen? A beach, near the Tower of London, in a then-called, dead river?

Introduction

It is hard to imagine that the two situations could take place close to one another, at the same time, in the same river. They bring back the notion of water being a nexus between the human body, natural habitat, and infrastructural systems. In the case of London, the river Thames was a foundation of industrial, economic, and societal development, as well as it became an irreplaceable symbol of the city.

Throughout history connecting industry with water played a more significant role than connecting people with water. The Thames was not so much an ecosystem as it was an infrastructure. An infrastructure that was equally important for humans and machines to operate. A body of water used to its extent for the sake of fulfilling the industrial desires of other, human, **bodies of water** *(Neimanis, 2009)*.

The Thames's industrial history, as well as the dynamic, tidal character, made up London's waterfronts unlike ones in other cities like Copenhagen or Paris, where the relation of the public with water is much closer. During the last two centuries, rapidly growing urban areas became a testing field of tensions between modern cities' desires and nature. The waterfronts became an engineered border between the two conflicted territories and bodies.

For many years extensive water consumption and increasing water pollution resulted in severe degradation of the water quality. At some point, after losing almost all of its biodiversity, the only remaining natural characteristic of the river were tidal flows. The smell and dirtiness of the water got to a point when in the 1950s the river was officially declared dead. This moment marked the beginning of the ecocentric approach towards the Thames. Waterfronts became the forefront of those changes. What used to be dirty and forgotten now became more desirable. Today, the Thames does not only serve as an infrastructure but is seen as an important natural actor within the city.

Images (previous pages):
1Millwall Docks, 1950, Author: Allan Cash Picture Library
2Tower Beach, Author: Henry Grant 1952

Bodies of water
1. Large water reservoirs
2.This concept recognizes that our bodies are part of the water system and so the fundamental part of the natural environment and can not be separated from it or feel more privileged.

Image
Indstrial cluster, Erith

Recently, there is less sacrificing the river ecology for the sake of industrial profits. The current approach is to retransform the riverfronts into more inclusive spaces. However, an idealized view of the big-city waterfront is realized instead of embracing the particular existing qualities. Although such retransformed spaces become much more open to the public, they are often highly controlled, paved areas with designated spots to sit on and little biodiversity. Additionally, many of those spaces seem to be stripped of past identity and lack a real connection to water.

The western part of London's waterfronts is an example of such a commercialized approach. Therefore, the interest of this work lies in the East London waterfront. The East side is still considered to be an industrial waterline, although to smaller extent than in the past. Throughout the years, interesting engineered elements appeared along, over, or under the river. The industry treated the waterfront operationally, adding, subtracting, or exchanging elements almost like prosthetics, implants added to intensify the flows needed for inland operations. As a result, various structures, machines, and tentacular-shaped piers extend from land to the depths of the river, craving to control it.

With the decline of the industry, much has been already erased leaving the territory patched, partially abandoned, and neglected. This waterline territory changed into a landscape of wastelands, water treatment facilities, factories, warehouses, and forgotten structures. At the same time, multiple abandoned spaces in that region are slowly being overtaken by nature. This contradiction of controlled and uncontrolled phenomena creates qualities that are rarely seen in highly urbanized parts of London.

The neglected, but still partially untreated by commercialized approach spaces of East London waterfronts have a chance to expose their potential. There is an opportunity to act for the preservation of the East London waterfront qualities. If those qualities become exposed, there is a bigger chance that the industrial character of the waterfronts can be embraced instead of being turned into other globalized, commercial entities.

1 Commercial waterfront
2 Industry +old dock ramp
3 Flood barrier
4 Woolwich terminal for cars and underwater tunnel for pedestrians
5 Barking Creek barrier
6 Commercial and green
7" Industry vs 4th nature
8 Sewage treatment and industry
9 Multilevel industrial complocity and landfil
10 Green and landfil
11 Dartford Crossing

Initial uncovering of the unique spaces.

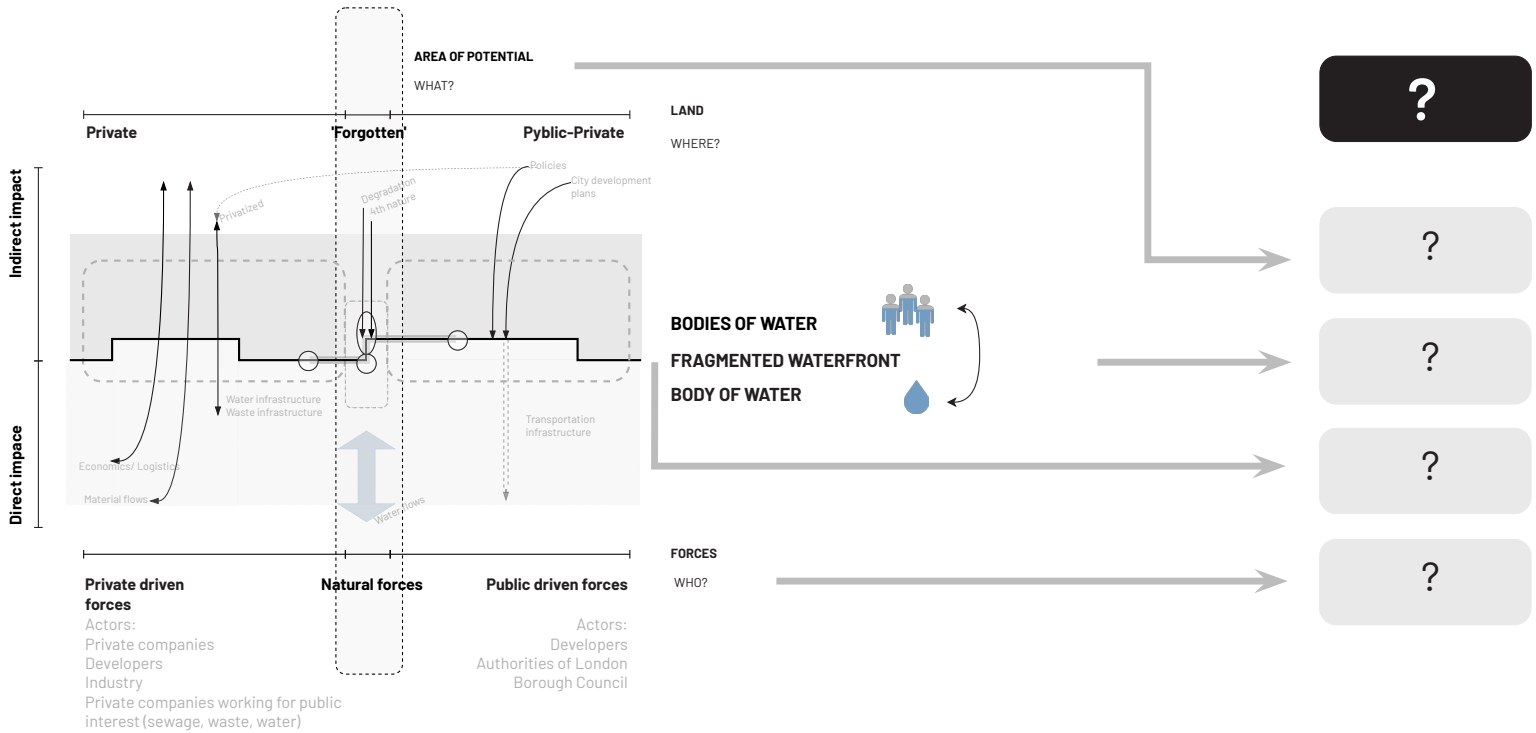
Further, in between a rigid land ownership structure, there is an opportunity for a spatial intervention that could act like an **amalgam**, a filler between fragments. The intervention is supposed to act for the preservation of the industrial waterfront qualities. The identity added from such intervention could bring attention to the space, make its intrinsic qualities more recognizable and potentially protect it from being easily erased by new investments. With that being stated, the question arises:

Answering this question will require at first understanding the systems related to the waterfront, mainly: "**which conditions and flows have formed the waterfronts as they are today? "** Within the history of changing flows **"how has the relationship between people and water changed and how can it be redefined?"** Further on the matter of those waterfronts needs to be identified, and understand "**what are the post-industrial components of the East London waterfronts?"** Finally, it needs to be answered "**how to uncover the places with high potential and which qualities define the potential for a particular intervention?**"

Amalgam
A combination of parts that create a complete whole.

Research question

"Given the fragmented, industrial landscape of East London waterfronts, how can the value of post-industrial spaces and structures be uncovered, and how can a spatial intervention act towards their regeneration with preservation of the existing qualities?"


AREA OF POTENTIAL
WHAT?
Private
'Forgotten'
Pyblic-Private
Indirect impact
Direct impace
Privatized
Degradation 4th nature
Policies
City development plans
Water infrastructure
Waste infrastructure
Transportation infrastructure
Economics/ Logistics
Material flows
Water flows
LAND
WHERE?
BODIES OF WATER
FRAGMENTED WATERFRONT
BODY OF WATER
FORCES
WHO?
Private driven forces
Actors:
Private companies
Developers
Industry
Private companies working for public interest (sewage, waste, water)
Natural forces
Public driven forces
Actors:
Developers
Authorities of London
Borough Council
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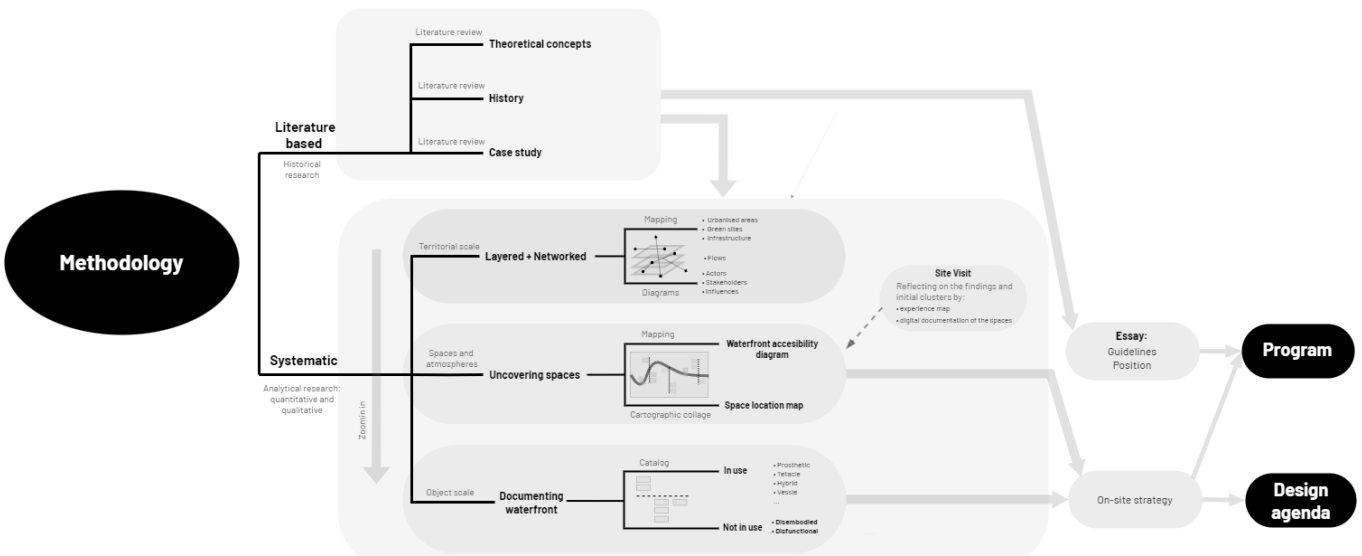

Methodology
Literature based
Historical research
Literature review
Theoretical concepts
Literature review
History
Literature review
Case study
Systematic
Analytical research: quantitative and qualitative
Zoom in
Territorial scale
Layered + Networked
Mapping
Urbanised areas
Green sites
Infrastructure
Flows
Actors
Stakeholders
Influences
Diagrams
Spaces and atmospheres
Uncovering spaces
Mapping
Waterfront accesibility diagram
Space location map
Cartographic collage
Object scale
Documenting waterfront
Catalog
In use
Prosthetic
Tetecie
Hybrid
Vessle
...
Not in use
Disembodied
Disfunctional
Site Visit
Reflecting on the findings and initial clusters by:
experience map
digital documentation of the spaces
Essay:
Guidelines
Position
On-site strategy
Program
Design agenda

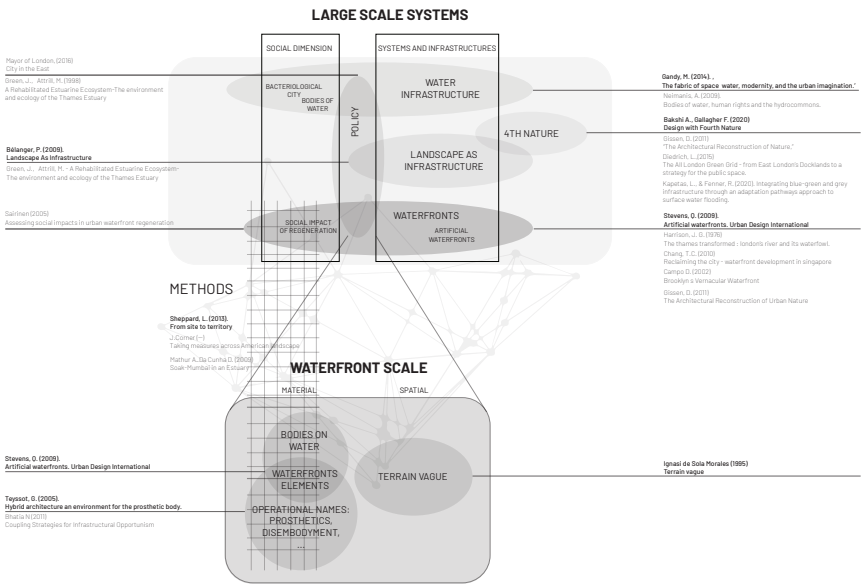
Structure

In this essay, I will examine the processes that made the area as it is today. By understanding the specific elements in the transforming water ecosystem such as working and dysfunctional waterfront structures, returning nature, the vagueness of spaces, and the presence of industry, I will aim to propose the trend of transformation and the importance of the mentioned elements in this transformation. Additionally, using the framework of 'bodies of water' I will aim to position human bodies in the process for enhancing a more ecocentric thinking about the transformation as well as future designs.

In line with the ethos of the studio I looked at the topic in a cross-disciplinary way. I believe that a combination of skills from architecture, landscape architecture and engineering crucial to propose a sustainable strategy for the future or the area. This position made me analyse the East London Waterfronts through different scales of layered and networked relations, treating the area as a territory as well as a set of potential locations.

The result of this essay will establish an approach to the design of the territory. This will allow for delineating a strategy for preserving the qualities of the East London waterfronts area and their future within the evolving peripheries. Having the knowledge from literature I will conduct systematic research in which I will investigate layers and networks present at the territory. Understanding them will help me to further narrow down the area of research and uncover the unique places more in depth and come up with the strategy for their preservation.

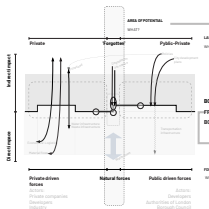
Theoretical framework



Fascination

Problem field

Research question

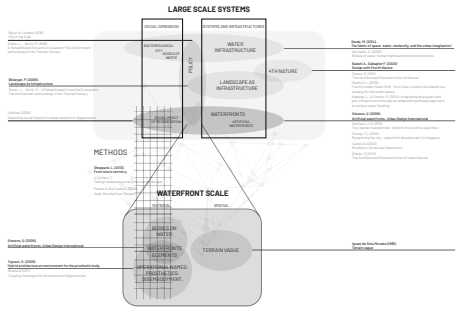


"Given the fragmented, industrial landscape of East London waterfronts how can the value of post-industrial spaces and structures be uncovered, and how can an intervention act towards their preservation?"

