

Pedro Muñoz

architecture & landscape
portfolio of works 2018

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1 // PUBLIC REALM

1.1 // GYPSEY RACE PARK

Bridlington, Yorkshire UK



Context

The mouth of the Gypsey Race is located in the city of Bridlington, in East Riding of Yorkshire Council, and more specifically, running across the old city before it arrives at the North Sea. This short river, of only 45km, has been partially hidden by a significant number of mills, which had been in use during the 19th and 20th centuries.

East Riding of Yorkshire Council, in a joint venture with Bridlington Renaissance, proposed the design of a new park along the river, which would certainly attract new investors to the city and would increase its development in the next years.



The Gypsey Race today



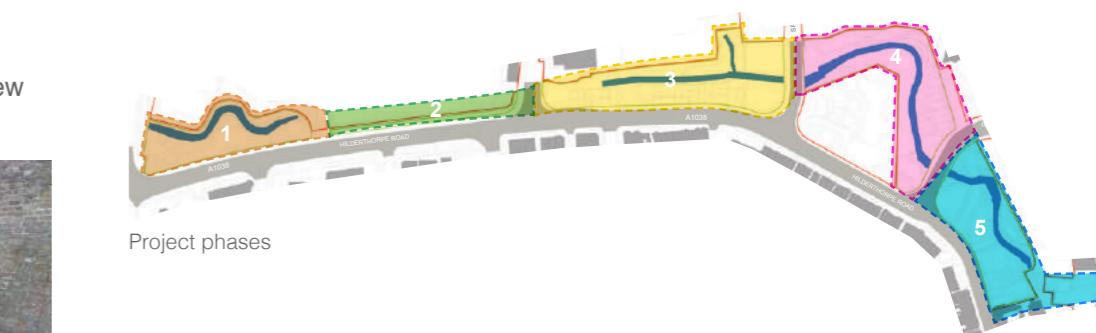
Existing mills walls next to the river

Concepte

During the year 2015, the landscape team at Sweco designed a Masterplan for the construction of a new parc. On the one hand, the new plan would provide new green areas, which would come along with new public realm areas and the restoration of the water quality and its habitats. On the other, the new parc forms part of a far more challenging urban development plan for Bridlington, which would attract investors for the construction of new housing, offices and leisure areas.

The project comprises 5 phases, 2 of which have been financially funded by the EU and have started on site during the second quarter 2017, and whose construction will be finished in 2018.

Furthermore, a new concept design for phase 3 (also funded by EU) was developed during the first quarter 2017, as well as a new feasibility study for phase 4, after the interest showed in these areas by different investors.



Project phases



Detail project of phase 1



Visualisation 1 - proposal for phase 1



Visualisation 2 - proposal for phase 3



Feasibility study of phase 4, after the interest showed by investors



Visualisation 3 - proposal for phase 5

1.2 // CUNINGAR LOOP Glasgow, Scotland UK



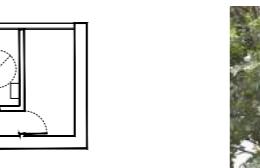
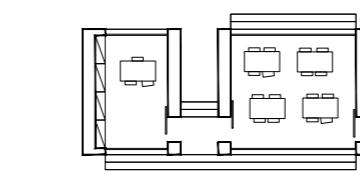
Context

Cuningar Loop is a meander of the river Clyde, located at the East End of Glasgow, next to estates built during the Commonwealth Games, which has still not suffered the urban pressure.

Concept

In 2016, and after Clyde Gateway's commission, Sweco started the design of a new leisure parc located within this meander.

The new project proposes a significant improvement of the river woodland, as well as a number of new facility buildings and areas, where visitors will be informed about the available activities and facilities, such as the Top Tree Walk and the trampolins area, as well as about the natural habitats and spaces that exist in this particular location of the city.



