

LUND INSTITUTE OF TECHNOLOGY
SUSTAINABLE URBAN DESIGN
ASBM01 - DEGREE PROJECT

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BARRIO PESQUERO

INTEGRATING AN INDUSTRIAL WATERFRONT
FERNANDO G-CAMINO



Title: *Barrio Pesquero: Integrating an Industrial Waterfront*



LUND
UNIVERSITY

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Sustainable Urban Design

ASBM01 - Degree Project



El Tomavistas de Santander

INTRODUCTION

El Barrio Pesquero (The Fishing District) sits on land that was artificially gained to the sea on the second half of the 19th century, in order to expand the port and its increasing activity. 150 years later, the city of Santander faces new challenges such as an aging and decreasing population or the talent drain. Also there are still large areas that are disconnected and lacking of green spaces. This is one of them.

Santander is a city that is far from its full potential, but with its breathtaking landscapes, the only south-facing coastline in the north of Spain, great communication and a generally high quality of life, there is much already laid down to steer the city towards a great urban life.

If there is one place in which I would start with this new direction, it would definitely be Barrio Pesquero.

It is next to the city centre, it enjoys 2.5km of waterfront spaces and most of it is in a state of dereliction. After 150 years of port activity, it is time to open the waterfront and give Barrio Pesquero to the people.



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ANALYSIS

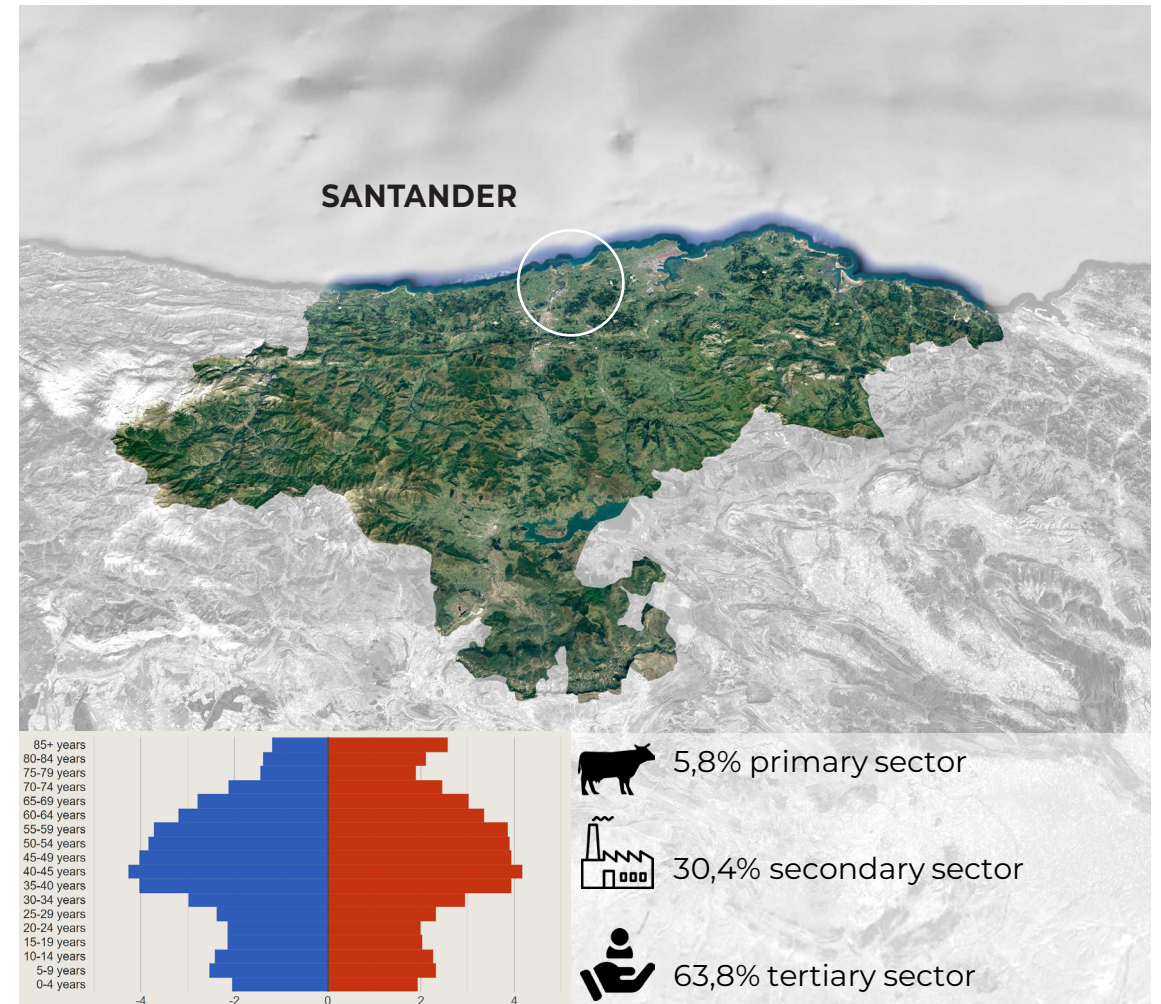
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WHERE IS IT?

Barrio Pesquero is located in Santander, capital of the region of Cantabria, North Spain. The North of Spain is quite different to the rest of the country and the most apparent reason for this is the climate. With very mild average temperatures ranging from 10°C in January to 20.5°C in February and heavy rainfall, it makes for lush, green landscapes nowhere else seen in the country.



Cantabria has a population of 580.000 inhabitants, with an economy that has gone from being based on the primary and secondary sectors, to being dominated by the tertiary sector, mainly tourism. Its population is both decreasing and aging.



Combining huge mountain ranges, hundreds of valleys and rich coastlines, Cantabria is one of Spain's most beautiful regions. Its culture and identity are deeply rooted in the mountain and marine lifestyles. It is important to note that the Islamic invasion never went past Cantabria's mountains, which makes its culture, architecture (and sometimes even vocabulary) quite different to the rest of the country.









Mirante
de Anamira

POSA
ANSOR

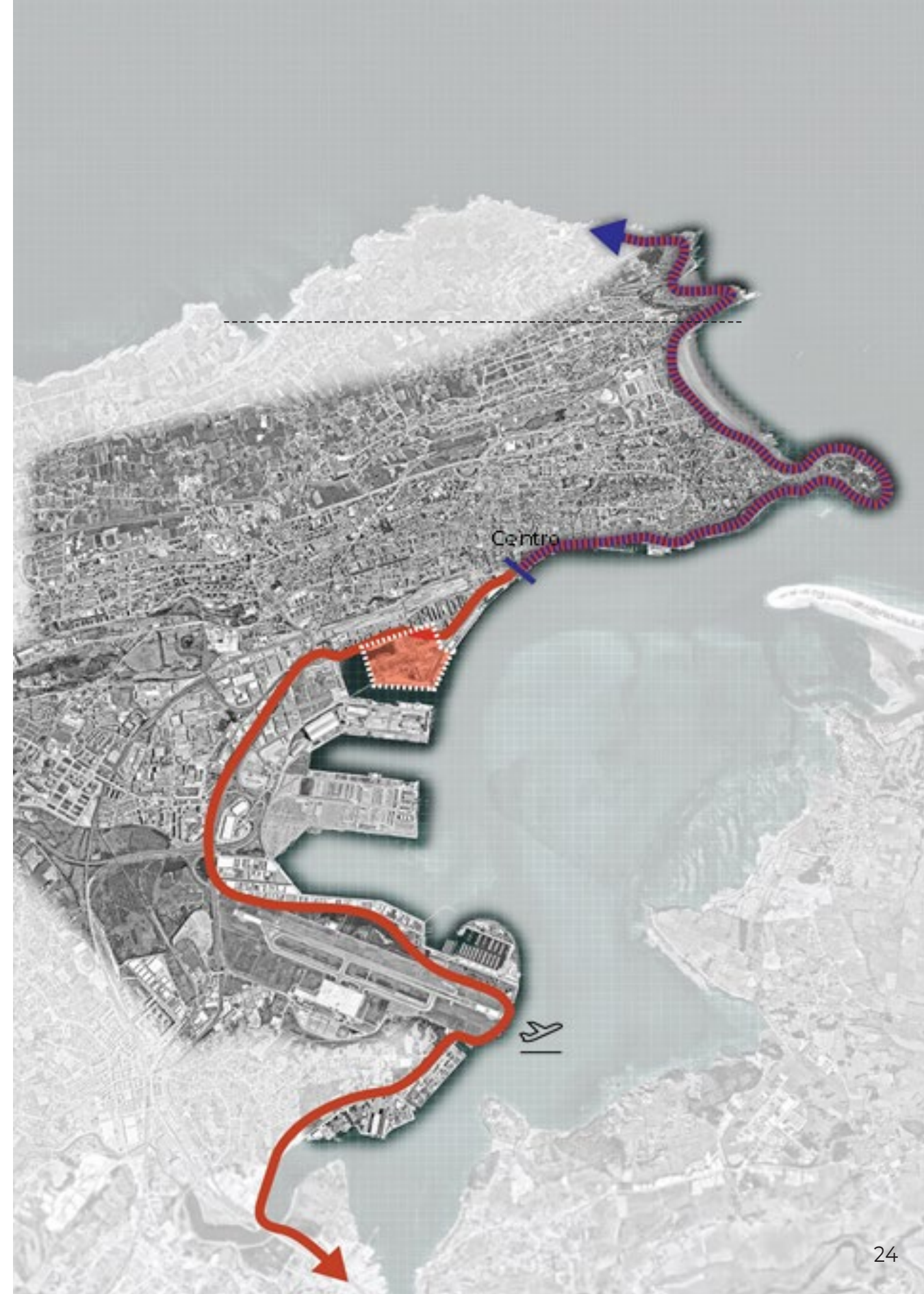
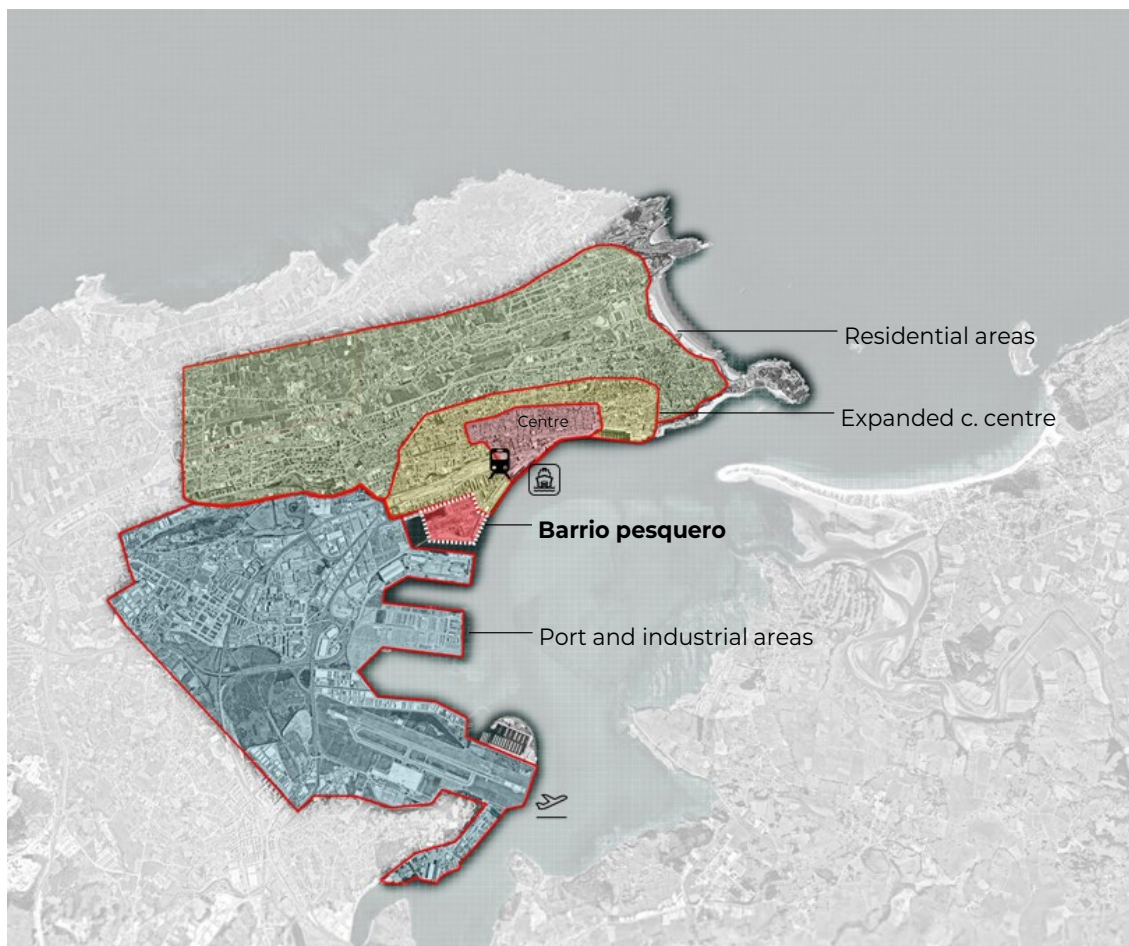
SANTANDER