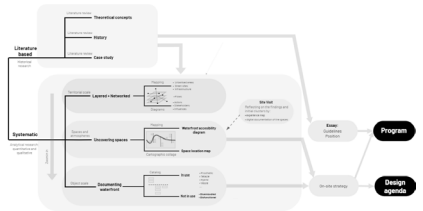
Subquestions

- How to uncover the places with high potential and which qualities define the potential for a particular intervention?
- How has the relationship between people and water changed and how can it be redefined?
- What are the post-industrial components of the east London waterfronts?
- Which conditions and flows have formed the waterfronts as they are today?

Theoretical framework



Methodological framework



P2

Design Phase

Essay

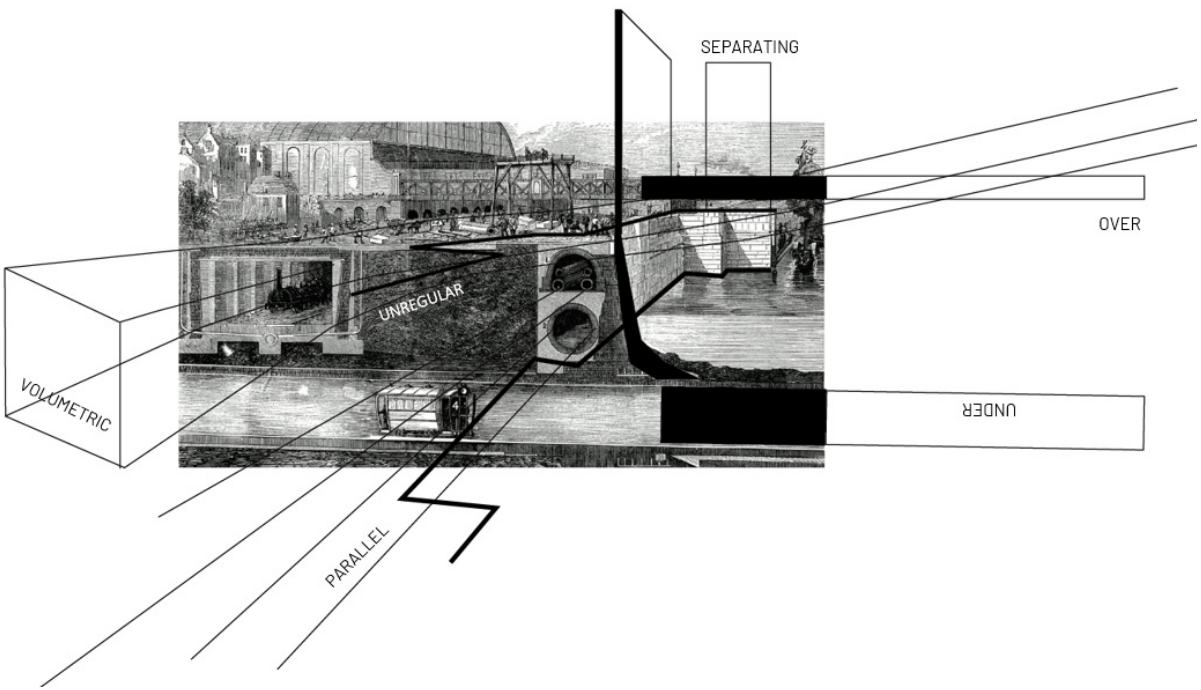
The transforming city

"Water lies at the intersection of landscape and infrastructure, crossing between visible and invisible domains of urban space. Water forms part of the material culture of modernity, ranging from the private spaces of the home to vast technological networks that have enabled the growth of cities, yet it is also powerfully inscribed in the realm of imagination."

(Gandy, 2014)

To analyse the conditions at the waterfronts I need to understand the link between the larger systems within the city that relate to water and societal changes. One of the main aspects that connects those concepts is the relationship between the city and water, involving topics like water supply and consumption, sewage, or hygiene. In 19th century, the booming industrial revolution and city growth had put a severe pressure on the city infrastructure. Specifically, the problem of sewage went beyond the city capabilities. The practice of dealing with that problem dated back to Roman times and in simple terms came to using the river Thames as a disposal bin. However, in the 1800s the problem reached excessive proportions. The ongoing diseases and increasing stink were unbearable. With urgent need, the city needed to restructure and prioritize a new, sewage infrastructure. Within the second half of the century, massive sewage systems were put in place and main sewage system outfalls were constructed in Beckton and Crossness built in the 1860s that were further enhanced up until modern times.[1] Later on during the war the sewage system was heavily disrupted, which caused a huge negative impact on the river. Between 1940-1950 the Thames was at its poorest condition and was claimed to be a dead river.

1 - The Beckton and Crossness treatment plants were designed in the 1850s, and built in the 1860s. The first "treatment of effluent was still inadequate, and the location of the new outfalls within the river narrows meant that little more had been done than to shift the problem a few miles further downstream" (Harrison, 1977). Later a division of separation of the solid matter was introduced. This matter was separately transported and disposed of at sea. Further efforts in the 20th century introduced more skilled plants at Beckton which besides separating solid matter treated the remaining fluids to obtain a cleaner discharge. Currently, only pure water is discharged to the Thames and solid matter is disposed of at a further location in the sea .


SEPARATING
OVER
UNDER
UNREGULAR
VOLUMETRIC
PARALLEL

“We spend very little time thinking about where our water comes from, or how our power is produced, where our food is grown, how far it travels, and how it gets there, or even where our shit goes.”
(Pierre Belanger, 2017)

The need for structural changes of the city in the 19th century problems are best defined by the notion of **‘Bacteriological city’** – “the transforming city, divine by epidemiologic science ‘findings’ in which water played a pivotal role” *(Gandy, 2004)*. The city needed to redesign and plan new intersections between technology, space, and society and define a new governance related to them. With the expansion and modernization of infrastructures in all domains, the city was more often described as a **cyborg** (*Gandy, 2014),* a unified body with mechanised components and systems. As those systems expanded and helped the city-body to grow, they also pushed human and water bodies away from one another. We were becoming the cyborgs using various systems as extensions of our interactions or desires. With the hygienic advancements and technology serving our private households the perception of water changed.

Bacteriological city
Movement toward a distinctive constellation of space, society, and technology. Also reffered as: “hydraulic city,” the “sanitary city,”

Cyborg city model
“Cyborg urbanization transcending the individual human subject to consider larger, sociotechnical interdependencies” (Gandy, 2014)



The distanced bodies of water

"How can we cultivate the further proliferation of watery life? How might we account for our differences while demanding our interconnection? What are our specific responsibilities as human bodies of water?"
(Neimanis, 2009)

With time both, the pollution as well as infrastructural changes distanced the citizens and Thames both physically and mentally. Throughout years the interface of the city and river changed. The engineered embankments, barriers and concrete walls are an example of this separation, which even fostered the separation. The city saw the river mainly as a part of cities infrastructure, forgetting its foremost role as an ecological infrastructure.

Throughout the years, various operations, such as reconstruction of embankments, land reclamation, flood resistance or pollution had created different interface scenarios. With this interface getting more and more complex and nature being pushed further away, it seems like the river had been forgotten by most citizens, and for a while, lost its natural and cultural role. Various activities such as bathing, swimming, water sports, mud lurking, or simply hanging out close to water are not the most popular activity even now.

The early infrastructural commodification of water separated us from the river and made it easier to forget that human bodies are intrinsically related to water. It took a while to realize the harm and pollution that was done to the Thames. The concept of **bodies of water** introduced by *Astrida Neimanis* reminds us that we are a part of the hydrological cycle. Simply we are just another bodies of water "neither materially nor semiotically discrete from our water others" *(Neimanis, 2009)*. Therefore, we can think about what is necessary to support different ecologies and maintain our differences as various bodies of water. She also believes that such realizations can lead to a more ecocentric approach in the management of **hydrocommons** *(Neimanis, 2009)*. She comes up with questions that can be beneficial for rethinking the interface between the different bodies of water at the East Thames waterfronts.

Bacteriological city
Movement toward a distinctive constellation of space, society, and technology. Also reffered as: "hydraulic city," the "sanitary city,"

Cyborg city model
"Cyborg urbanization transcending the individual human subject to consider larger, sociotechnical interdependencies" (Gandy, 2014)

Image:
Wall dividing Crossness power plant with water.

Retransformation of the river

"[between 1940s-1950s]...the river was little better than an open sewer; the water was black in colour, contained no oxygen, and during the summer months the foul smell from the Thames was detectable over a wide area. The surface was littered with rafts of rubbish and driftwood and great banks of detergent foam."
(Harrison, 1977)

Although the pollution of the river is often associated with the filth of the industrial revolution, the degradation of the river was mainly caused by the previously mentioned improper waste and effluent disposal, mainly from the city and partially from the industry. As found in the 1960s by the 'Water pollution Board' (working on the report since 1949) the pollution came in majority from improper sewage treatment -79% and significantly less from industrial discharge – 12% *(Harrison, 1977)*. From then on even stronger measures were put in place as well as modernization of the existing infrastructure. Within the next decades, the river was transformed into a significantly more biodiverse environment in a particularly short period.

The great improvement of the Thames condition brings a light of hope in times of ecological crisis. If we cooperate nature can recuperate. The London municipality, as well as Port London Authority (formed in 1909), were at the forefront of those changes, and till now PLA, although a business-oriented party, still has the Thames ecological transformation at a forefront of its agenda *(PLA report)*. Although the industrial companies are often seen as parties resisting to adapt to changes, the PLA defined that "overall the reaction of the riverside industry to these controls has been one of cooperation, and in some cases, great expense and effort have been expanded to comply with the new standards" *(Harrison, 1977)*.

In some cases, the industry even benefited from these changes. For instance, in the case of the Bowater Scott factory, the company needed to build an additional coagulation plant to deal with the waste. The pulp left from the separation process was found to be suitable. for the production-specific type of

cardboard. The pollution was greatly diminished and by now the river ecology is an example of successive collaboration *(Harrison, 1977)*.

Another local example of caring from nature is the creation of new marshland ecology In Rainham. Since 2015 various parties like Land & Water, PLA RSPB, and Natural England work together on the reconstruction of Rainham marshland from earth dig out for a 'super sewer' project *(Civil + Structural Engineer, 2021)*. The land is being transported by the Thames River to the Waste Management Terminal nearby Viola wasteland. This form of transportation greatly reduces pollution and does not disrupt city traffic.

Image
Regrowing landscapes in teh area of Rainham marshes and Purfleet.

The transforming power of nature

Next to the efforts that positively fostered the river's biodiversity, the nature itself also regenerates and shows impressive abilities to regrow on even very polluted lands. This phenomenon is known under the concept of **4th nature** *(Bakshi & Gallagher, 2020)*. Given years of attempts to tame the river and reshape the waterfronts, the 4th nature can be seen as an attempt of the nature to reclaim the land lost to human activity. While it is already happening at the East London waterfronts, there is an ongoing discussion between scholars, architects, and landscape designers about the ways of reintroducing nature in the cities. One of the exanples of such research is the concept of **reconstructing nature** *(Gissen & edited by Stan Allen and Marc McQuade, 2011)*, in which he discusses the human role in reconstructing landscape.

However, on a more recent note, the debate has expanded. Depending on the hemisphere, the approaches differ. In Australia, there is a strong emphasis on actively protecting native species. In the northern hemisphere, there is a growing inclination to avoid mowing lawns in urban areas and instead embrace a hands-off approach. While some advocate for rewilding, there is increasing discussion about **abandonment**.

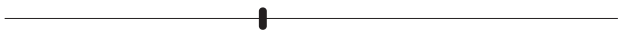
This concept is a central part of Dermot Foley's design approach, as described in his book in the chapter titled „Abandonment (Versus Rewilding?)" *(Baracco, 2022)*. Abandonment is portrayed as a potentially superior method of landscape design in certain cases. Although the term may evoke notions of neglect, abuse, or giving up on a space, it is actually closely tied to the idea of the „unexpected versus the expected."

According to Foley, rewilding is often seen as the expected approach, which can be controversial and may seek to recreate past conditions. In contrast to that 'abandonment emphasizes ' what will happen'. It does not mean at all abandoning certain space, but in opposition to that spotting the potential and finding a balance in observing and intervening and not being disappointed with the outcome."

The unexpected already started to happen in the area years ago. Throughout the times of imrpoving water

4th nature
Originally by Ingo Kowarik's notion of four natures or nature of the fourth kind. "Nature that emerges spontaneously on urban sites such as vacant lots or industrial sites."
- Ingo Kowarik

Reconstructing nature
Representing relationships to nature thorugh architecture. David Gissen specifically points that in many citis we can see efforts to reconstruct the urban atmosphere and ground to its pre-industrial cycles. Often potliticised in a form of environmentalism. He claims that"These new insertions of topography and verdure and corrections to the atmosphere are situated against the existing spaces of the modern and contemporary city."



Abandonment

Observing and intervening

Rewilding

Is not about knowing
'doing nothing' - under particular circumstences
Its about abandonment of certain practices
Abandonmnet is not being dissapointed with the outcome, as it is not about knowing. (how it should tern up)
It allows things that should not happen to happen.
It leaves room for unexpected, but goes further than rhar in celebrating the unecpected, no matter what form the unexpected takes.

Involves altering and oscilating
periods of action and interaction
What is differet to rewildening?
It allows for action that is irrational, impulsive, but also pragmatic practical useful. It allows things that should not happen to happen

Knowing
Desire/ proposition to return to past condion
Nature as distant but controlled
Expected
Allusion of familiarity
Implies perfection, or at least that one state is better than other
Obligates the way of thinking

Experimenting

Learning

Letting go

Waiting

Observing

Storage space

Intervening

Not intervening

quality, multiple proofs had been recorded of fauna and flora managing to thrive in the retransforming river. The most interesting example is the significant increase in the population of birds in the Inner Thames area already in the 60s. The area "has been largely shunned by **wildfowl** in the past" and the scientists were interested in what food attracts those animals. They found out that these animals started to eat a mud worm called Tubiflex, a worm that lives in the worst polluted rivers and had been abundant in the Thames during its worst times. However, back in those times the contamination of the mud had been too high, and animals were unable to get the worms without interacting with the chemical layer. Interestingly, it was the first time that those birds started to eat this kind of food. Instead of feeding normally, they started to do "dabbling" to adapt to the food source. Any more of such new co-dependencies could be mentioned, such as birds thriving on algae overgrowing the walls and piles of the Thames water elements. They use higher piles as viewing locations and the boats very often are said to cause little disturbance to most of the species. "In some cases, large concentrations of both wildfowl and waders use feeding areas close to, or even among, jetties and wharves which are still fully operational." *(Harrison, 1977)* In the 21st century where so much land is contested or polluted, there is a hope that retransforming abilities of nature can help us reconstruct ecologies. Several examples of using nature to reconstruct the landscape or even detoxify it can be presented. One of them is as a constructed ecology shoreline of Lake Ontario, near Downtown Toronto *(Bélanger, 2009)* where construction waste materials were used to build a jetty, with time it appeared that it was also a construction of a new ecology. "Unplanned and undesigned, the accidental ecology of plants, birds, and mammals that took over this large wasteland within walking distance of the downtown area attracted considerable attention from a different constituency" *(Bélanger, 2009)*. Another interesting example showing the transforming power of nature is the case of **phytoremediation** - the use of living plants to clean environmental hazards *(Kirkwood, 2001)*. A great example is the soil detoxification of a former oil transfer terminal In Ogden Utah, where various grasses, alfalfa, and trees were used to detoxify land over 3 years reducing the initial traditionally estimated clean-up costs from 1 000 000 to 200 000 USD.