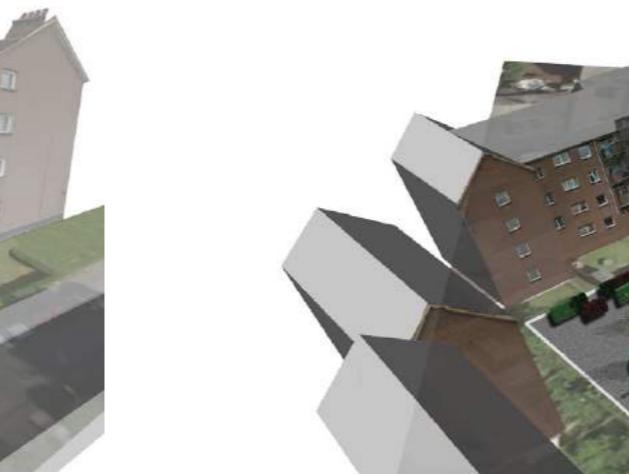
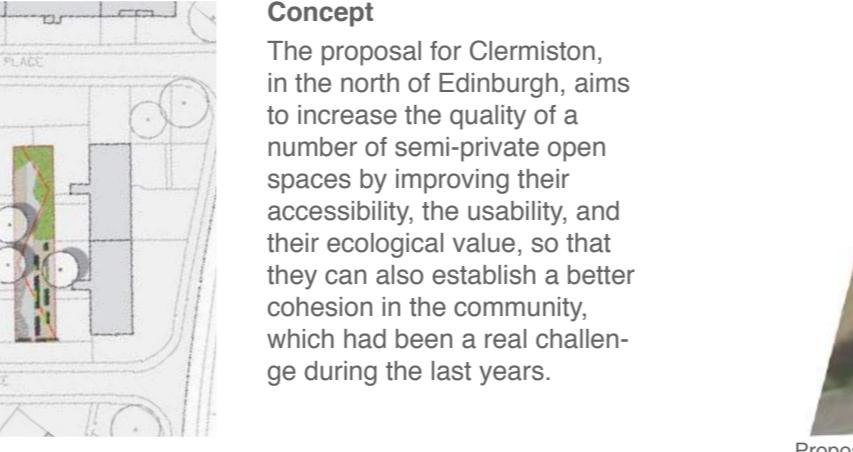
1.3 // CLERMISTON BACK COURTS

Edinburgh, Scotland UK



Context

The Landscape Masterplan for Clermiston is part of the Neighbourhood Environmental Projects (NEP), a Framework proposed by the City of Edinburgh Council in order to make urban improvements to different deprived areas within the City of Edinburgh. Sweco forms part of this Framework since 2015.



Concept

The proposal for Clermiston, in the north of Edinburgh, aims to increase the quality of a number of semi-private open spaces by improving their accessibility, the usability, and their ecological value, so that they can also establish a better cohesion in the community, which had been a real challenge during the last years.



1.4 // ARBORETUM PLACE

Edinburgh, Scotland UK



Concept Proposal



Current view of the existing square



Bird's eye visualisation of the proposal



Visualisation of the proposed Arboretum Place and the entrance to the Royal Botanic Garden Edinburgh

Arboretum Place

The project for the re-design of this square, which is located to the north of the old city of Edinburgh, is to be built during the year 2018. This proposal forms part of the deal that already exists between Sweco and the City of Edinburgh Council since 2016, which was agreed in order to handle a significant number of projects for the enhancement of the local landscape and the urban mobility within the next years.

Context

Due to its location, giving access to the Royal Botanic Garden Edinburgh, it is the place where a great number of visitors of all ages meet every weekend, just before they get into the gardens.

Albeit the ease for many people to drive their cars to the square, there is an urgent need to increase the pedestrian area in order to guarantee the wellbeing and the safety of the all the visitors, whether they arrive at the place by car or other means.

Concept

The proposed design gives the squares a completely different aspect by making a pedestrian area of the existing car park. Although it keeps the central road, it is slightly narrowed along this area, in order to reduce the speed of the vehicles across it.