The region's capital enjoys the only south-facing coastline in the north of Spain. It is well connected by land, air and sea and its bay is a great natural port. It has a population of 175.000 (300.000 in the metropolitan area) which, just like Cantabria's population, slowly aging and decreasing. Its privileged landscape features and mil climate all year round, could make it an attractive destination in the future for people to move in.



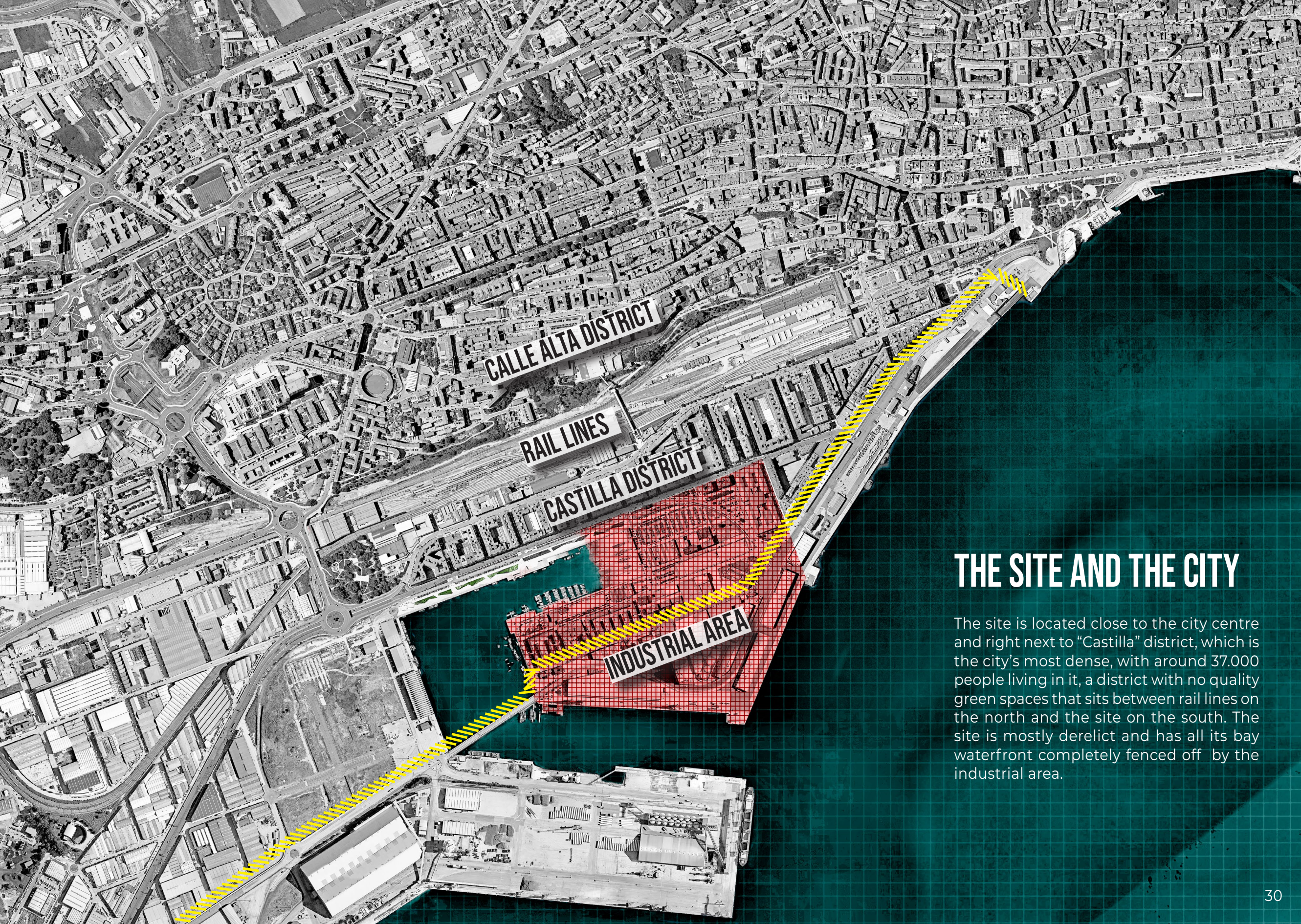
The city centre is where the original docks used to be located. With time, the docks have been moving away as new land was gained to the sea through extensive landfilling. The port is now in the South of the city, right next to Barrio Pesquero.

Santander enjoys one of the country's best waterfront spaces. One can walk by the sea uninterruptedly around most of the city, going through beaches, cliffs, promenades... This waterfront access is suddenly cut off by the Ferry's platform and the site itself.









CALLE ALTA DISTRICT

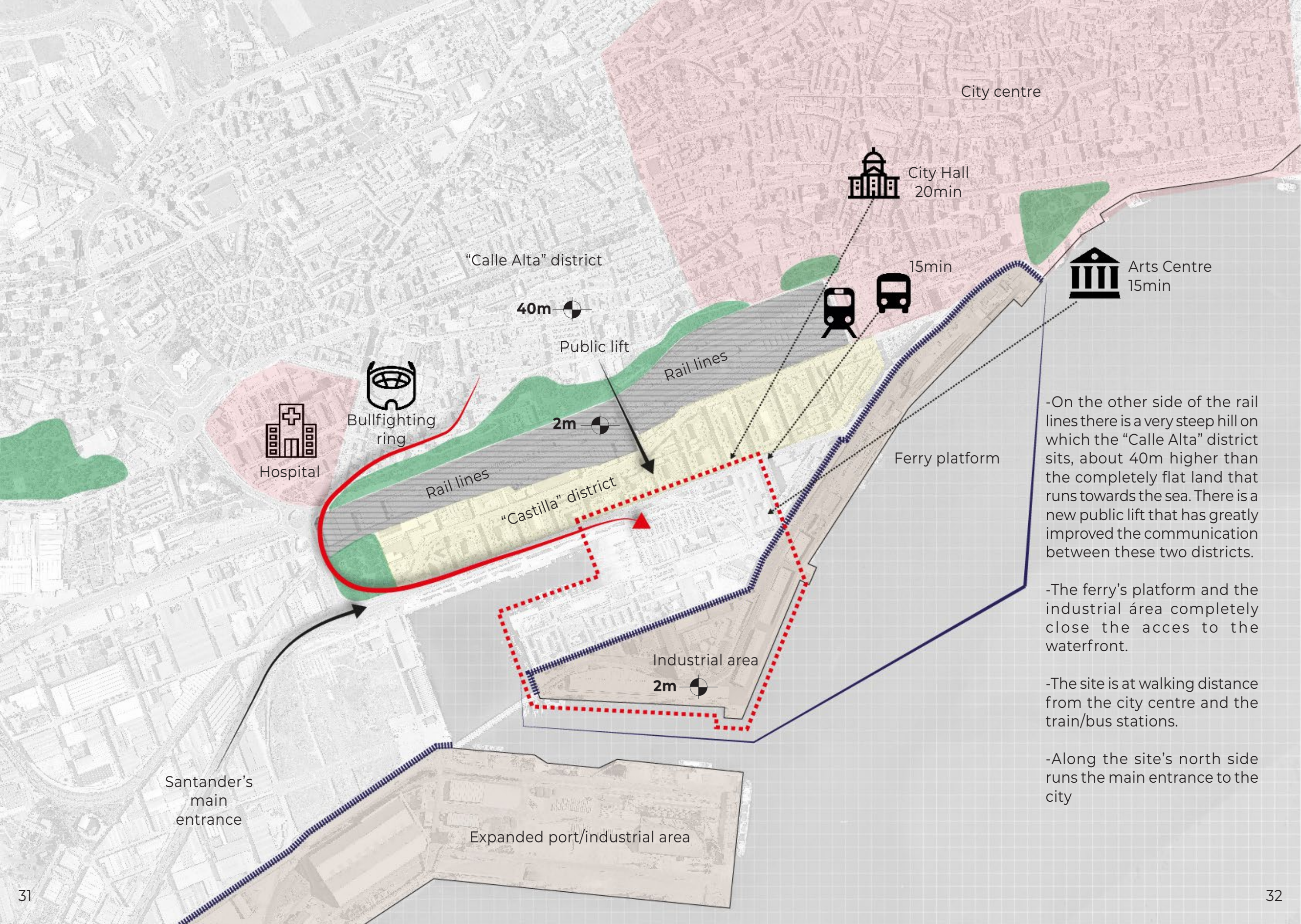
RAIL LINES

CASTILLA DISTRICT

INDUSTRIAL AREA

THE SITE AND THE CITY

The site is located close to the city centre and right next to “Castilla” district, which is the city’s most dense, with around 37.000 people living in it, a district with no quality green spaces that sits between rail lines on the north and the site on the south. The site is mostly derelict and has all its bay waterfront completely fenced off by the industrial area.