Abandonement
Abandonement is about abandoning certain practices, not places or people[...] Abandonment throws up opportunities for unexpected and celebrates it, no matter what form it takes [...] 'abandonement is not dissapointed with the outcome. Abandonement is not about knowing. *(Baracco, 2022)*

Wildfowl
Birds especially ones such as ducks that live near water.

Phytoremediation
The use of living plants to clean environmental hazards.

Prosthesis, transplants and disembodied structures - rethinking operational elements

Transforming the Thames has a history reaching far before the industrial revolution. As much as we helped the river to recoup, we caused most of the river problems in the first place. Although pollution has always been seen as a main problem, the history of heavy engineering of the city interface had a very direct impact on the decrease in biodiversity. In addition to that, the reclamation of land from water and the transforming of suitable marshes to docklands severely decreased the floodplain. Over centuries the Thames channel decreased from 750m to 250m in width. As a result, this caused the tide to rise from 1m in Roman times to 6 meters today *(Gandy, 2014).*

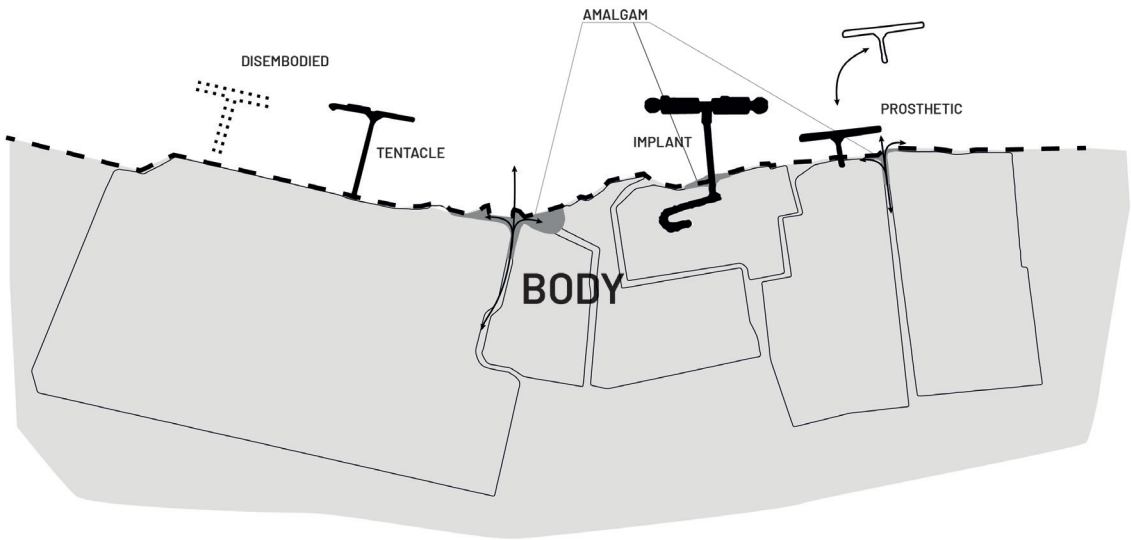
Specifically, within the last two centuries, more engineered elements appeared under over along or into the river creating different encounters of the city with water. The industry treated the waterfront operationally, adding, subtracting, or exchanging elements almost like prosthetics, implants added to intensify the flows needed for inland operations.

The docklands - indents where the interface was largely controlled, usually formed on reclaimed marshes. The outlets that controlled the flows, and structures regulating permeability such as dams, dikes, breakwaters, weirs sluices, or locks. At last, extensions: the most interestingly shaped tentacular piers and jetties. Extensions reaching from land to the depths of the river, craving to control it. Nowadays the situation retransformed and many of those elements face dereliction. Attached to the land/body, yet losing their tentacular function they wait in limbo as disembodied ghosts of the former era.

[organ-without-body] Such an organ, 'released' from the body, can be sold as a commodity, as well as 'grafted on' to another body, another organism, be it living or not, be it mechanical, biological, or computational.

(Teyssot, 2005)

Image
Tentacular structures at cement facility in Belvedere,Erith


AMALGAM
DISEMBODIED
PROSTHETIC
TENTACLE
IMPLANT
BODY

In opposition to giving up on those structures, it is interesting to look at them from a different perspective, in a more operational framework, celebrating the divisions, and disjunctions of those working and derelict bodies. For instance, to see the particular tentacular shapes, functionality, and typological complexity as a quality on its own. The categorization under general typological notions of piers or jetties seems not to be sufficient. Just like *A. Neimanis* proposes to look at our bodies as other bodies of water, I propose to look at the industrial objects at the waterfront are seen as 'bodies on water' or 'bodies in the water'. This terminology better describes their in-between land (body/organism) and water state. Further on, concepts of **hybrids, prosthesis, transplants, disembodiment** or **grafting** *(Teyssot, 2005)* can help in rethinking those structures as both objects and operational elements. What might they become? Are they disembodied? Then, should they regain their bodies? Acquire new prosthetics? Tentacles? As result what should those elements become? A redesigned machine-like extension? Spaces for biological bodies to thrive on, or rather derelict shapes that soon will not be present on the detailed Port London Authority map.

Hybrid
Of mixed character; composed of different elements, A thing made by combining two different elements

Prosthesis
Relating to an artificial body part, such as an arm, foot, or tooth, that replaces a missing part.

Disembodied
Seeming not to have a body or not to be connected to a body.

Grafting
To join or add something new. (medicine) A piece of living tissue that is transplanted surgically.

A cross disciplinary thinking – The process driven peripheries

While the Thames underwent transformation, the fields like planning and design expanded their agenda. One of the examples is redefining 'the site', as a multi-layered space tied to different processes. With the increasing complexity of the cities sites, the architect became a mediator between multiple actors at times becoming detached from the material aspect of the location. However, most often the site is still defined strictly economical and pragmatical aspects within its boundaries, without recognising the bigger connections.

In the case of London, much care is attached to central parts while the peripheries prevail to lie beyond the scope of design interests. In terms of planning, the peripheries such as East London Waterfronts belonged and still 'belong to' engineers. This is also what formed their industrial character as we know it. What is very specific is the lack of any intentional stylization of those areas, yet at the same time multiple interesting typologies appear formed by process requirements. Unlike 'object' and form-oriented architects, engineers pay attention to processes and flows. Instead of big notions like 'form follows function' or 'function follows form' engineers would say "fuck form, everything is fluid" (*Pierre Belanger, 2017*). And even now the area is still process-driven, and such an approach could be embraced and transformed into something greater. Designing with attention to various processes happening concerning both, program, natural and social environment. Finding beauty in it, instead of artificial beautifying.

The engineers' work at the peripheries is interesting also from the spatial perspective. The efficiency happens always in the required area, leaving unrecognised, nature pockets. Those overseen mini-spaces increasingly become important for both nature and its micro-processes. The discipline tied to landscape is landscape architecture and engineering,

Image
Industrial facilities at Belvedere, Erith

"[Landscape architect] structures potentials and is perfectly aware of the incompleteness of his design rather than building a final solution. Landscape architecture is a design of changing environments rather than of perfect objects. (...) design of open and reactive systems rather than closed structures" (Jauslin Daniel), 1999

a ffield that is very aware of the exosystemic importance of aforementioned 'leftovers'. Although much has been said about landscape thinking in architecture design, the divagations usually focused on thinking about building in terms of the landscape instead of crossing the interdisciplinary approach more holistically. Architects still rarely think about those spaces in terms of processes relating beyond their site. The attention is often lost in translating landscape thinking onto architecture while not incorporating landscape thinking as a greater understanding of the site and the processes that are both tied with it but also external to it. The site could be understood as a **layered and networked territory** *(Sheppard, 2013)* to have a more complete view over the processes related to a particular site. The East London Waterfronts are becoming a part of that shift as multiple projects start to look into the area with a more complex approach, merging disciplines.

The landscape architects "are taught early on to appreciate larger regional scales (watersheds, ecosystems, infrastructures, and settlement patterns) as well as understanding smaller, more intimate places as part of the larger framework"*(Wall, 1999)*. Additionally, they are much more aware of the influence of time and seasonality on a site. Their intervention marks the very beginning of the project, as time is needed for plants to grow and the landscape to transform. The approach that could be specifically beneficial to East London Waterfronts is what *Steen A.B. Høyer* defines as a role of landscape designer "incorporating functional and aesthetic concerns within the peculiarities of a particular location, inherently marking the character and specificity of the time and place" *(Høyer, 1999)*. Mainly, seeing and uncovering existing potentials of the site and its processes, rather than juxtaposing something completely new. Being an "effective site-seers – [the one] who can decipher the complex layers of time, program, and meaning in the contemporary **hyperlandscape**" *(Marot, 2013)*. Proposing a different approach from one for Central London waterfronts, where the commercialized waterfronts obey the infrastructure and private ownership and easy to maintain nature pops out only at designated spots and access to water is limited.

Layered site
'The layered territory stratifies its environment into a series of individuated layers and systems. It enables an in-depth examination of the systems physical and natural at work within a site, but with little focus on the interconnection or potential overlaps of these systems.'
-Lola Sheppard

Networked site
'Networked territories, in counterpoint to layered territories, conceive of context as the subject and product of multiple intersecting networks of human and natural ecologies. The networked territory understands sites as hubs or pieces within much larger territories the juncture of multiple forces political, economic, social and ecological whose source and destination are often far from.'
-Lola Sheppard

Images
Left: Concrete mixing plant at Purfleet Bottom
Left: At power plant at Beckton, Source: Google mapsTop right: Chemical plant in Grays, Source: Google maps

Commercial forces

"Many leisure waterfronts are built on the ruins of industrial port areas. First shaped by humans to enhance production, these places have now been reshaped to enhance consumption."
(Stevens, 2009)

During the last two centuries, London was shaped mainly by the industrial revolution and water system changes. The city was formed first hygienically led changes followed by steep technological development but also by the way they were governed. The centuries of turbulence between the state and private ownership of infrastructures formed a tightly coupled network of interdependencies. The high degree of privatization often puts the municipality in a weakened position while the fragmented ownership of land makes it difficult to execute a more unified masterplan. While the market forces often outweigh the more social, difficult-to-monetize aspects, the accusations are not strictly against the 'market' itself, but rather against the lack of balance between the cities' guarding role more socially oriented goals, and profit-driven ambitions of private investors.

Considering the recent, more ecocentric approaches that see nature as an unvoiced actor within the city, in the current arrangement it is unlikely that such a modern way of thinking will be treated seriously. The urban waterfronts are an integral strip of green and blue infrastructure with the potential to include a wide range of programs that benefit both social, ecological, and economical fields. The city should see them foremost as an opportunity to enhance the city's social and ecological benefits for the city and secondly as a land value-increasing feature.

"In the prime urban site of the waterfront, the convergence of tourism, cultural, retail and residential functions testifies to a city's vitality and attainment of world-class status."
(Chang & Huang, 2011)

Not only in London but in many big metropolises there is the challenge of balancing community-focused and economically driven aspirations. The result of more commercially driven processes is the creation of so-called 'other worldly' environments in which the

2 - In typical urban waterfront precincts such as London's, Melbourne's and Brisbane's South--banks, embankments and boardwalks regularise the edge condition between land and water. (Stevens, 2009)

Image
Pedestrian crossing at Woolwich

embankment is highly regularised[2]. **Worldliness** is a concept describing "transformations that are often aimed at creating worldly landscapes - world – class environments and activities targeted at communities often with no previous connections to the place" *(Chang & Huang, 2011)*. The city is easily overtaken by the idealized image of the global city with economic power. In these visions, the city waterfronts are often lively luxurious spaces aiming to reflect the economical status of the adjacent luxurious offices and apartments. As central locations they are designed with control in mind: concrete paths to walk, bits of grass to stare at and high riverbanks to stay safe from water. "Unlike earlier industries, contemporary urban waterfront uses often have no direct or obvious relation to natural water bodies, except views of them." *(Stevens, 2009)*

The artificial development of waterfronts goes to different extents based on consumption and leisure ideas. "The gathering together of various water-related activity spaces, often with quite artificial and contrasting themes, serves consumers' appetite for novelty, and for the conceptual shallowness of escapist spectacle" *(Stevens, 2009)*. Some of the examples are artificially formed lagoons, beaches, or pools that aim to evoke specific feelings about water usually not aligned with the natural environment. Those ideas are often temporary in this climate and must overcome natural variations of weather changes, humidity, and seasonality which in fact may lead to negative impacts on the ecology of waterways. As a result, the city interface becomes globalized and filled with artificial attractions, often losing its local or historical feeling.

Worldliness
Concept used by T.C. Chang when describing the reclamation of the Singapore waterfront "from a derelict entrepot into a site of culture and tourism"

Image
Royal victoria gardens, northern riverbank across Woolwich crossing.

Aesthetics of the peripheral: embracing vagueness

Rushed by the economy, London is shifting its interest to the East, the previously deprived and forgotten territory. There is an urge to rebuild, redesign and fill in what's vacant with mostly housing and commercialized activities. With this, often rushed approach there is a threat that the , old worlds' might be easily forgotten. Specifically, the presence of the post-industrial structures, machines, and tentacular piers in dereliction is a remanence of the past. Although seen as a wasteland they have something magnetic. The vacancy is a potential to at least be partially use informally or in unconventionally.

Despite the urge to redevelop and define, the vagueness is a quality of East London Waterfronts. It offers "wilderness wilder than any natural one " and "an alluring mix of freedom and danger" *(Lynch Kevin, 1990)*. Moreover, the ruins of such places "retain their evocative, symbolic power" *(Lynch Kevin, 1990),* allowing the past to be reconstructed in imagination.

Terrain vague, a concept proposed by architect *Ignasi De Sola Morales* seems to explain the fascination. He defines the terrain vague quite extensively, as:

"The relationship between the absence of use, activity, and the sense of freedom, of expectancy, is fundamental to understanding the evocative potential of the city's terrain vagueness. Void, absence, yet also promise the space of the possible, of expectation."..." this absence of limit precisely contains the expectations of mobility, vagrant roving, free time, liberty" *(de Sola-Morales Rubio Ignasi, 1995)*.

This concept helps in understanding the various ambiguous type of spaces. Although inside the city those spaces are perceived as ones outside it (...) "mentally exterior in the physical interior of the city, its negative image, as much a critique as a possible alternative" *(de Sola-Morales Rubio Ignasi, 1995)*.

Terrain vague
The relationship between the absence of use, of activity, and the sense of freedom, of expectancy (...) Void, absence, yet also promise, the space of the possible, of expectation.

Images
Top to bottom:
1.Concrete pier in Purfleet, previously part of Paper Mill factory
2.Entrance to the Winery at VIK by Smiljan Radic, Chile
3.Pier in Purfleet, abandoned after rail use

"The physical, material, fluid and energetic extents of urbanization lie far beyond the footprint of cities" - (Pierre Belanger, 2017)

The East London Waterfronts are a complex peripheral landscape with a recognizable industrial presence supporting the highly urbanized area. It is a network that supplies the city clustered in different zones of a different character. In this territory, the Thames is both a part of this industrial and logistic network and belongs to other ecologies. The existing infrastructure generates vectors of movement flows or axis of good transmission extending far outside their occupation zone. Those patches are interrupted by abandoned lands, landfills, strips, and patches of 4th nature and nature parks. Although the area is highly polluted by the approach seen in Central London should be completely transformed, I want to depart from the idea of total re-transformation of the post-industrial and industrial landscape for sake of 'beautification'.