Furthermore, the construction of four insitu concrete benches efficiently separate pedestrian and wheeled areas, helping to increase the safety at the square.

1.5 // SURFACE WATER MANAGEMENT PLAN

Glasgow, Scotland UK



Masterplan

According to the flooding problems happening across many urban areas of the city of Glasgow, Sweco was commissioned by the City Council a Surface Water Management Plan that would eventually alleviate the effects produced during intensive rainfall episodes.



Visualisation of retention pond 1 (left hand side of photo) and retention basin 2 (right hand side of photo)



Visualisation of retention basin 3

In this area of the East End of Glasgow, a new park has been proposed, which will provide, on the one hand, better pedestrian and cycle links, as well as good quality open spaces for the community, and on the other, a number of ponds and basins that can retain the water in the event of a storm.



Bio-retention design - existing plan



Bio-retention design - proposed plan



Bio-retention design - visualisation of proposal



Visualisation of retention pond 4

2 // ARCHITECTURE

2.1 // INTERPRETIVE CENTRE IN CASTRO DE BORNEIRO

Castro de Borneiro, Cabana de Bergantiños - A Coruña, Spain



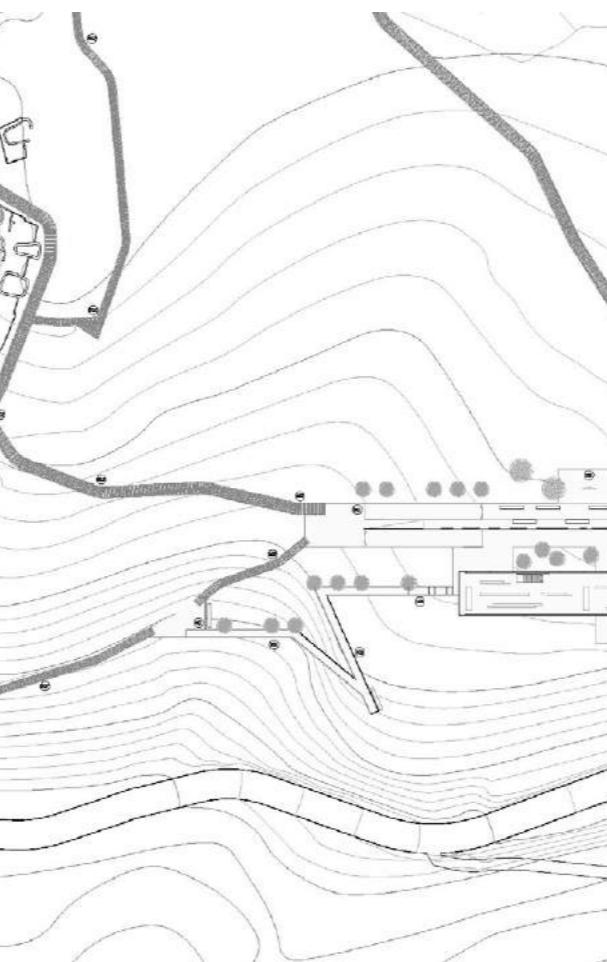
Archaeological site 'Castro de Borneiro'