City centre

City Hall
20min

Arts Centre
15min

"Calle Alta" district

40m

Public lift

Rail lines

15min

Hospital

Bullfighting ring

2m

Rail lines

"Castilla" district

Ferry platform

-On the other side of the rail lines there is a very steep hill on which the "Calle Alta" district sits, about 40m higher than the completely flat land that runs towards the sea. There is a new public lift that has greatly improved the communication between these two districts.

-The ferry's platform and the industrial area completely close the acces to the waterfront.

-The site is at walking distance from the city centre and the train/bus stations.

-Along the site's north side runs the main entrance to the city

Industrial area

2m

Santander's main entrance

Expanded port/industrial area



**CALLE ALTA
DISTRICT**

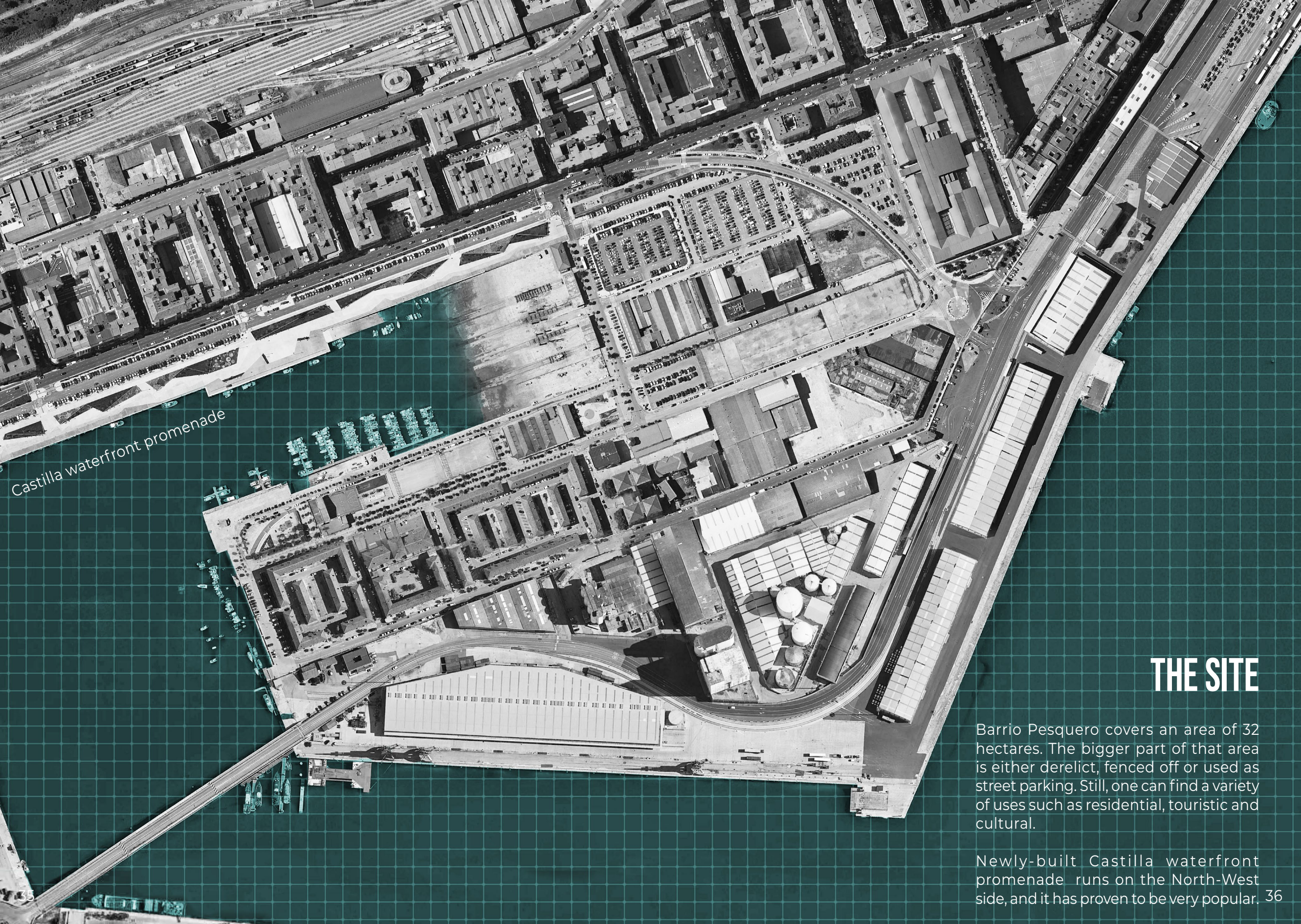
RAIL LINES

**CASTILLA
DISTRICT**

SITE

**SITE'S INDUSTRIAL
AREA**

FENCE

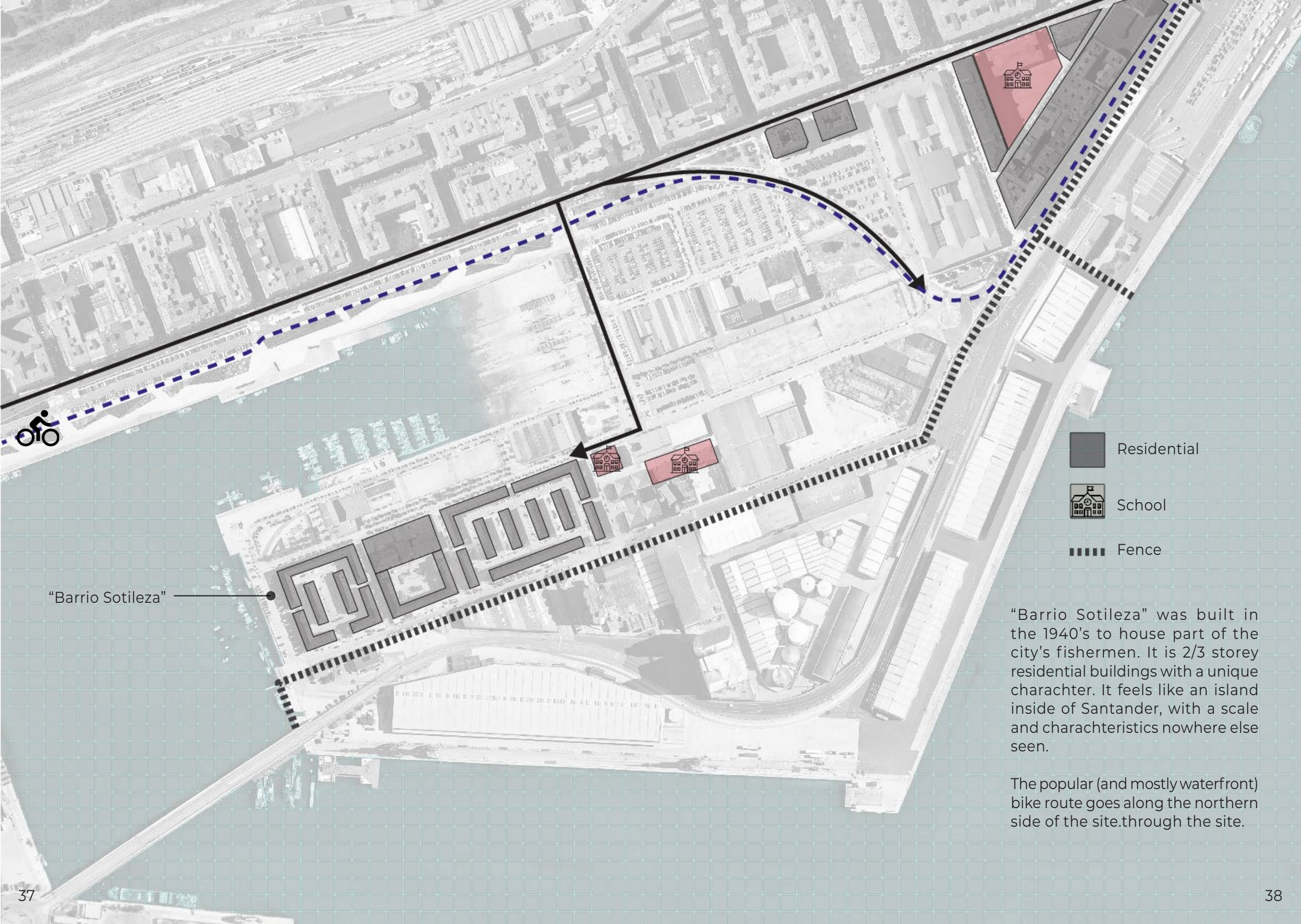


Castilla waterfront promenade

THE SITE

Barrio Pesquero covers an area of 32 hectares. The bigger part of that area is either derelict, fenced off or used as street parking. Still, one can find a variety of uses such as residential, touristic and cultural.