The challenge is to not disregard those landscapes as peripheral dirty and machinic but rather as part of our 21st-century milieu. In his work *For a Techno-Aesthetics (Teyssot G., 2017), Teyssot* challenges the division between architecture and infrastructure giving more attention to the importance and aesthetics of the peripheral infrastructural lands. Using *Gilbert Simondon's* work he argues for a different definition of the aesthetic of the infrastructural object concerning their cartographic and topographic position. The old '**key points**' such as the bridge, lighthouse, castle, and ruin are at once technical and aesthetic. As important 'past key points', they bring back nostalgia and prevail on our maps as landmarks. Today the power lines plants or junctions are part of our new cartography " illustrating the key points in our contemporary world. (...) Without nostalgia, they redefine also the notion of "nature," extracting it out of its picturesque or romantic substrate" *(Teyssot G., 2017).*

Key points
In this case, meaning, key objects relevant for geospatial orientation.

Image
Abandoned concrete pier at waterfronts of Rainham marshes.


KEEP
FLOOD GATE
CLEAR

Conclusions

Rethinking the peripheries

The East London Waterfronts are a complex peripheral landscape with a noticeable industrial presence supporting the highly urbanized area of London. According to London's yearly report (Mayor of London 2021), the city recognizes the industrial and logistic patches as strategic for the city. They are a perfect territory to rethink the infrastructural and logistic peripheries as a part of the city ecosystem and as that also can be well designed. Moreover, amidst the industrial processes, there is space to support, natural processes and reactivate public access. The objective of the research is to uncover latent qualities and integrate them into location-specific transformations. These peripheral areas have the potential to become unique, wild spaces, providing a contrast to the tightly planned city center of London.

The future of the patches and the 3 actors

When proposing interventions in this context, three actors need to be considered: infrastructure, nature, and people. With regard to the industry, the focus is primarily on water freight, which is expected to intensify based on reports from the Mayor of London and the Port of London Authority. The derelict structures at the waterfronts are already being assessed by the Port of London Authority for suitability. Industry and logistics are envisioned to be integral to the future of the Thames, treating it increasingly as a crucial infrastructure. Additionally, river freight can alleviate congestion caused by heavy transport in the city. It is anticipated that future river transport will rely on hydrogen and electricity, moving away from oil-based systems. In parallel, there is a plan to prioritize nature by proposing green solutions.

Another important aspect is allowing the natural habitat to flourish. The guiding principle is to treat the river as both a transport infrastructure and an ecological ecosystem. Recognizing the concept of „4th nature" and enabling nature to regenerate can have a positive impact on biodiversity. The , leftover' green patches left in between the industry might become beneficial for topics of flood

Image:
Gate in Purfleet, entrance to the abandoned pier of Paper Mill.

resistance and biodiverse pockets. In these polluted lands, there is room for observation, experimentation, and verifying purification strategies in line with researching the self-transforming power of nature. Many of the patches, uncovered in further research, are links in the chain of green-blue infrastructure along the Thames, often serving as habitats for various species not commonly found in other areas.

In a future that promotes green industries and the return of biodiversity, there is also room for human engagement. The challenge lies in integrating citizens, allowing them to appreciate these unique areas, and enabling them to benefit from their proximity to water, all while avoiding commercial overpowering or a globalized approach. The approach views citizens more as visitors to the area rather than permanent settlers.

The waterfront elements - the interface

The machinic landscape of used and unused tentacles is a big quality of the area. Being part of the land body, and partially part of water bodies they allow for various interfaces and flows. Each of those elements has a history and a new purpose to be uncovered. Depending on the in-land operations and in-water conditions the tentacles should be rethought. The strategy involving the three actors can guide decisions on whether to abandon or transform these objects for alternative uses.

The approach towards the design – site seer

When approaching the area for design the working and self-regenerating character of this machinic landscape should be embraced in the design with feelings like desolation and vagueness being a quality. The approach is one of the previously mentioned „site-seer". The designer should try to understand the general territorial interdependencies as well as the specificity of the site within this territory. A layered, interdisciplinary way of understanding territorial interdependencies.

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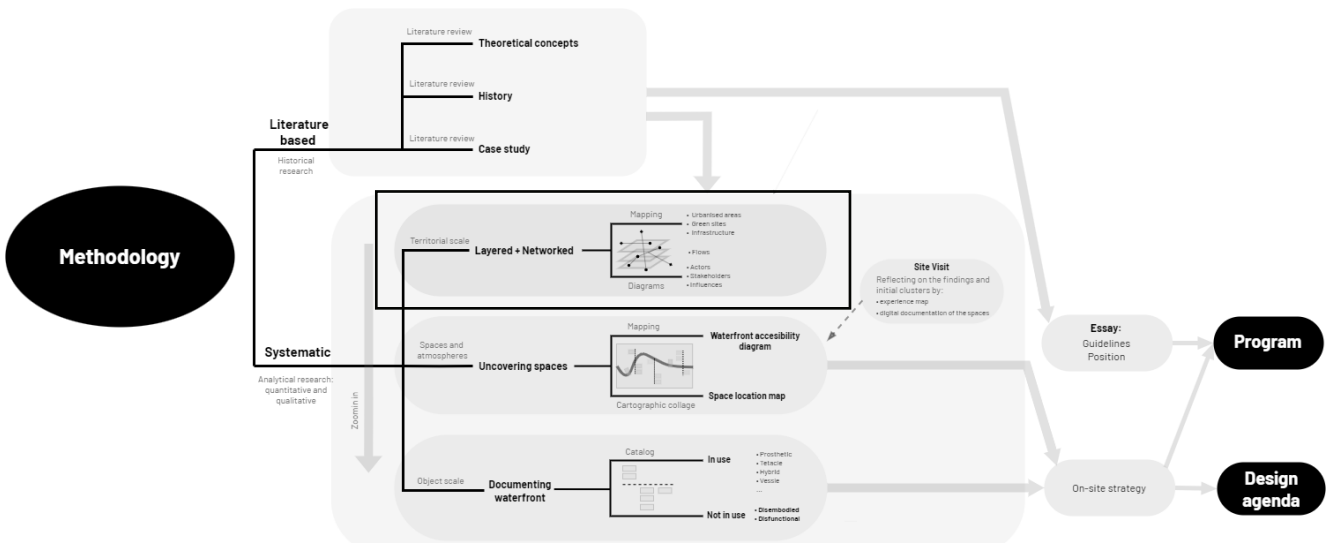
Systematic research

Layered and networked analysis


Methodology
Literature based
Historical research
Literature review
Theoretical concepts
Literature review
History
Literature review
Case study
Systematic
Analytical research: quantitative and qualitative
Zoom in
Territorial scale
Layered + Networked
Mapping
Urbanised areas
Green sites
Infrastructure
Flows
Actors
Stakeholders
Influences
Diagrams
Spaces and atmospheres
Uncovering spaces
Mapping
Waterfront accesibility diagram
Space location map
Cartographic collage
Object scale
Documenting waterfront
Catalog
In use
Prosthetic
Tetacle
Hybrid
Vessle
...
Not in use
Disembodied
Disfunctional
Site Visit
Reflecting on the findings and initial clusters by:
experience map
digital documentation of the spaces
Essay:
Guidelines
Position
On-site strategy
Program
Design agenda

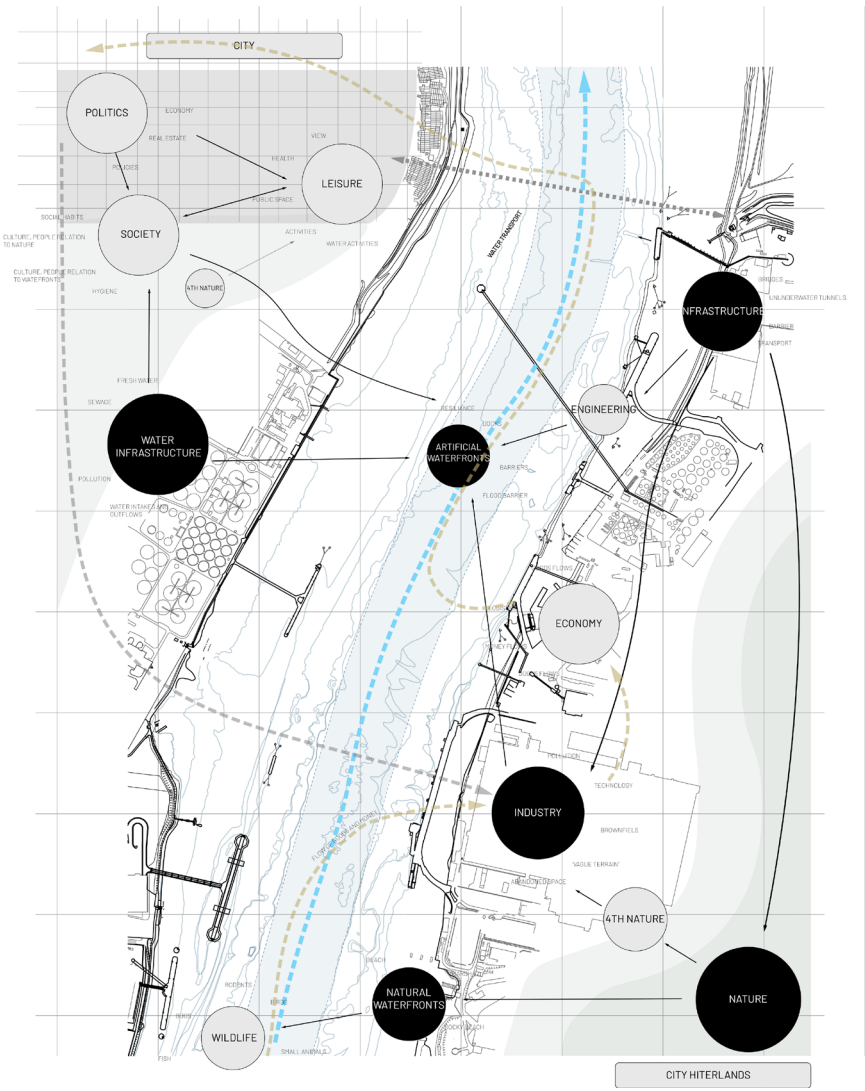
Structure
-systematic research

Along the way, findings from the literature informed the direction and scope of mapping or diagramming. The theoretical background presented in the essay established the position towards the waterfronts and the approach to their design. Additionally, the reports and facts helped to understand the vision for the area. They also allowed me to filter my systematic research findings. I investigated more in-depth the interests of the 3 main actors discovered through literature findings: nature interests, industry interests, and social interests. I presented my discoveries mainly through selective mapping, diagrams, and analytical drawings which represented both layers of information and the network of relationships.

Networked and layered
- Actor analysis

At first, I aimed to understand multiple layers and networks crucial to waterfronts. As mentioned previously, the results were filtered by the essay findings. One of the first networks of relationship that I examined aimed to understand the stakeholders and actors influencing waterfronts. The diagram additionally aimed to position them concerning one another and the waterfront itself. Already in that finding, I saw that the main categories relate to industry and nature as well as citizens, with specifically the municipality as a legislative power.

Further on I attempted to zoom into specific actors and find out some tensions that arise between the specific stakeholders.


CITY
POLITICS
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REAL ESTATE
POLICIES
LEISURE
VIEW
HEALTH
PUBLIC SPACE
SOCIETY
SOCIAL HABITS
CULTURE, PEOPLE RELATION TO NATURE
CULTURE, PEOPLE RELATION TO WATERFRONTS
ACTIVITIES
WATER ACTIVITIES
HYGIENE
4TH NATURE
FRESH WATER
SEWAGE
WATER INFRASTRUCTURE
POLLUTION
WATER INTAKE AND OUTFLOWS
WATER TRANSPORT
INFRASTRUCTURE
BRIDGES
UNDERWATER TUNNELS
BARRIERS
TRANSPORT
RESILIENCE
ENGINEERING
ARTIFICIAL WATERFRONTS
BARRIERS
FLOOD BARRIER
ECONOMY
POLLUTION
TECHNOLOGY
INDUSTRY
BROWNFIELDS
VAGUE TERRAIN
UNMANAGED SPACE
4TH NATURE
NATURE
BEACH
RODENTS
NATURAL WATERFRONTS
ROCKY BEACH
WILDLIFE
SMALL ANIMALS
FISH
CITY HITERLANDS

At first, I aimed to understand multiple layers and networks crucial to waterfronts. As mentioned previously, the results were filtered by the essay findings. One of the first networks of relationship that I examined aimed to understand the stakeholders and actors influencing waterfronts. The diagram additionally aimed to position them concerning one another and the waterfront itself. Already in that finding, I saw that the main categories relate to industry and nature as well as citizens, with specifically the municipality as a legislative power.

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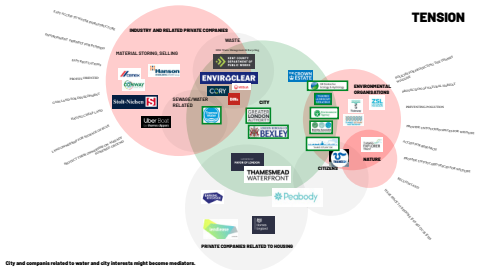
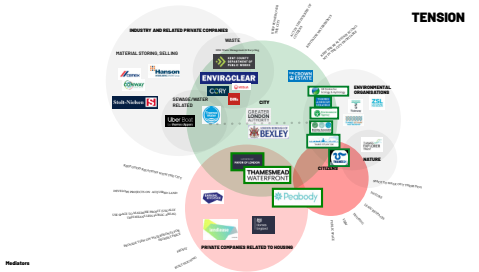
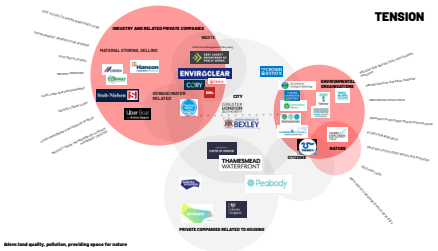


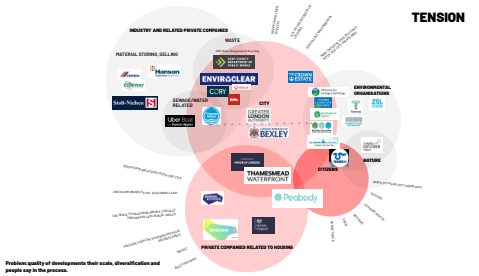
City and companis related to water and city interests might become mediators.