Rural village of Borneiro



Location Plan @ NTS



General Plan @ NTS



Isometric view



Conceptual section



Bird's eye view of proposal model

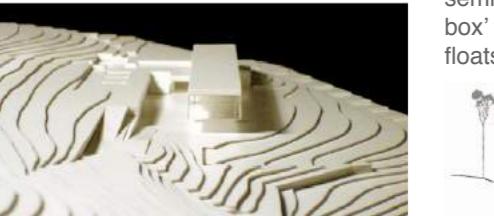


Level -1 / Research, administration, and leisure facilities

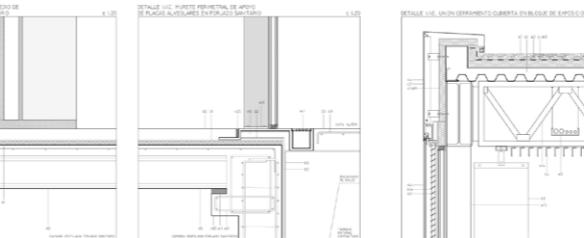
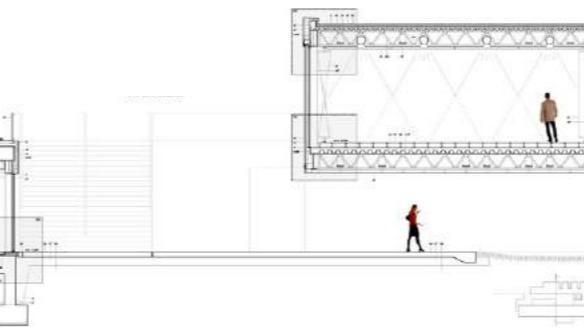
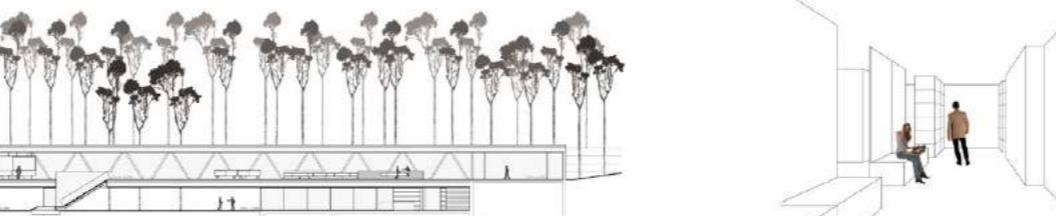
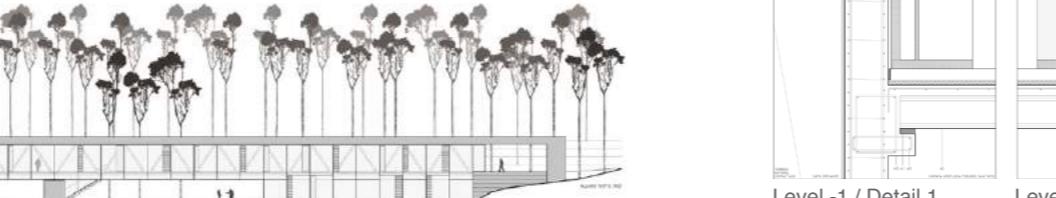


Visualisation of Level -1

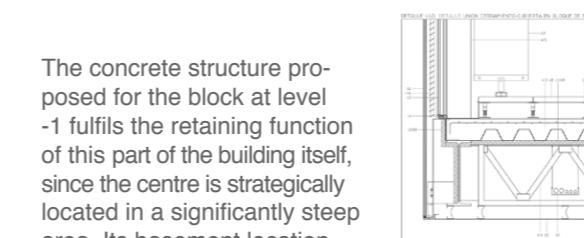
graphy of the archaeological site 'La Borneiro', which was strategically on the edge of a flatland, right in front of a valley, provided the opportunity to put a design, in which both architecture and landscape would play highly important roles. It is the flatness of this area that the design would make the most advantage of, in order to locate private areas such as research and administration, in a closed block, to later design a 'see-through' block that contains the exhibition use and virtually disappears into the landscape.