Newly-built Castilla waterfront promenade runs on the North-West side, and it has proven to be very popular. 36



“Barrio Sotileza”

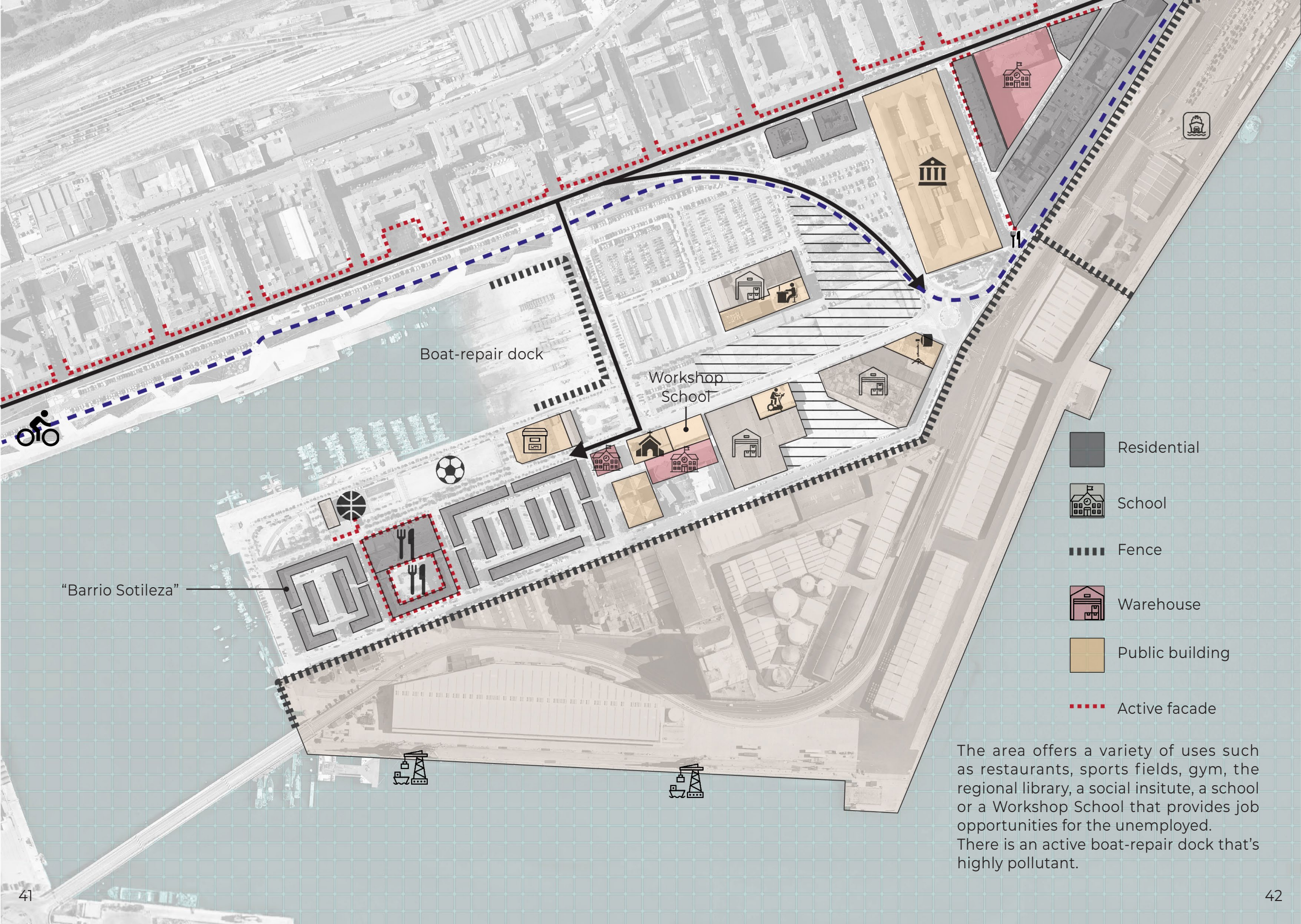
-  Residential
-  School
-  Fence

“Barrio Sotileza” was built in the 1940’s to house part of the city’s fishermen. It is 2/3 storey residential buildings with a unique character. It feels like an island inside of Santander, with a scale and characteristics nowhere else seen.

The popular (and mostly waterfront) bike route goes along the northern side of the site through the site.









Barrio Sotileza's main source of income is its fish restaurants, lined around its centre block. Behind it sits the industrial area with a 4m-high fence. Its mostly restaurant workers and fishermen (many retired) living here with their families.



Boat-repair dock

Workshop
School

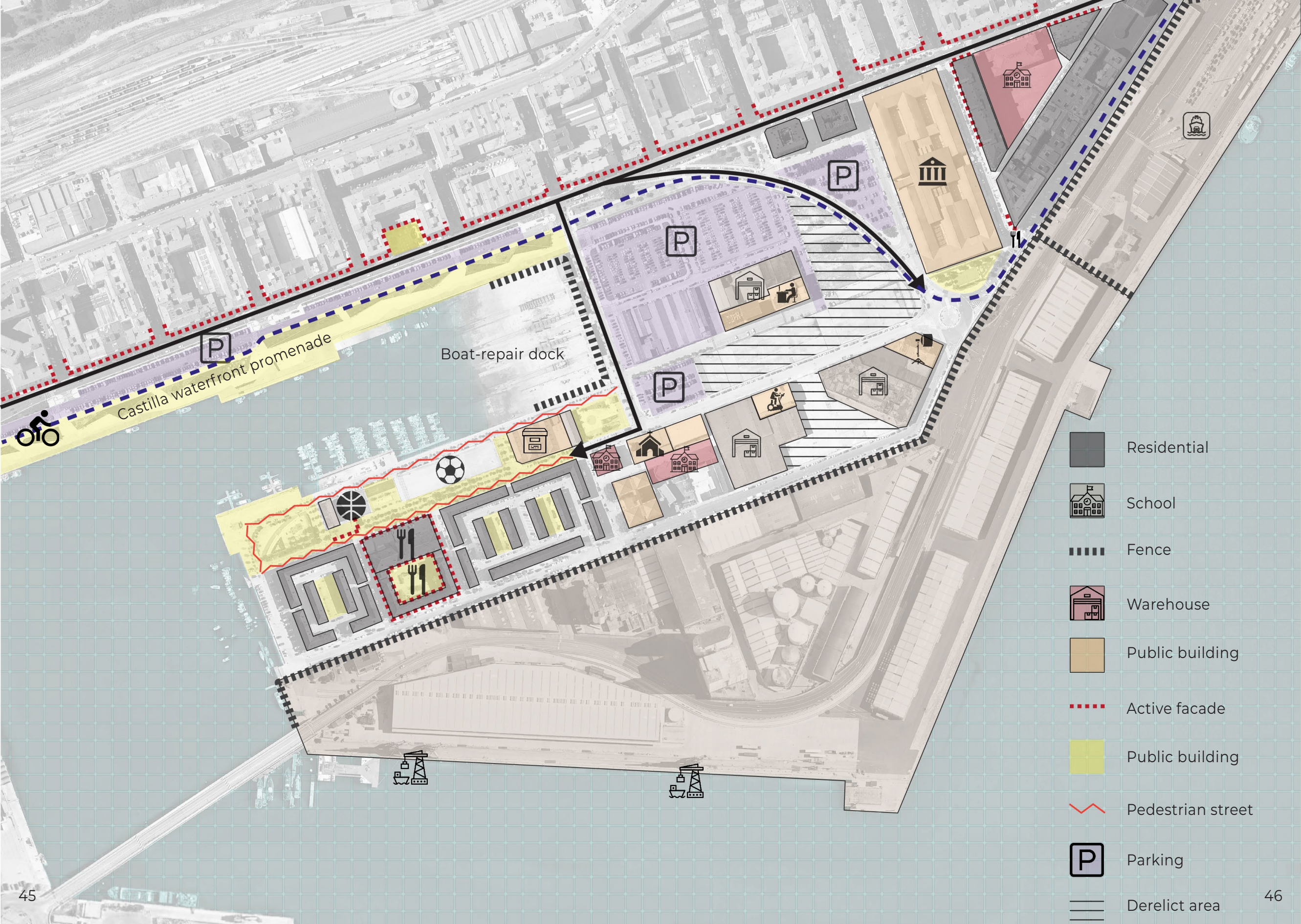
"Barrio Sotileza"

-  Residential
-  School
-  Fence
-  Warehouse
-  Public building
-  Active facade

The area offers a variety of uses such as restaurants, sports fields, gym, the regional library, a social institute, a school or a Workshop School that provides job opportunities for the unemployed. There is an active boat-repair dock that's highly pollutant.












Boat-repair dock and Castilla district



Castilla waterfront promenade

Boat-repair dock

-  Residential
-  School
-  Fence
-  Warehouse
-  Public building
-  Active facade
-  Public building
-  Pedestrian street
-  Parking
-  Derelict area



On both sides of the boat-repair dock, we can see the Castilla waterfront promenade (right) and the pedestrian street that goes along Barrio Sotileza (left). Both great existing features.



Behind the boat-repair shop, there are large areas that are either derelict or converted into street parking. On the back, there is the Regional Library, a former tobacco manufacturing plant.



This aerial picture shows the expanded docks and how Barrio Pesquero is the meeting point between them and the city. All the flat land is artificial landfill, including the site and Castilla district. The port activity has been gradually leaving the city, and moving into the expanded docks.



SWOT ANALYSIS

WEAKNESSES

The site is close to the city centre but it is disconnected from it because of the large, empty areas that stand between them.

The waterfront towards the bay is completely closed from the docks and industrial areas.

The boat-repair dock is underused and pollutes both the water and the air.

Lack of green areas. Public spaces are disperse.

Bad image due to the state of its streets and buildings.

THREATS

Population is aging and decreasing. New generations are not following the fisherman's lifestyle and are leaving the area.

The bad state of some buildings might cause their demolition and replacement with newer ones that would not have the same character.



STRENGTHS

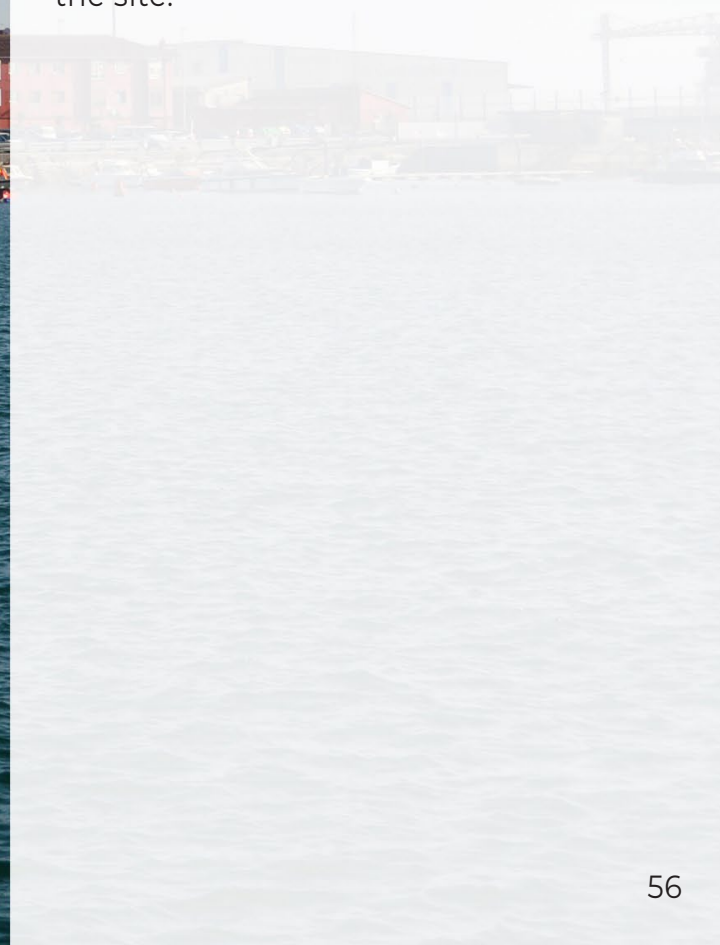
It is a unique, picturesque area, with its own identity.