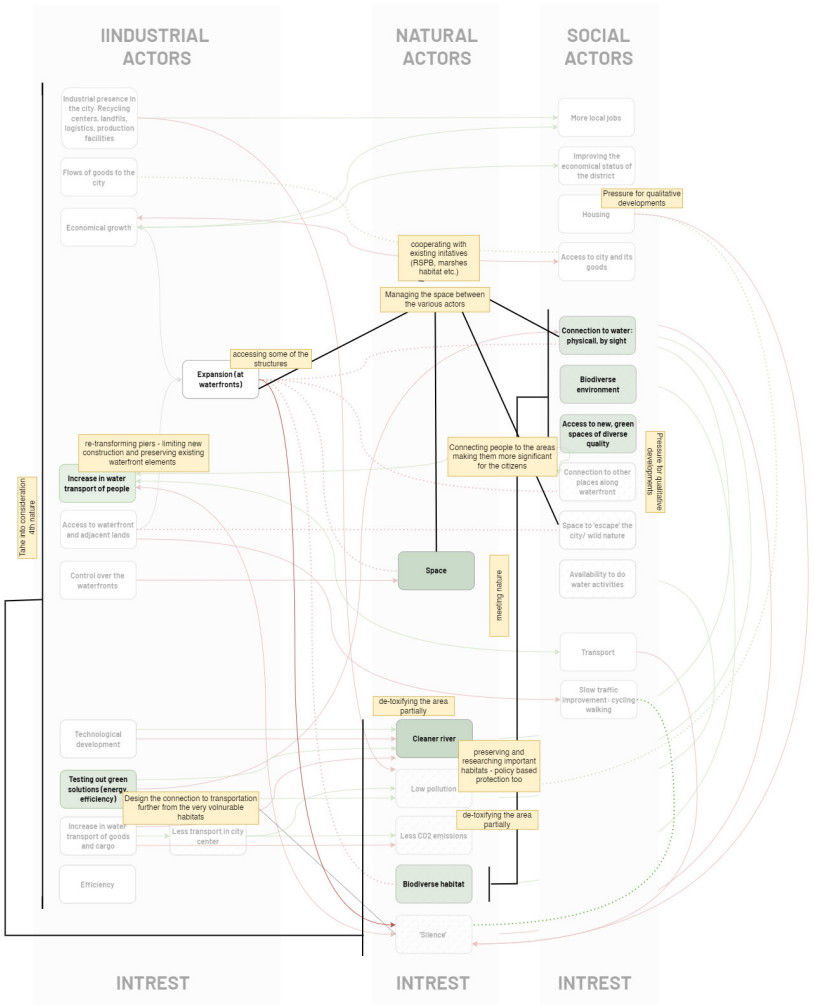
Mediators



Aims land quality, pollution, providing space for nature

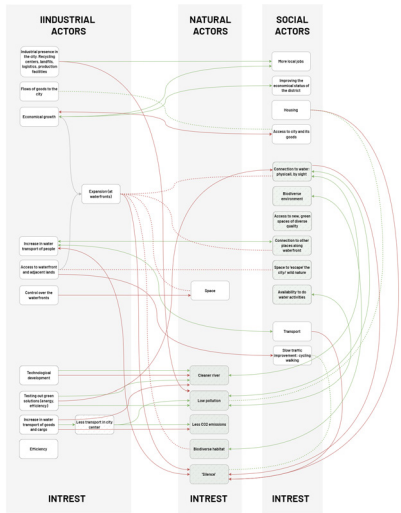


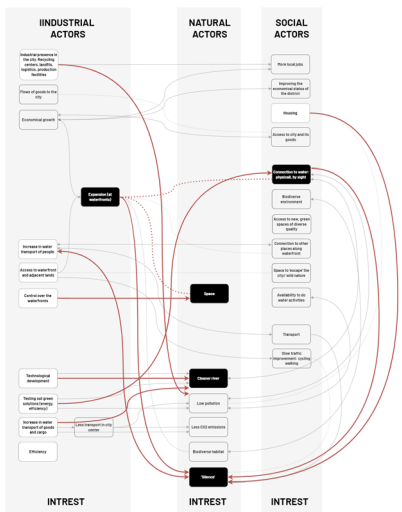
Problem: quality of developments their scale, diversification and people say in the process.



Analysing interests of human industrial and nature-related actors.

Based on the essay findings I narrowed down the analysis to the 3 specified actors bringing attention to the tensions and benefits based on their aspirations. After that, I extracted the most crucial conflicts. In the third diagram, based on literature findings and my ideas I aimed to find a general idea for those conflict remediation.





Analysis of green patches and industrial activities at waterfronts, operating structures and flows.

Networked and layered – industrial flows

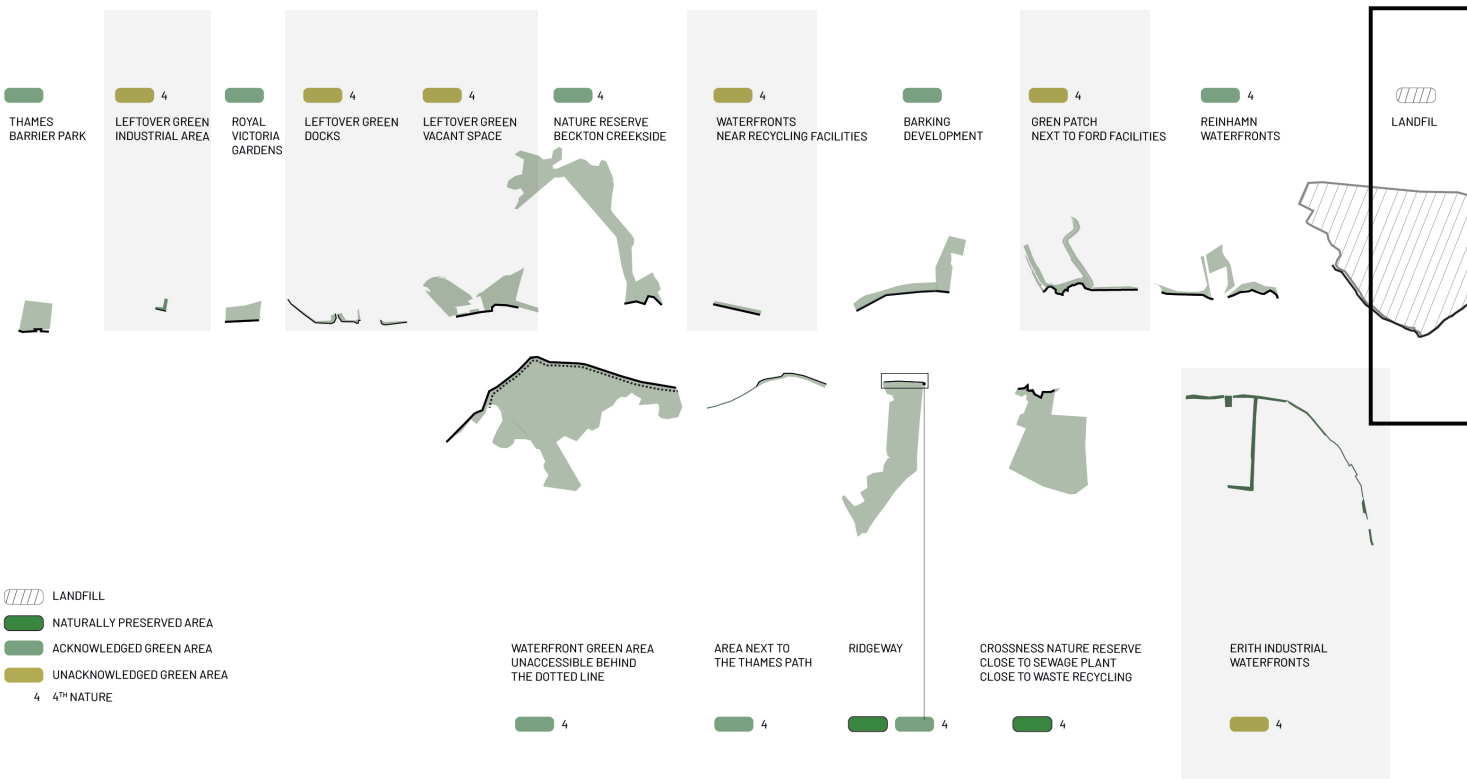
The second significant finding came from the analysis of the industrial patches and their flows. It was important to understand the logic of those patches as well as find out what piers or waterfront objects are still in use. At a territorial scale, the patches act as a connected system supporting multiple city processes such as waste management, logistics, goods delivery, sewage treatment, or recycling. In this regard, the Thames still functions as an infrastructure. Although the area acts as a system, there is no significant hierarchy between the patches and each of them has its own inner logic. Each patch has its inner logic. Almost every patch has a dominant function, there are for instance recycling clusters, logistic hubs, sewage, or production clusters. Because of such characteristics, any new industrial activity should not only serve the bigger network but also be coherent with the logic of the patch.

Mapping green areas and possible green corridors.

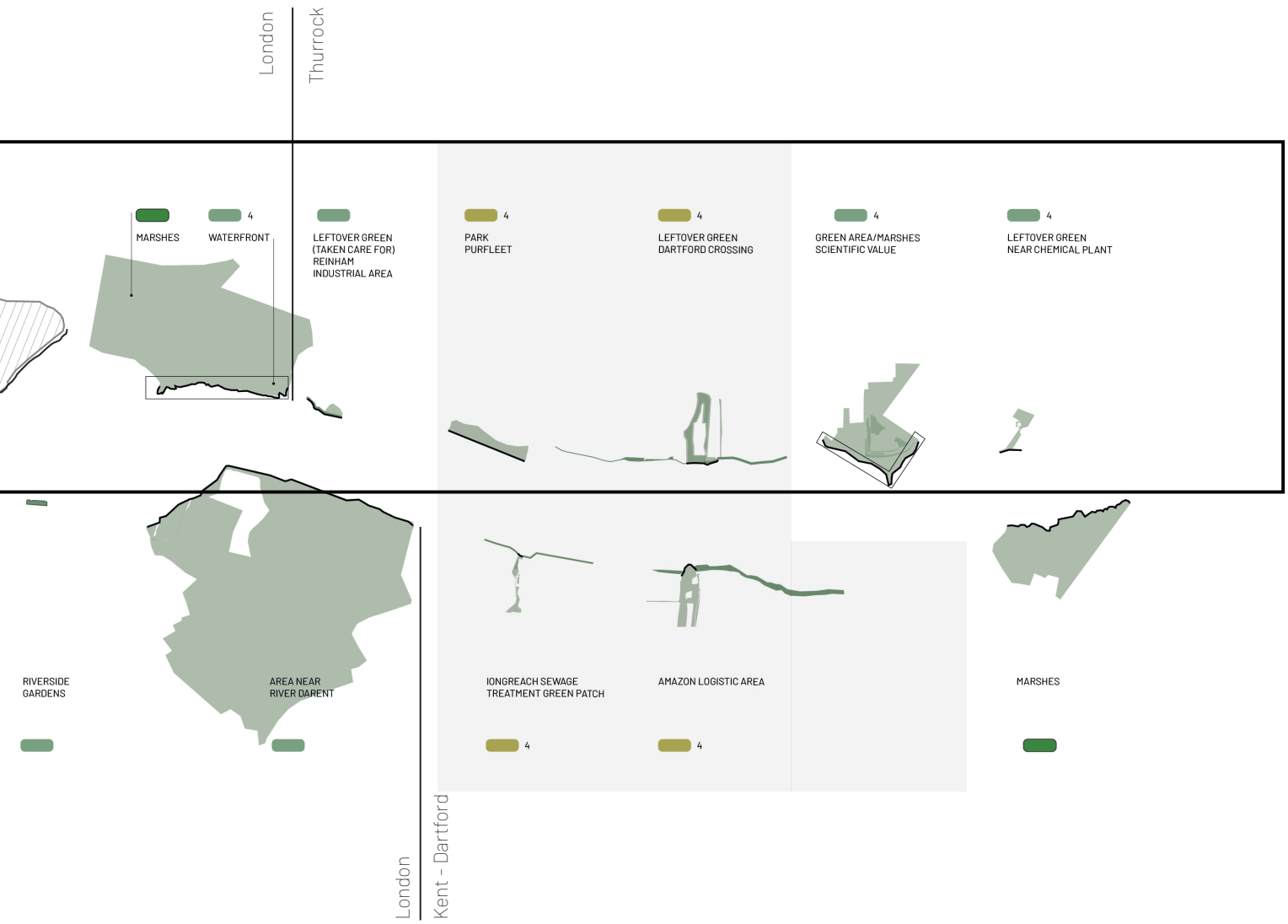
Networked and layered – nature flows

The next steps analyzed the combination of layered data with its network aspects. This involved nature patches as more layered information and later the industrial goods flows relating to specific patches. At first, when mapping the green patches, I discovered possible green corridors. Further on I investigated the relation of those patches to the waterline. I straightened the waterline to understand the patches in sequence and I marked them by the two classifiers. 1 – Acknowledged and Not Acknowledged and 2- 4th nature or designed green area. This classification gave me an impression of seen and unseen natural qualities. Mainly, is the 4th nature often acknowledged as a sort of quality area, or is it always a „leftover" patch.

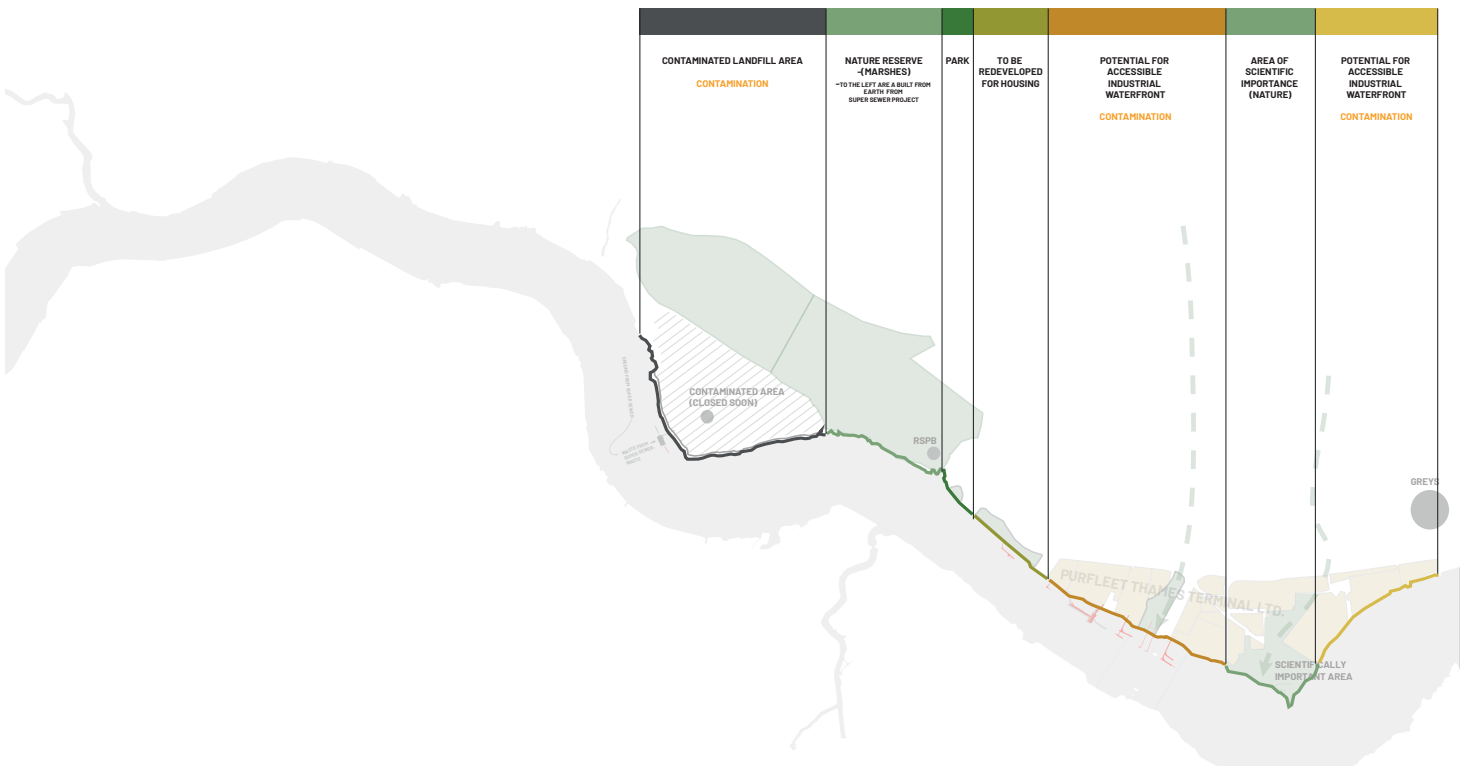
Images left:
...