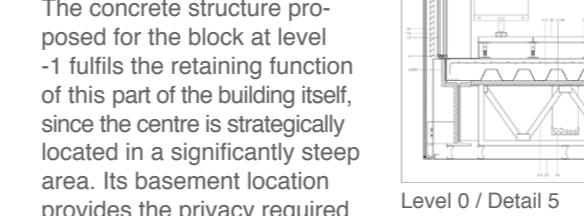
theast view of proposal model



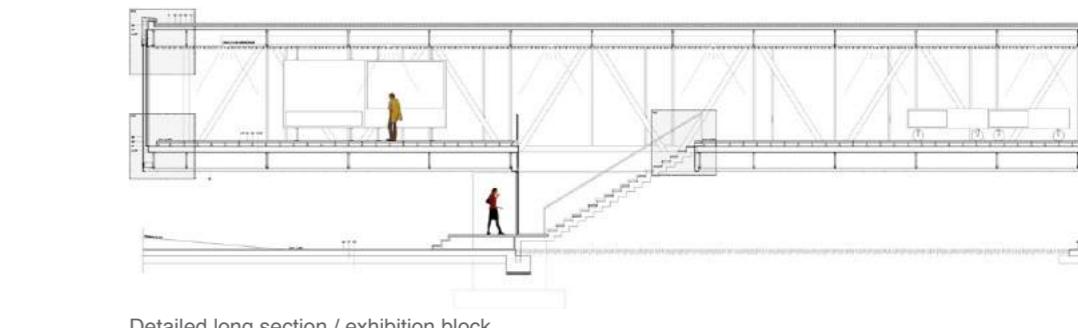
etail 2 Level -



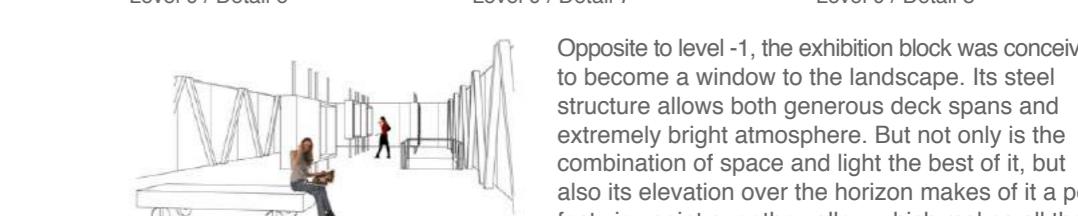
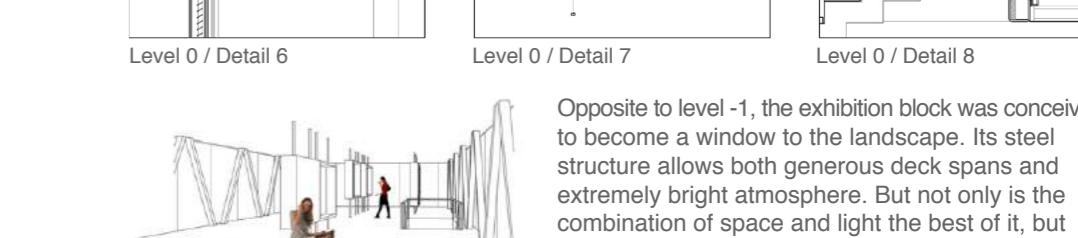
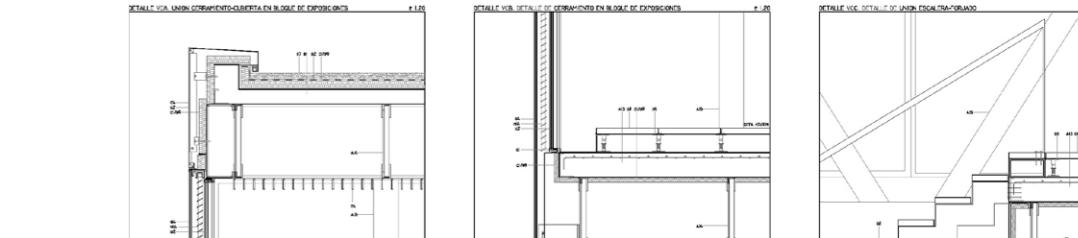
area. Its base is