The newly-built waterfront in Castilla Street is the area's main public space at the moment, offering great views towards the port, the site and the fishermen's activities.

It is located next to the densest, most populated area in Santander, which ensures a high number of daily users and visitors.

It already has a wide variety of uses.

The city's main bike route goes through the site.





OPPORTUNITIES

-The site has wide-open, empty spaces, with little physical constraints for the development of a large-scale project that could add cohesion and great value not only to the site and immediate surroundings but to the whole city of Santander.

-Some of the existing warehouses offer the ideal characteristics to create quality working spaces where younger populations can start their businesses at lower cost. Offering spaces of this kind could help alleviate the talent migration that the city is going through at the moment.

The City Council is already predisposed to think and hear about ideas to regenerate this area.





VISION + STRATEGY

2



AN ACCESSIBLE WATERFRONT

Continue the excellent waterfront promenades and public spaces that are present in the rest of the city. Offer direct access to the water to a large population that have been deprived of it for decades,

Strategy:

- Completely removing the fence and most of the industrial buildings so the entirety of the waterfront space will be accessible.
- The boat-repair dock Will be opened to the public and turned into an urban beach.
- Creating new safe-bathing areas
- Improving the connection with the parts of the city located behind the rail lines.



A YOUNG, CREATIVE PLACE

Attract the younger population and avoid the escape of talented minds. Offer the ideal conditions so they choose Santander as the place to develop their lives.

Strategy:

- Creating funded coworking spaces where the user's expenses are kept to a minimum.
- Easing the acquisition or renting of dwellings by creating residential buildings that are adjusted to modern needs like efficiency in cost and space, with an average dwelling size of 70m². Most of the land is owned by the port authority. In case they would release that land to the city council at no cost, it would help reduce the final cost of each dwelling.
- Promote cultural activities, offering the necessary spaces both indoors and outdoors.



A SEAMLESS URBAN EXPERIENCE

Make the most of the area's qualities and potentials to turn Barrio Pesquero into an all-year destination for both tourists and locals.

Strategy:

- Creating quality public spaces and integrating them in the city's structure (such as the waterfront promenade), so the area stays active through constant use and movement.
- Providing the area with the necessary spaces to promote activities such as water shows, cultural events, concerts, fairs, markets...
- Taking advantage of the unique experience of being so close to the fishermen's world, bringing public spaces right to the edge of the water and the creation of a Fishing Museum.



DESIGN

3

MAIN GOALS

- The main aim is to develop a medium-density project to accommodate around 7000-7500 people plus the approximately 1500 people who live in “Barrio Sotileza”.
- It will be a pleasant place to live as well as to visit, ample enough to be shared with the large number of neighbours from the surrounding districts. There will be clear gestures directed towards these districts with clear access throughout the urban fabric.
- It will have the necessary public services such as schools, offices, shops, sports facilities and spaces for outdoor and indoor activities both cultural and commercial.
- It will be economically sustainable, with an optimal public-private ratio and realistically viable to build.
- It will provide the necessary spaces for a wide variety of businesses, going from small, ground-floor converted warehouses to new, modern office buildings.
- It will encourage visitors to park their cars before entering the city, by offering a free carpark in the city’s limits. From this very carpark, people will be able to walk on waterfront promenades uninterrupted until the far side of town. It will also offer bike-sharing and public transport.
- It will keep its identity really close to the maritime world.



DESIGN'S KEY ACTIONS

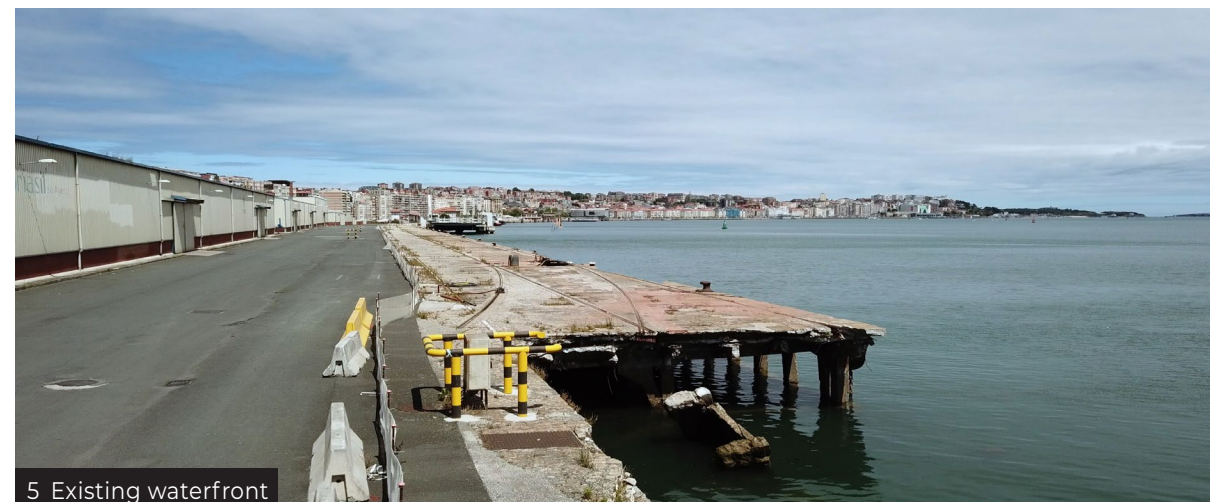
Based on the SWOT analysis and the vision+strategy, the first design step is to completely remove the fence (1) and consider the whole industrial area as part of the city. The remaining port activity can be transferred to some of the expanded port's areas. This thesis, however, will not go into detail with that issue.

The next step is to select which of the existing industrial buildings/warehouses to keep and which to remove (2). The ones remaining will be used for coworking centres and cheap rentals for small local businesses.

The boat repair dock, facing South-west, forms a light slope towards the water. This is a perfect spot for safe bathing and will be turned into an urban beach.

The public lift (4) is a major connector with "Calle Alta" district. The axis that goes from the lift to the sea coincides with the centre of the bay's central mountain. By opening this axis and creating a direct access with an uninterrupted view, the sea and the bay's landscape are brought closer to tens of thousands of people.

The site's fenced-off waterfront spaces are the only ones facing both the bay and the city itself. This will make for truly breathtaking public waterfront spaces and a perfect continuation to the city's promenades.



DESIGN PROCESS

1. Lifting the fence

2. Selecting buildings to remove

3. Creating the lift-sea axis

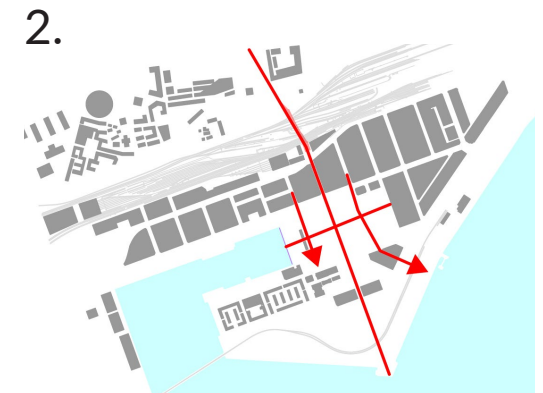
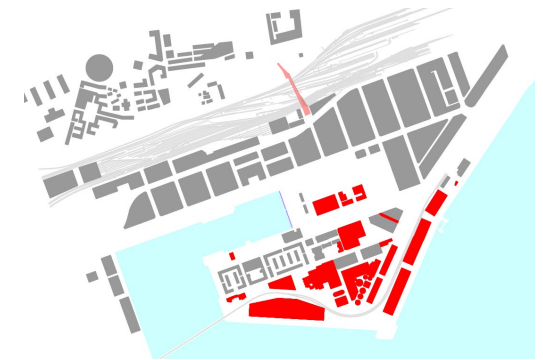
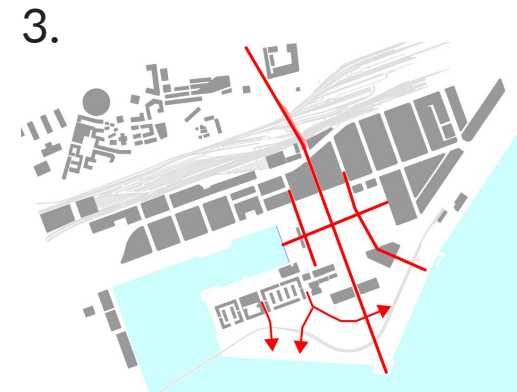
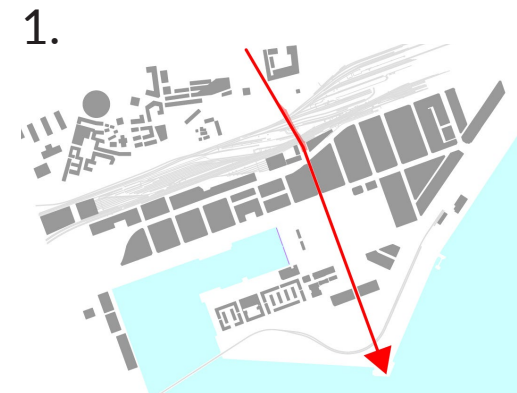
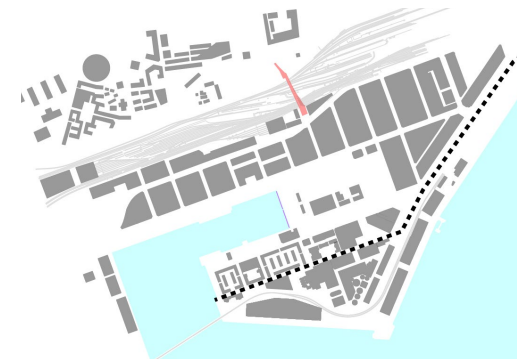
4. Extending the context's blocks' lines

5. Extending and twisting the site's blocklines

6. Creating network and defining blocks

7. Breaking the blocks

8. Defining uses and spaces



After specifying the public spaces and build use, the result is a project that merges with the existing morphology and adds many new uses both indoor and outdoor. Easy access to water and marine-related features have been important guidelines as well.