Mapping the acknowledged and not acknowledged



green spaces and occurence of the 4th nature.

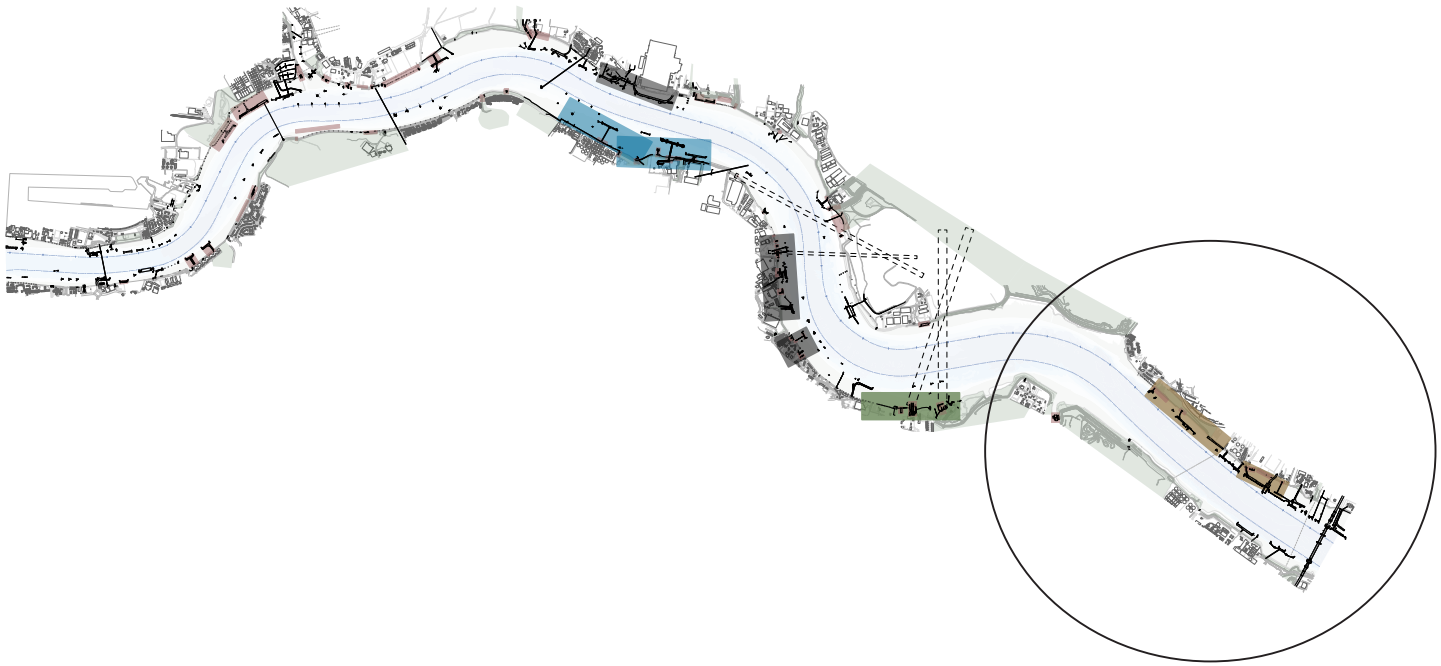


Thresholds at waterfront relating to green landscape and contamination.

Synthesis

Fromt he analysis it was apparent that there is a potential at the north bank to make the waterfront more accessible and preserve the different qualities along the way. All the places were intensively used by human activity and are all polluted. However, on some of them 4th nature became really apparent. One of the sites has already been marked a scientifically important area where various types of invertebrates appeared that haven't been seen in that location before.

The uncovering of the character of the patches shows that the waterfront could be seen as a line of different threasholds relating to pollution and man activity, at the same time seeing those patches as a chain can preserve a green corridor at the waterfront.



Cluster based on industrial activities

Purfleet

Having that information on both natural and industrial flows made me decided to zoom into a chosen patch for further analysis. At first, I distinguished 5 potential waterfront areas within the patches to finally chose **Purfleet** as the main location for further research.

Among multiple industries Purfleet is surrounded with logistic functions. It also has a container terminal. It lies just outside the London border, but before the Tilbury Port. It is connected by rail to both, London central and to the Tilbury Port.

Further on research uncovered the potential of that location to support the London future plans for intensyfying green fraight on water in terms of light parcel delivery. *(WSP, 2021)* , (Mayor of London, 2021) , (Brackett Rankine, 2022) The research pointed at this area as an area where a River Distribution Center could be located. The idea for such development is to have a point where the parcels are sorted out and thn loaded on boats. The boats will further delived the parcels to the city center (last mile delivery). Such solution greatly deminishes amount of cars and vans in the city center

Next to that the city itself has multiple abandoned structures that could be retransformed into anothe ferry station. This would be in line with London plans of increasing boat traffic and reducing car usage in the city.

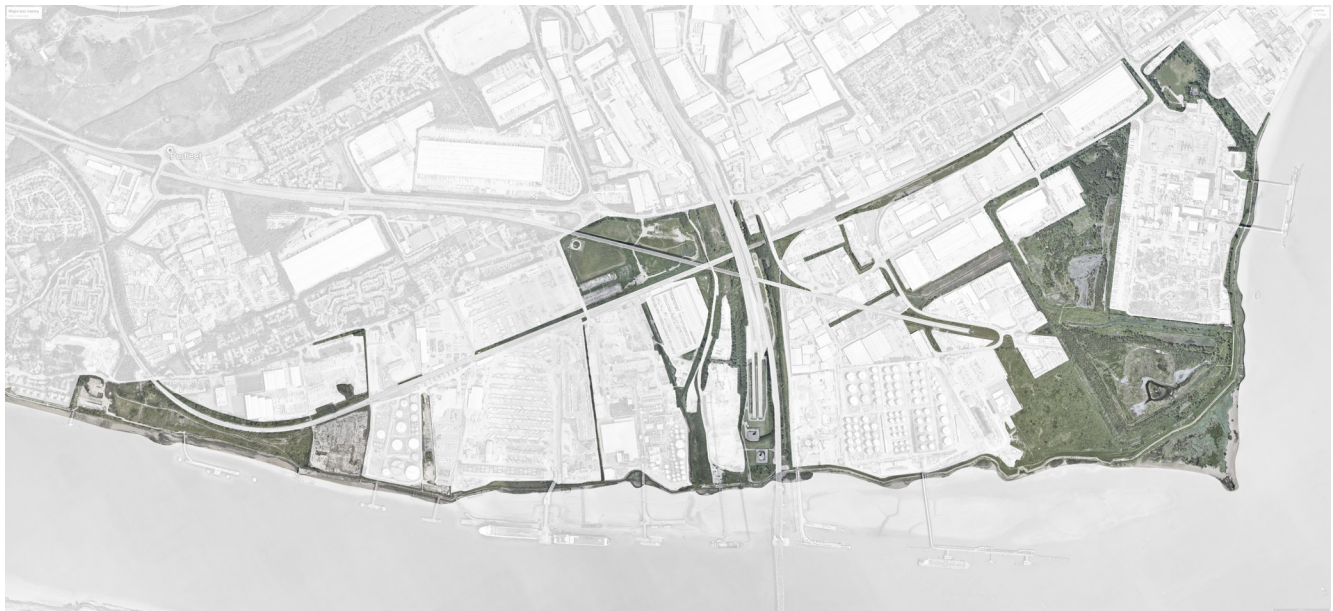
The city lies in the region of Thurrock that besides industry and port functions houses also multiple organisations relating to nature preservation. The organisations are widely aware of the 4th nature phenominon and try to protect nature pockets that appeared inbetween the industrial activity, specifically considering waterfront.

Further analysis of the area showcased that the industrial activity left behind multiple green patches that form anoteh chain of pockets along the waterfront.

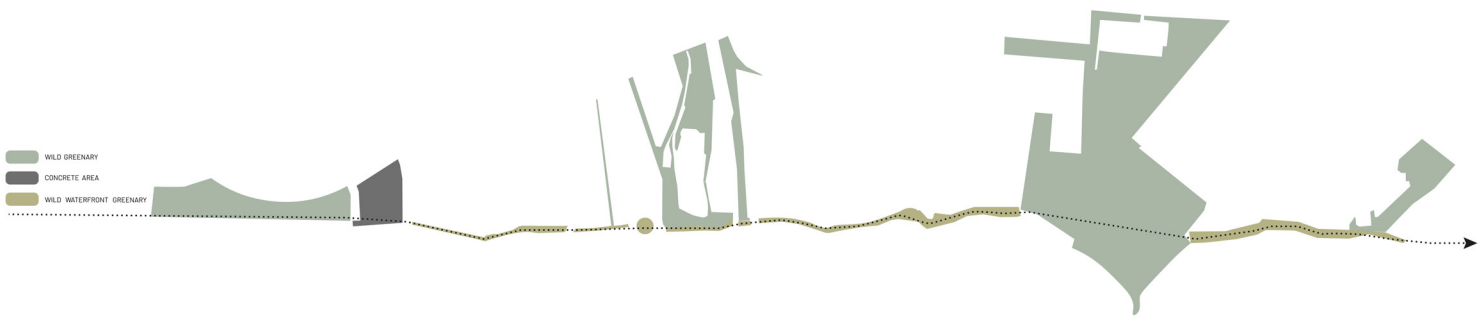
Purfleet panorama

Map of purfleet cluster

Image right:
The red outline shows the area of the new masterplan introduced by the city. Red dot marks the train station and the area of the new center of the city.



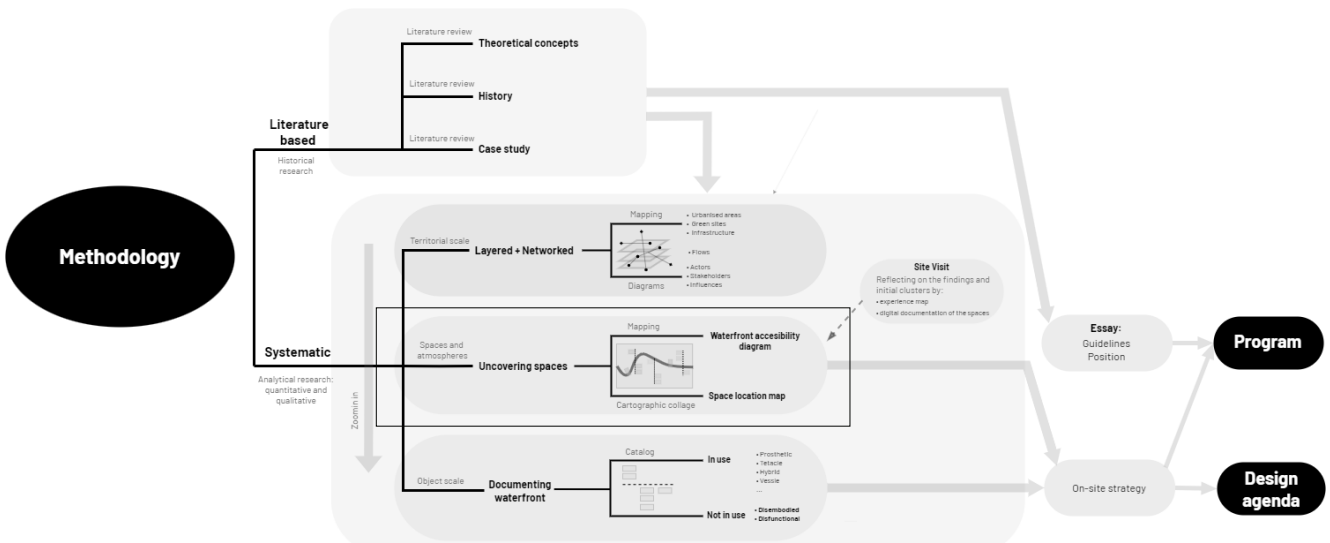
Green pockets - Patches left by the industrial activity



Chain of green pockets - Diagramatic representation of the chain of green patches.

Systematic research

Uncovering


Methodology
Literature based
Historical research
Literature review
Theoretical concepts
Literature review
History
Literature review
Case study
Systematic
Analytical research: quantitative and qualitative
Zoom in
Territorial scale
Layered + Networked
Mapping
Urbanised areas
Green sites
Infrastructure
Flows
Actors
Stakeholders
Influences
Diagrams
Spaces and atmospheres
Uncovering spaces
Mapping
Waterfront accesibility diagram
Space location map
Cartographic collage
Object scale
Documenting waterfront
Catalog
In use
Prosthetic
Tetacle
Hybrid
Vessle
...
Not in use
Disembodied
Disfunctional
Site Visit
Reflecting on the findings and initial clusters by:
experience map
digital documentation of the spaces
Essay:
Guidelines
Position
On-site strategy
Program
Design agenda

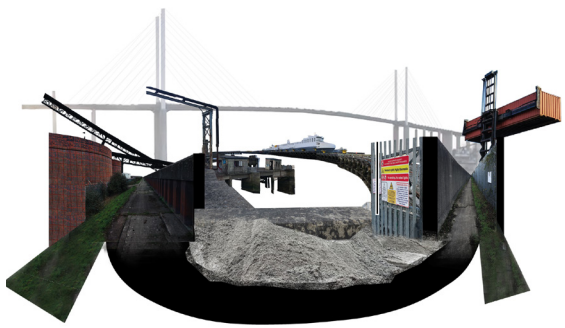
Uncovering

At the beginning of the process, the spaces were mapped intuitively. The site visit made me verify my initial findings. Zooming in on the Purfleet waterfronts allowed me to understand the character and relation of the uncovered spaces more precisely. It also allowed me to analyze more in-depth the waterfront structures. For sorting out locations not only by feeling but also by strategic qualities I developed the three categories that the spaces needed to fulfill.

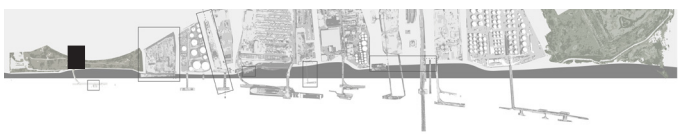
1. The space is close to the waterfront structure.
2. The space is in proximity to a residential area.
3. The space has natural or industrial qualities.
4. The space evokes atmospheric notions of terrain vague.

Additional to those categories it was crucial to get a real site experience, specifically to have an idea about the atmosphere in the locations but also about the firmness of the further examined structures. After collecting photographic documentation I made a collage summing up some of the characteristics of the site and I made a photo collage series identifying some of the views in the uncovered locations.

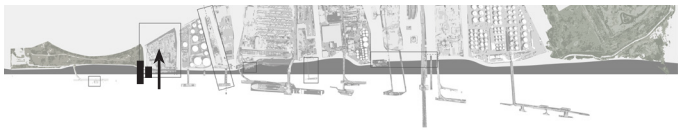
The map on the next page shows the potential locations that are in coherence with guidelines 1, 2 and 3. Further on the photocollages document the spaces that also fulfilled the 4th, more subjective criterium.