The lift-sea axis comes in the form of a boulevard. It is an uninterrupted straight line to allow the views to come into the city as far as possible.

The site is surrounded by a green ring formed by a variety of green spaces, squares, activities and even marine biotopes.

With 84 residential buildings housing an average of 85 people each, this project could house approximately 7200 to 7500 people.



Lift-sea axis

Public Library

Wildflower meadow

Skatepark

Urban beach + ocean-fed pools

Exhibition centre

Sports/shopping centre

Main square

Jetti

Lawn + steps towards the bay

Fishing museum

Marine research centre

Marine biotope

Parking and public-transport hub

Open-air gym

Public seapool

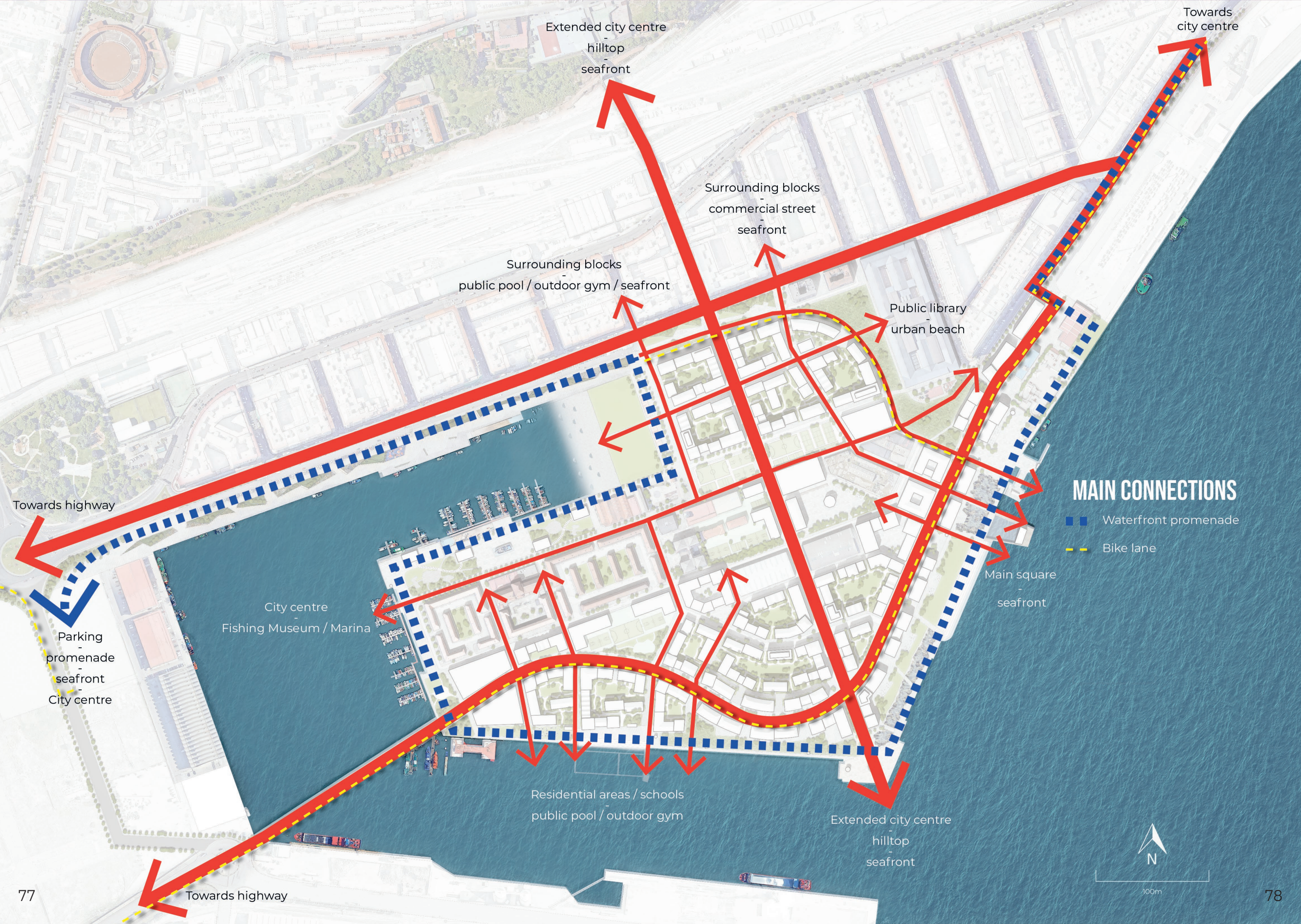
Wildflower meadow

Monument to the sea



1:2000

100m



Extended city centre
hilltop
seafront

Towards
city centre

Surrounding blocks
commercial street
seafront

Surrounding blocks
public pool / outdoor gym / seafront

Public library
urban beach

MAIN CONNECTIONS

- Waterfront promenade
- - Bike lane

Main square
seafront

City centre
Fishing Museum / Marina

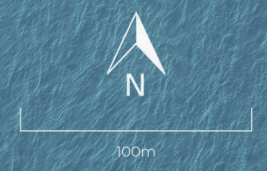
Parking
promenade
seafront
City centre

Residential areas / schools
public pool / outdoor gym

Extended city centre
hilltop
seafront

Towards highway

Towards highway

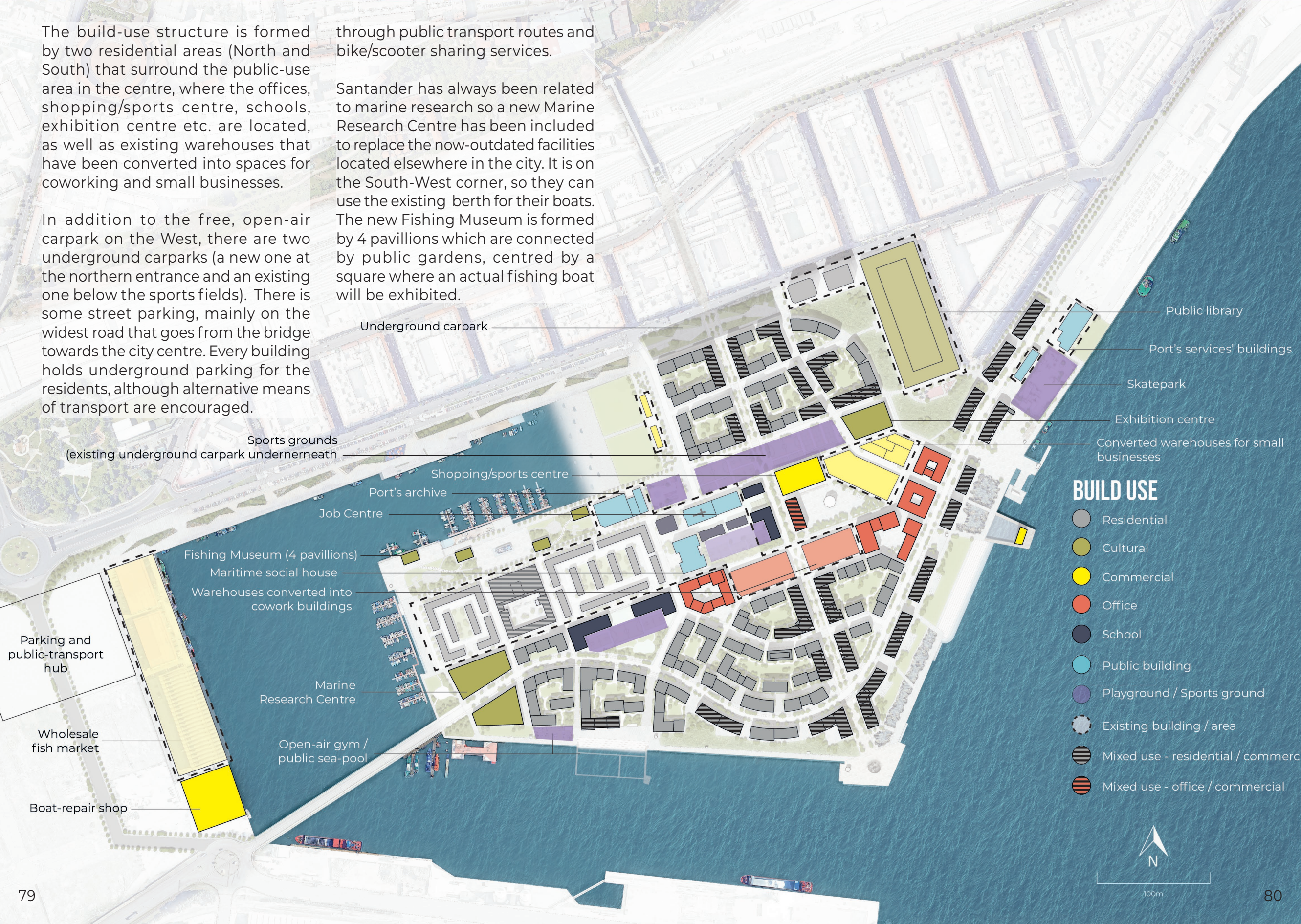


The build-use structure is formed by two residential areas (North and South) that surround the public-use area in the centre, where the offices, shopping/sports centre, schools, exhibition centre etc. are located, as well as existing warehouses that have been converted into spaces for coworking and small businesses.

In addition to the free, open-air carpark on the West, there are two underground car parks (a new one at the northern entrance and an existing one below the sports fields). There is some street parking, mainly on the widest road that goes from the bridge towards the city centre. Every building holds underground parking for the residents, although alternative means of transport are encouraged.

through public transport routes and bike/scooter sharing services.

Santander has always been related to marine research so a new Marine Research Centre has been included to replace the now-outdated facilities located elsewhere in the city. It is on the South-West corner, so they can use the existing berth for their boats. The new Fishing Museum is formed by 4 pavillions which are connected by public gardens, centred by a square where an actual fishing boat will be exhibited.



Sports grounds
(existing underground carpark underneath)

Underground carpark

Public library

Port's services' buildings

Skatepark

Exhibition centre

Converted warehouses for small businesses

Shopping/sports centre

Port's archive

Job Centre

Fishing Museum (4 pavillions)

Maritime social house

Warehouses converted into cowork buildings

Marine Research Centre

Open-air gym / public sea-pool

BUILD USE

- Residential
- Cultural
- Commercial
- Office
- School
- Public building
- Playground / Sports ground
- Existing building / area
- Mixed use - residential / commercial
- Mixed use - office / commercial

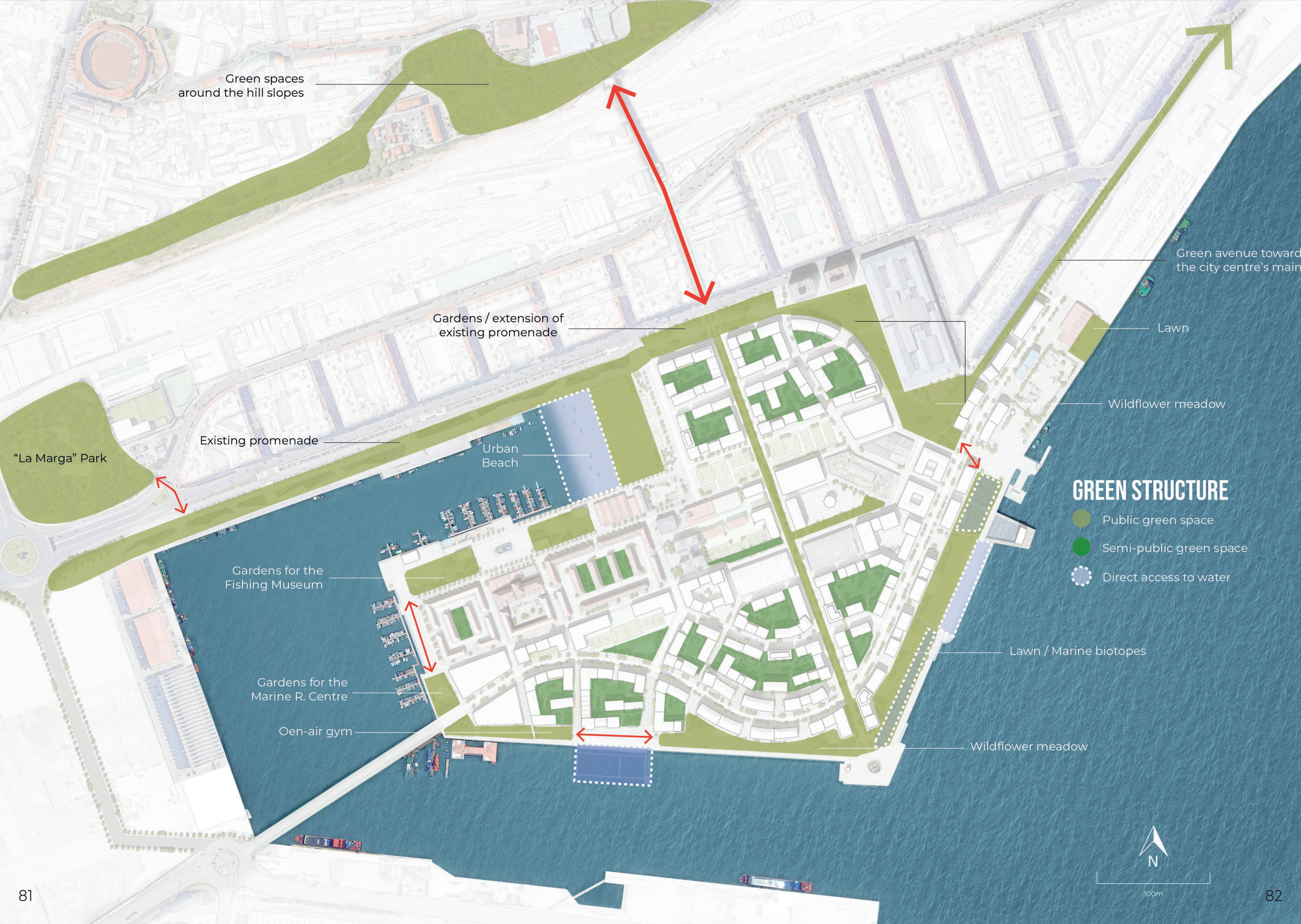
Parking and public-transport hub

Wholesale fish market

Boat-repair shop



100m



Green spaces around the hill slopes

Gardens / extension of existing promenade

Green avenue toward the city centre's main

Lawn

Wildflower meadow

Existing promenade

GREEN STRUCTURE

- Public green space
- Semi-public green space
- Direct access to water

"La Marga" Park

Urban Beach

Lawn / Marine biotopes

Gardens for the Fishing Museum

Wildflower meadow

Gardens for the Marine R. Centre

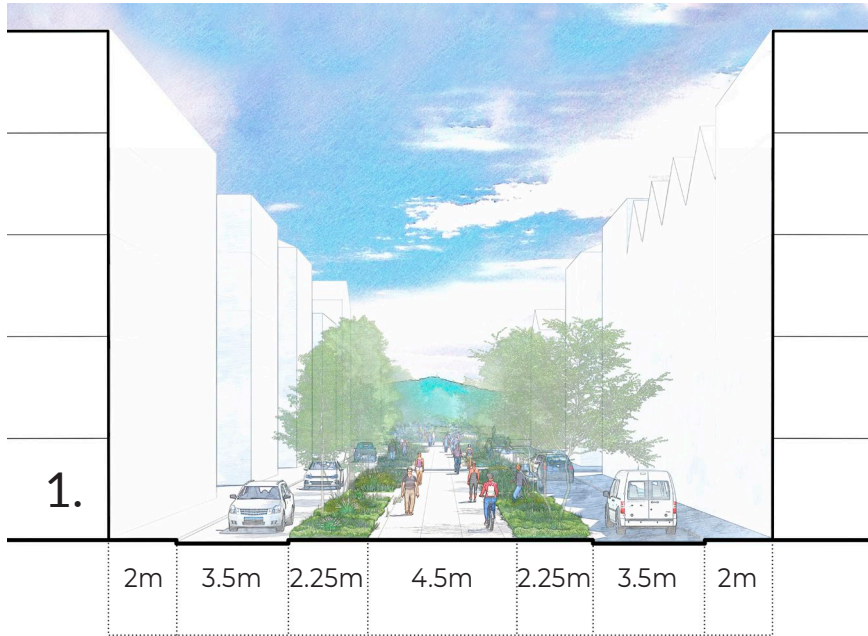
Oen-air gym







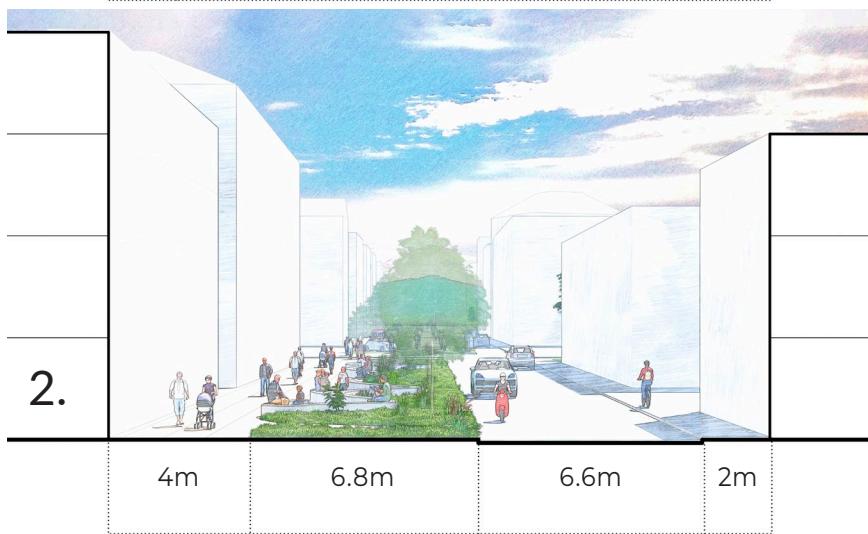
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1.

2m 3.5m 2.25m 4.5m 2.25m 3.5m 2m

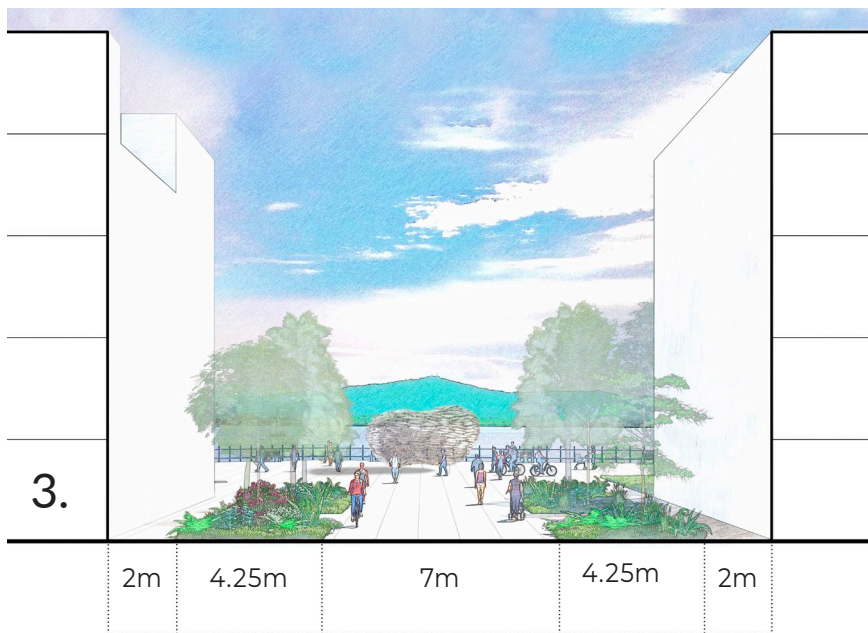
2.



2.

4m 6.8m 6.6m 2m

3.



3.

2m 4.25m 7m 4.25m 2m

LIFT-SEA AXIS / BOULEVARD

The boulevard that acts as main connector from the public lift to the waterfront goes from being a typical boulevard (1) to then change into a wide sidewalk with more greenery and seating (2) to being fully pedestrian (3) right before reaching the bay's waterfront and the "Monument to the Sea" (below).

The centre of the bay's central mountain is aligned with the angle from the public lift to the waterfront, that is the reason why the boulevard has been kept as a straight line, so the visitor does not lose sight of the mountain's top until reaching the wide-open views.



WATERFRONT PROMENADE

The design features along the promenade seek offering the visitor with a variety of spaces and activities as one walks through it.

The new skatepark would be the biggest in the city, while the waterfront square would be an ideal place for markets, outdoor concerts, fairs...