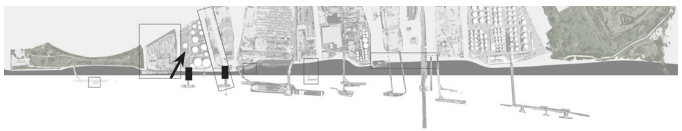


Uncovered spaces - potential locations that are in coherence with guidelines 1, 2 and 3

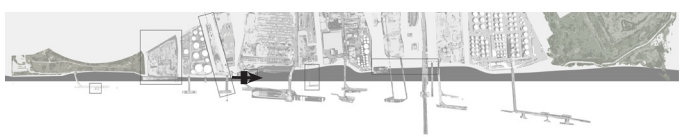



KEEP
CLEAR

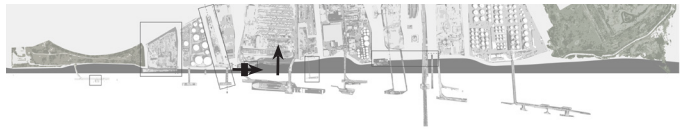


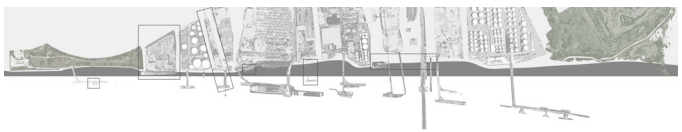



PAULINE

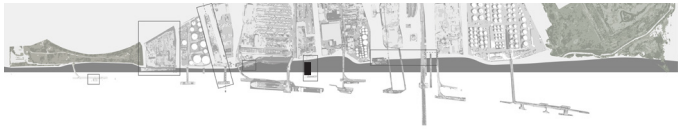



GTS
GTS
CLINKCARGO
COBELFRET






Google

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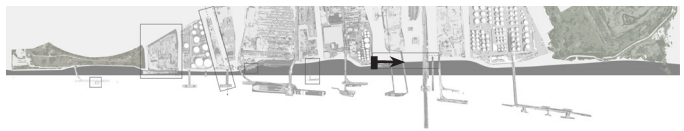

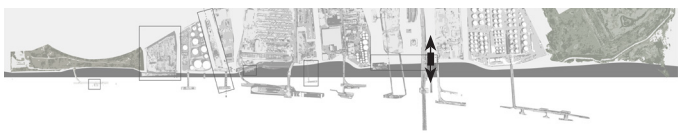


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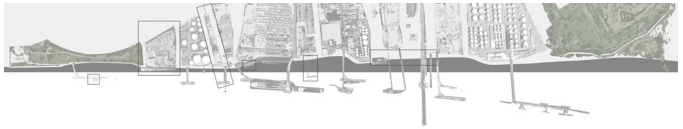
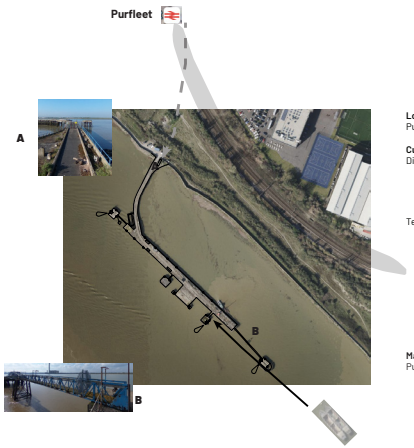


Systematic research

Structures analysis

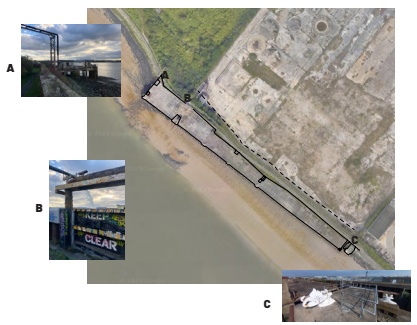


Location:
Purfleet

Current function
Disfunctional

Tentacle

Materiality
Purfleet

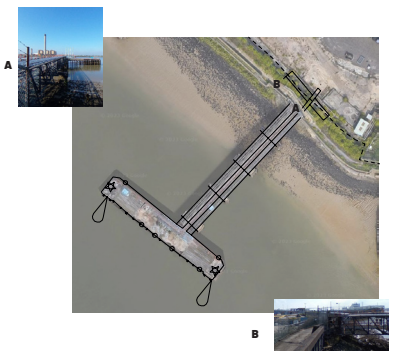


Location:
Purfleet

Current function
Disfunctional

Excresence

Materiality
Concrete, Wood

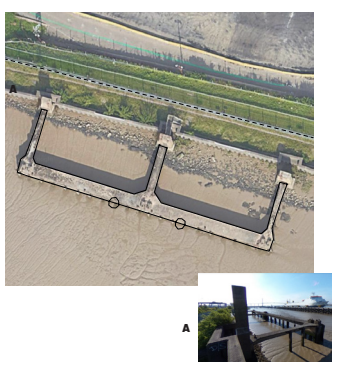


Location:
Purfleet

Current function
Disfunctional

Tentacle

Materiality
Concrete,Wood, Steel

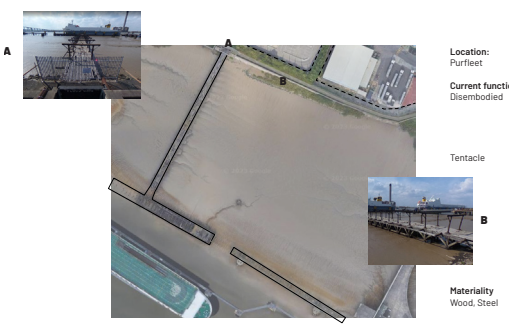


Location:
Purfleet

Current funct
Disembodied

Framework

Materiality
Concrete



Location:
Purfleet

Current function
Disembodied

Tentacle

Materiality
Wood, Steel

Location:
Purfleet

Current function
Passage,
Authorised access

Graft

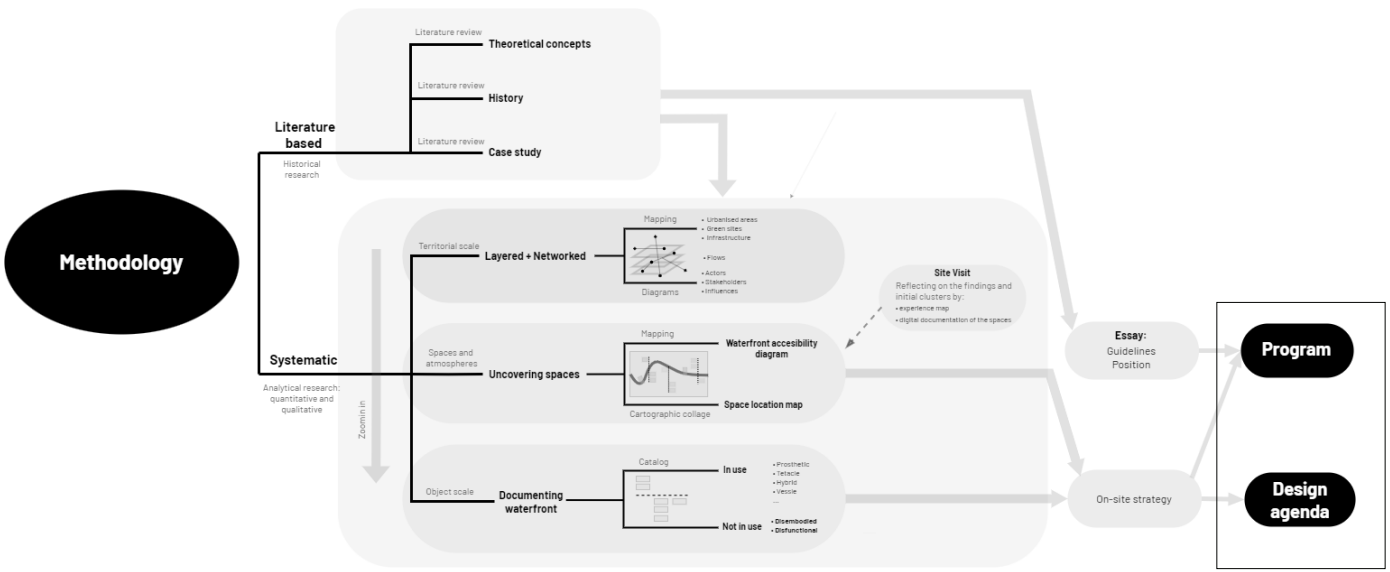
Materiality
Concrete ramp
Steel railing

Uncovering spaces and documenting waterfronts

The last step was to examine the abandoned structures in the area. The presented images were sellected out of a bigger amount of structures that included also ones not defined as disfunctional. While describing the operational vocabulary was used in naming the structures so to identify the possible new function.

Strategy

Strategy Site and Progarm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Telaclé
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Vessle
...
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Disembodied
Disfunctional
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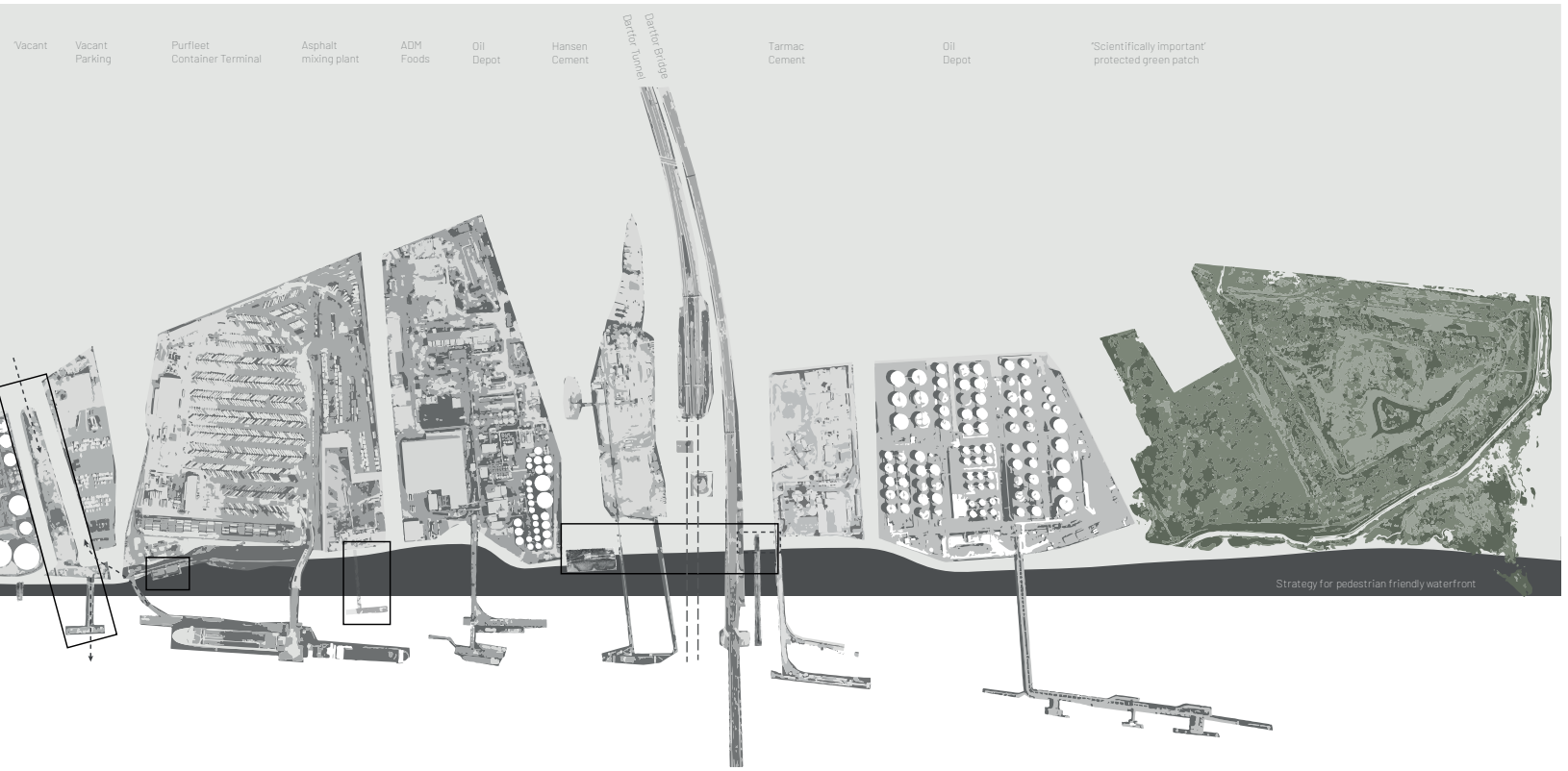
Reflecting on the findings and initial clusters by:
experience map
digital documentation of the spaces
Essay:
Guidelines
Position
On-site strategy
Program
Design agenda



River Distribution Center

Redevelopment of land for light freight sorting facility (Parcel hub). With possility to host other functions. Pier reactivation.

Fostering greener logistic peripheries. New axis of transmission.
Prosthesis

Skeleton

Possible redesign of the firm structure for interesting observation space and work with the embankment.

Access to water, different quality spaces.

Embodyment

Bio pier

Foster plants and nature grow with use of derelicting structures.

Fostering nature regrowth.

Grafting

Interface

Uncovering the green patch and designing a 'stop-by space' and pleasent path to travel in land.

Access to water, different quality spaces.

-

Waterfront path strategy

A design strategy: materialisation and principles on the pedestrian friendly waterfront redesign. Solution to some of the difficult spaces.

Greys
Tilbury Port

Strategy

Having acquired knowledge about the area and studying multiple reports on London's industrial and logistical future, I have developed a strategic approach for the waterfront. Guided by research, three distinct domains of change have emerged, each associated with different key actors.

By conducting an analysis of site conditions, area development plans, and strategic reports from the City and Port, I have formulated an initial strategy for the space. This strategy focuses on uncovering hidden potentials and proposes various interventions and guidelines for the overall redevelopment of the waterfront. The operational vocabulary serves as a conceptual tool for the intervention strategy at each specific location.

For example, when approaching the park area, the strategy revolves around the concept of grafting. This approach aims to introduce specific changes or additions to the existing underlying elements, rather than completely removing the current concrete layer and overlaying a more generic park design. The strategy acts as a starting point for the design, outlining both the desired transformation and the potential functions to be applied to the different areas or „tentacles" of the waterfront.

The ultimate goal is to create a cohesive design that establishes a visual relationship between the various locations, evoking a sense of uncovering hidden treasures. By implementing interventions that harmoniously blend with the existing context, there is a greater hope that none of these valuable spaces will be further erased or disregarded, ensuring their long-lasting presence and significance in the overall waterfront redevelopment.