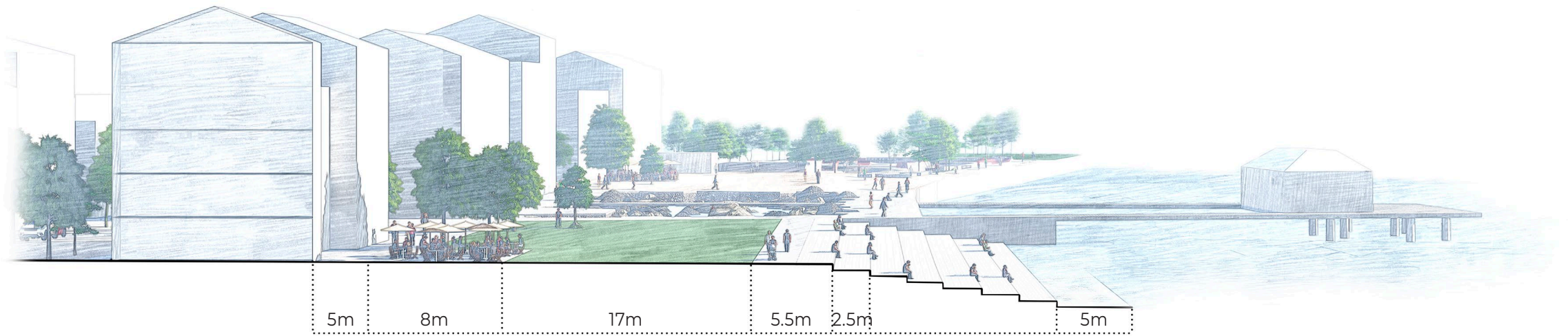
The marine biotopes are designed to support the same life that can be found at the seashores, on the bottom of cliffs etc, with a variety of species such as crabs, octopuses, fish, molluscs... The water comes in and gets renovated naturally during the high tides. The rocks are accessible with seating merged to them.

The lawn, as simple as it sounds, is very important. Santander generally has no lawns in which to simply lie on especially around the city centre. Even more so, there is no such thing as a waterfront lawn in which to lie on and admire the beautiful views towards the bay. In front of the lawn, there are wide steps that descend towards the water.

On a smaller scale, there are nets that stick out of the promenade for people to lie on, hanging on top of the sea.

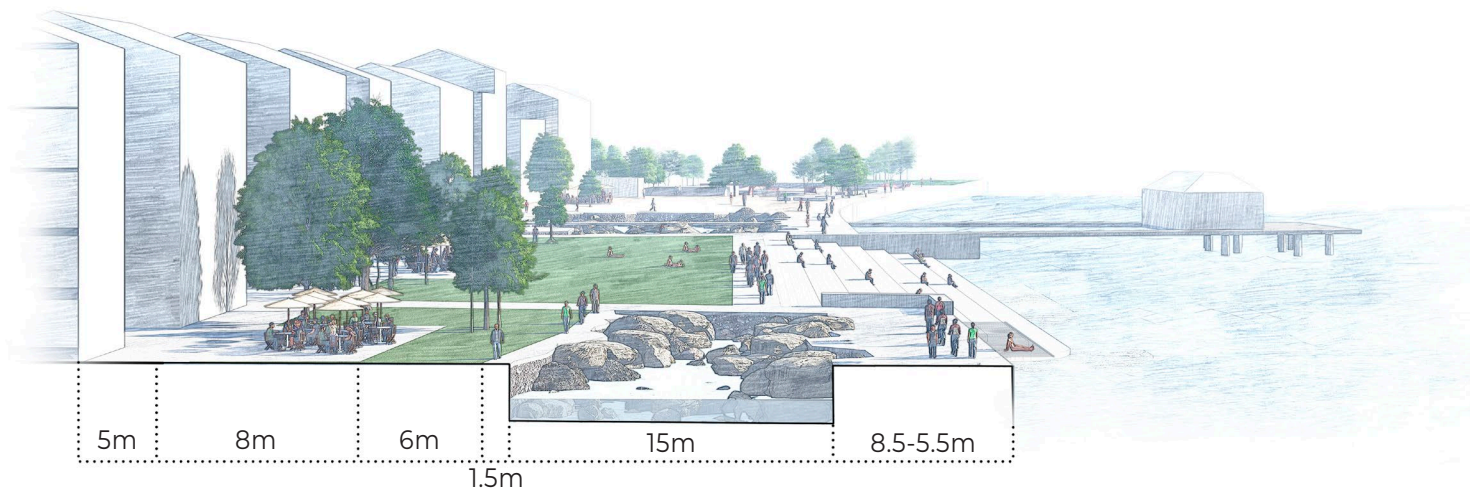
The southern side of the waterfront promenade holds wildflower meadows, an ocean pool and an outdoor gym. It is also where the Maritime Research Centre is located.





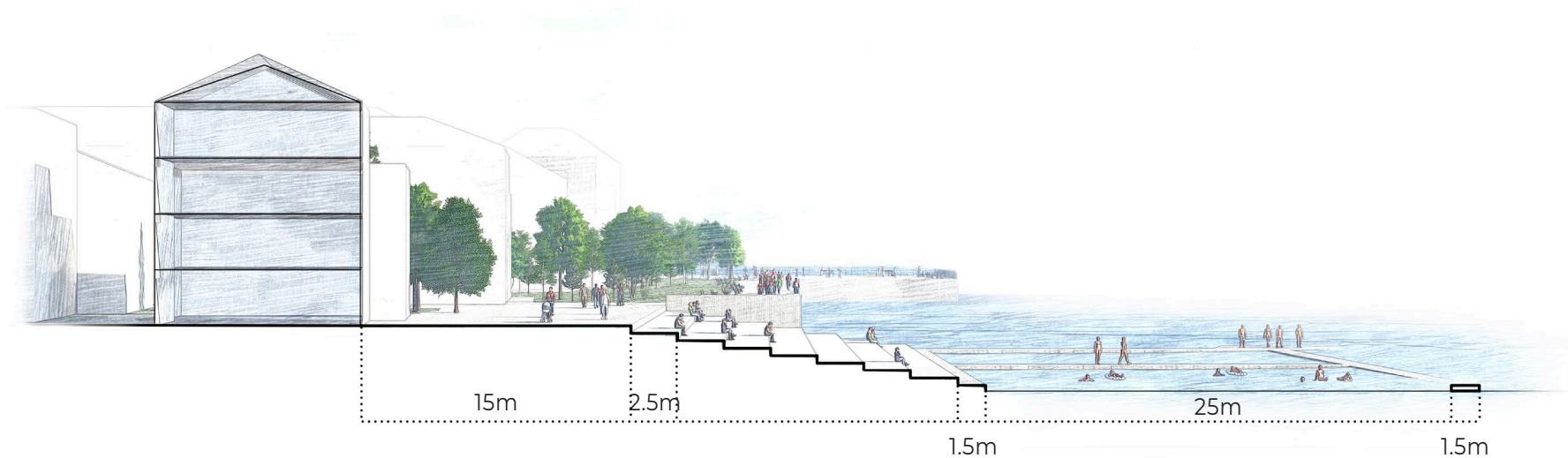
Section 1

Terrace, lawn, promenade and steps towards the sea.



Section 2

Terrace, marine biotope, promenade and hanging net.



Section 3

Square, steps towards the sea and ocean pool (floating frame that forms a 25mx50m pool for swimming and a 25mx28m pool for play).



Waterfront promenade (East). Before



Waterfront promenade (East). After



Terrace, lawn + steps overlooking the stunning bay of Santander



Wildflower meadow

The effect seen in these pictures (left) is what this thesis means as “wildflower meadow”. Grassland cut in two different ways where most of is just cut twice a year while the short grass is there to form paths and areas to lie down on (see plan below).



Semi-private courtyards

They are designed to be interconnected, offering alternative green routes through the site. They typically combine low bushes with wooded areas, lawns and water-retention ponds.





Exhibition Centre

Existing warehouses converted for small bussineses

Sports/Shopping centre

Main square

Office / Commercial

Office

Office

Office

Cowork

Section (next page)



Terrace, lawn + steps overlooking the stunning bay of Santander



4m

2m

7.5m

2m



2m

4m



Boat-repair dock (before)



Urban beach with ocean-fed pools and connection with the Regional Library



The built typology usually ranges from 4 to 6 storeys, the optimal height for the density I was looking for. There is a wide variety in form but the materials are usually a mix of wood and brick, to keep a certain harmony.



LOCAL INPUT

Through the analysis and design processes, I've actively talked to local people and got really useful insight and design suggestions. For example, I wanted to move the Ferry platform away, but it was suggested that the ferry arriving right at the city centre brings a special character to Santander. In the area where the Fishing Museum is located, I was planning to place the boat-repair shop but it was suggested that this area should be clear of big buildings, to allow open views of the Marina and the promenade in front. Based on this, the boat-repair shop was moved next to the wholesale fish market and the Fishing Museum was placed instead, in the form of 4 smaller pavillions. Special thanks to Esteban Sainz, director of the local Workshop School, for sharing his great knowledge and design advice.

"I've walked around Barrio Pesquero for many years and I wish there was more life in the streets"



Barrio Pesquero Santander
@proyectobarriopesquero

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Buscamos tu participación!!

Al pasear por el Barrio Pesquero de Santander, es facil dejar volar la imaginación y ver toda la zona perfectamente integrada en esta bonita ciudad. Con nuestro proyecto queremos plasmar esa visión, con todo el frente marítimo urbanizado y accesible.

Inspirados por la espectacular diversidad arquitectónica de algunos proyectos colaborativos en Suecia, queremos averiguar qué aspecto tendría algo así hecho en España. Para eso, ¿nuestro proyecto est...
See more

ESTO ES BO-01 (MALMÖ, SUECIA)

WHERE TO TAKE IT FROM HERE?

When I first saw Bo01 years ago, I was very impressed by the sheer diversity of this project, thanks, amongst other reasons, to the collaboration of many architects and professionals. I always wondered how a development like that would look like in Spain. That has inspired me to share this project on different platforms, with the aim to getting different architects/students/ involved in any way, from full facade designs (see numbered/coded plan to the left) to simple suggestions.



CONCLUSION

After spending these last months studying this area, I have come to really appreciate just how much potential is hidden in here. It is quite shocking to think that most people (including myself until recently) live completely oblivious to this site as it is or what it could be. Santander is facing some issues towards its future that, maybe because they are not urgent or extremely serious (such as the hardships that Bilbao went through that sparked its transformation), not much is done about it. With the support of the Port Authority, City Council and Regional Government, I am convinced that this area could be developed in a way that transforms the entire city's identity.

Whether this project would encourage younger creative minds to stay in Santander or not, is hard to say. I would like to think so... But in the more physical design goals, I have achieved the density I was looking for, in order to offer the 37.000 immediate neighbours with a new public realm that they can also call their own. I am happy to have had the opportunity to tackle several of the issues I found initially and put them into a design thesis. Opening barriers, bringing life and imagining all the possibilities that this raw diamond could offer has certainly been stimulating.

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