1-transformation for the industrial activity is a driver of more sustainable and green solutions

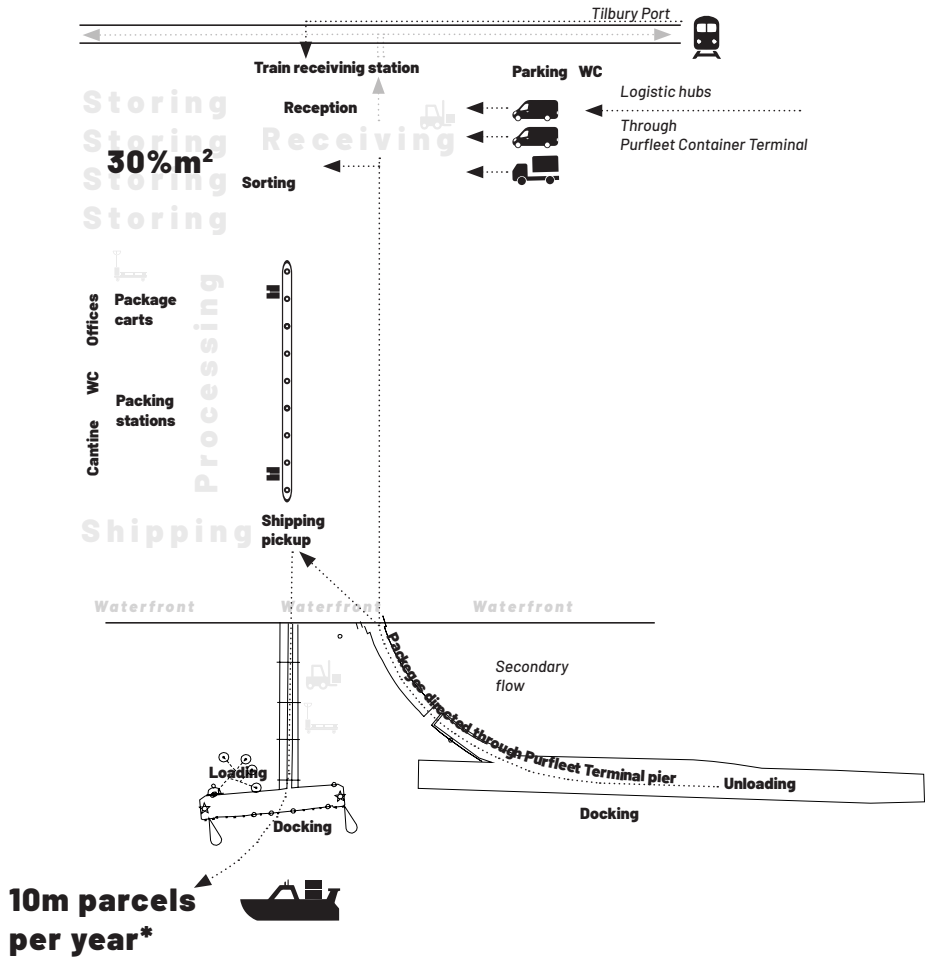
2-transformation encouraging 4th nature activities

3 -transformation encouraging human closure with the Thames

River Distribution Center

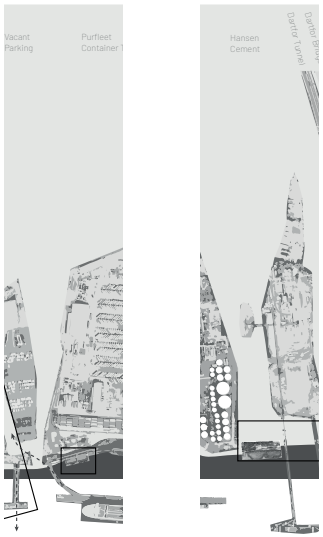
Redevelopment of land for light freight sorting facility (Parcel hub). With possility to host other functions. Pier reactivation.

Fostering greener logistic peripheries. New axis of transmission. Prosthesis



Program proposal - River Distribution Center

*10 mln is half of the amount that the research proposes



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Interface

Uncovering the gree
patch and designing
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land.

*Access to water,
different quality spa*

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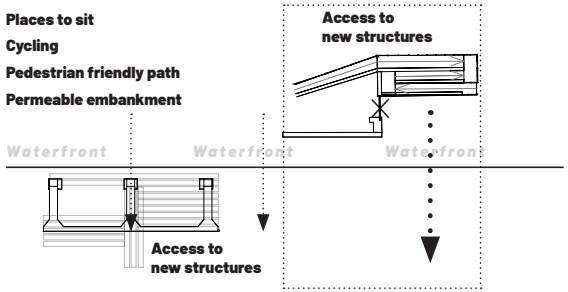
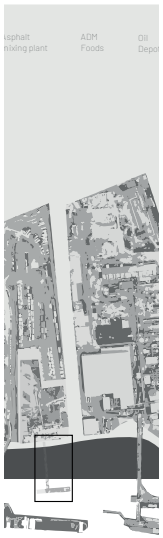


Program proposal -Abandoned piers

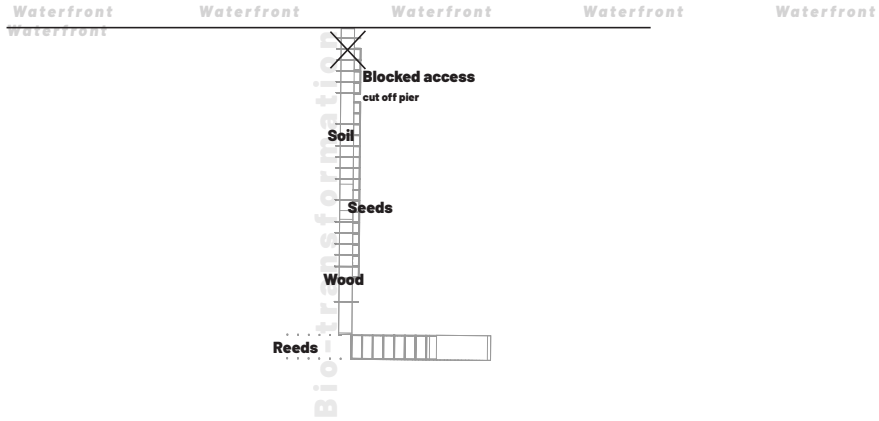


Bio pier

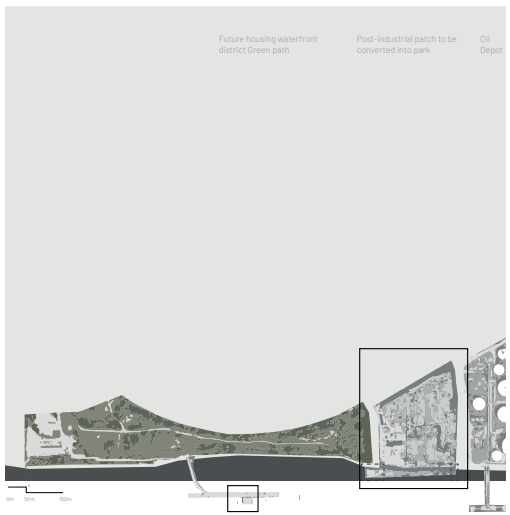
Foster plants and nature grow with use of derelicting structures.

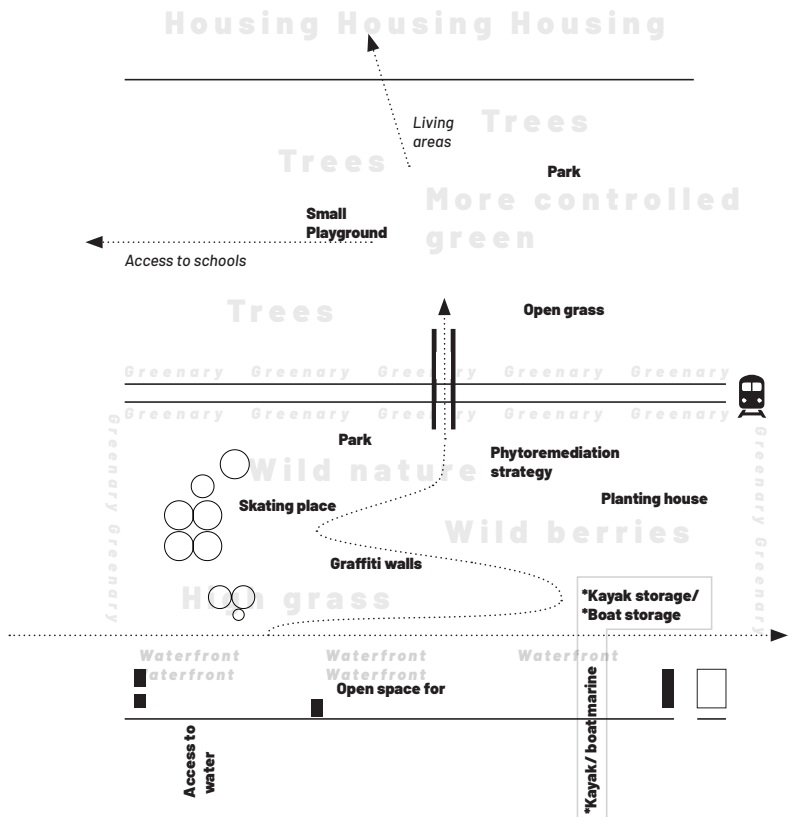
Fostering nature regrowth.

Grafting



Program proposal -Pier turned into nature hub





Park
Reinham Marshes

***Control house**

Considering the future development for ferry transport the small control space/waiting area could be added to the pier.

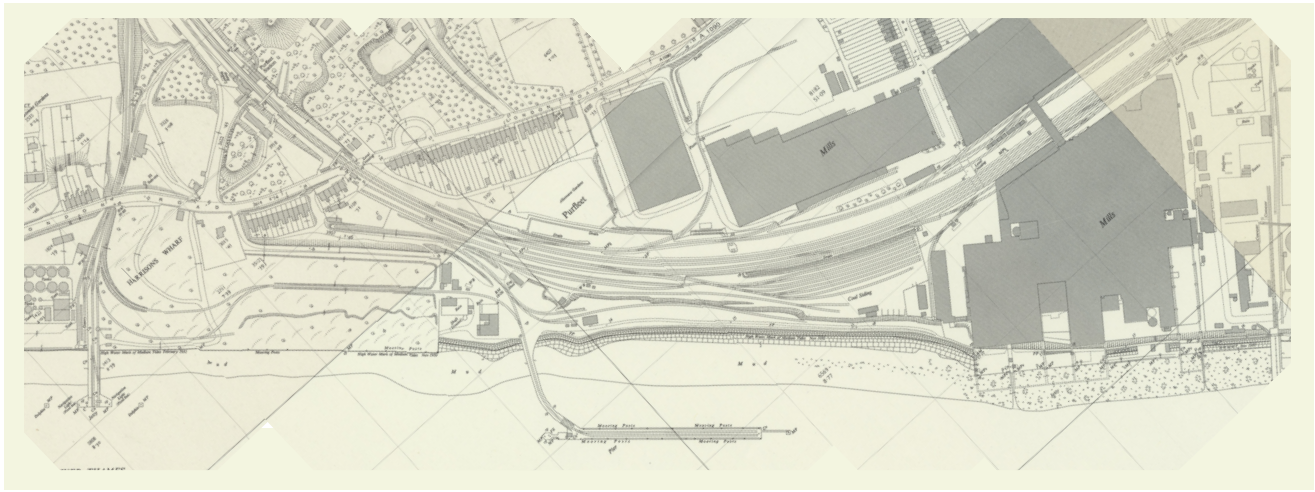
Fostering greener logistic peripheries. Connecting people Excrescence

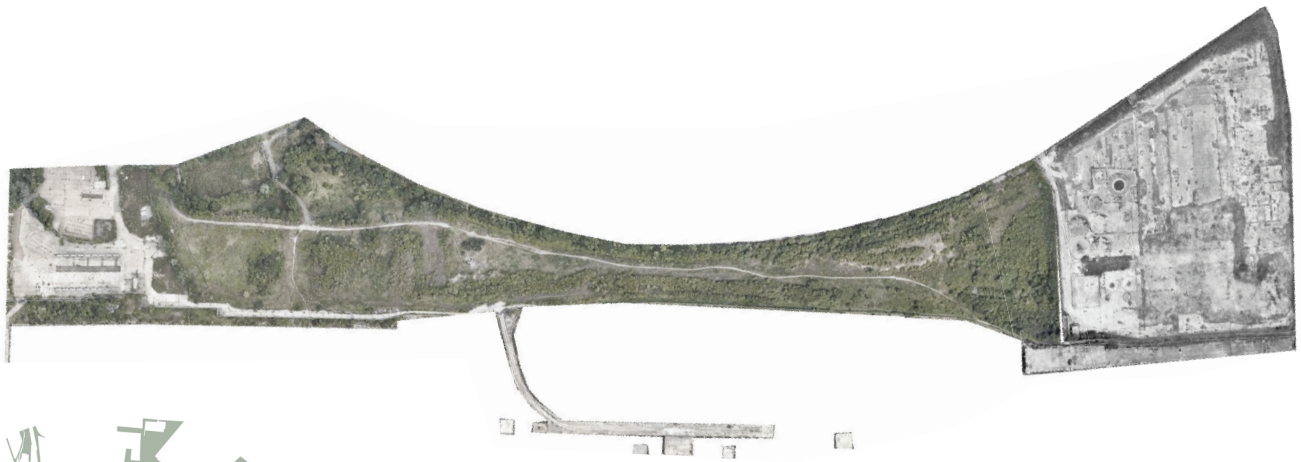
'Post industrial' Park

Post industrial land park design with 4th nature driven design and phytoremediation.

Designing green spaces with concern to their origin. Grafting

Program proposal - Early programatic ideas for abandoned site (Paper Mill area)


Mills
Mills
Portfleet
HUDDISONS WHARF
Coal Jetty
Mooring Posts
Mooring Posts
Mooring Posts



Design site

While providing the possible scenarios It was quite apparent that the site closest to the station has biggest potential for the design. This particular site had a previous function as a railway depot, while being adjacent to a paper mill factory. Unfortunately, the industrial history of the area left it highly polluted, degrading the soil. However, over time and with years of inactivity, the site began to undergo a remarkable transformation, evolving into a biodiverse area.

Presently, although the site is part of the waterfront, the water is hardly visible from the site, primarily due to the presence of a sheet pile acting as a flood wall that spans the entire industrial waterfront.

Ecological program

Transport

- Enhancing access to Purfleet and London
- Reactivation the pier
- Small marina for use

Legislative/ Administrative

Agency

- Overlooking
- Planning
- Reacting to developments
- Cooperation between organisations

Botanical explorations

Cultivation and research

- Nursery - local species
- Observing learning and acting
- Preservation
  - Eco area - Park nursery and „redevelopment"
  - Green corridor at waterfronts
  - Waterfronts - shallow habitat
  - Island
- Consequent incorporation of greenary in the program
  - Brownfield sites
  - Post industrial elements
- Rain water management
- Waste management

Education

Social program

- Lecture sessions
- Social activities in the area
- Gardening sessions (experimental - uncovering)
- Cleaning the riverfront
- Sessions/ Program on the piers 'Bodies of water'

Education on ecology and industrial infulece

- Thurrock industries and its ecologies
- Educating on local fauna and flora
- Advisory
  - Landscape - designing
  - biodiversity (for city and citizens)
  - water management and resiliant design
- Exposition of purification processes
- Exposition of plants

Proposition of the program

Based on my analysis, my aim was to identify a location where abandoned structures could be revitalized or repurposed. The objective was to propose an intervention that would enhance accessibility to waterfronts and reactivate the area while appreciating its unique qualities. One of these distinctive qualities was the concept of the 4th nature. In accordance with the essay's findings, the proposed function had to align with the logic of the patch.

In the case of Purfleet, a particular site was chosen due to its transportation and social inclinations. To this end, a new ferry terminal is suggested, considering the significant shift towards water transport highlighted in the research. This terminal could serve as another means of connecting the newly reactivated periphery of Purfleet.

In addition to the ferry terminal, I suggest implementing a comprehensive program focused on post-industrial green patches. The area would become a living lab and process space, showcasing different plant species' development in relation to pollution. It would also demonstrate water and soil purification processes. The program would provide space for NGOs currently working to preserve the brownfields in the area. By curating processes and actively engaging with the site, the agency responsible for the area could extend its influence beyond the site borders, integrating consecutive parts of the waterfront into the scheme. The location's knowledge and research would be utilized to educate the public through workshops, programs, and thematic walks. It would also serve as a tool for remediating polluted brownfields in the area, while research labs and plant development facilities could be used for remediation efforts outside the site.
Regarding the architecture, the program would be integrated with the existing man-made structures on-site, minimizing its impact on the soil. The program would be dispersed throughout the area, positioned between the site and the water, offering commentary on site-specific aspects. This arrangement would provide an unexpected experience for passers-by, engaging them with the surroundings.