provide the privacy required for such a research activity



D



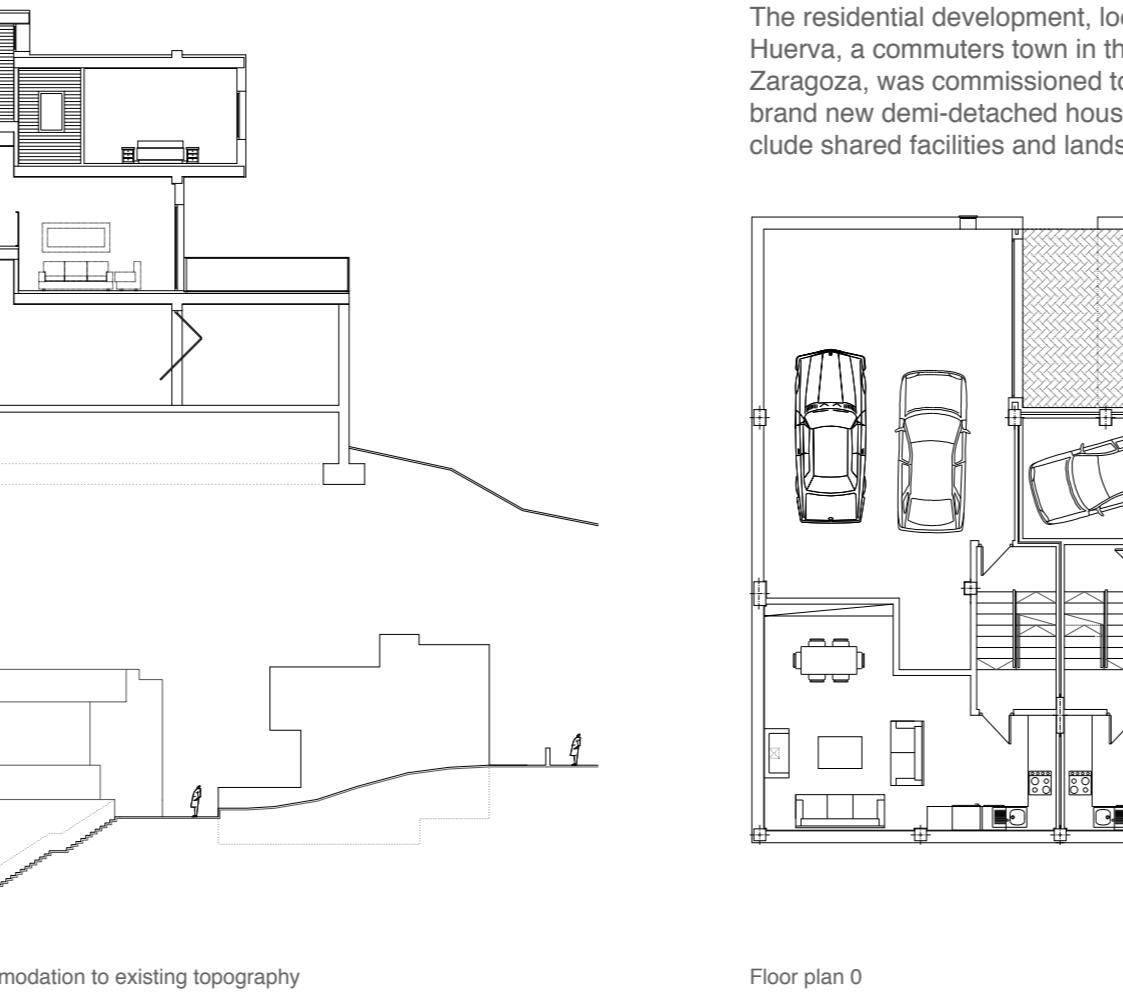
An architectural rendering of the exhibition block. The structure is a long, low building with a steel frame and a light-colored deck. Two people are sitting on a bench in front of the building, which has large windows looking out onto a landscape. The rendering shows the building's elevation and how it sits above the horizon.

2.2 // SEMI-DETACHED HOUSES IN CUARTE

Cuarte de Huerva - Zaragoza, Spain



Development overall plan



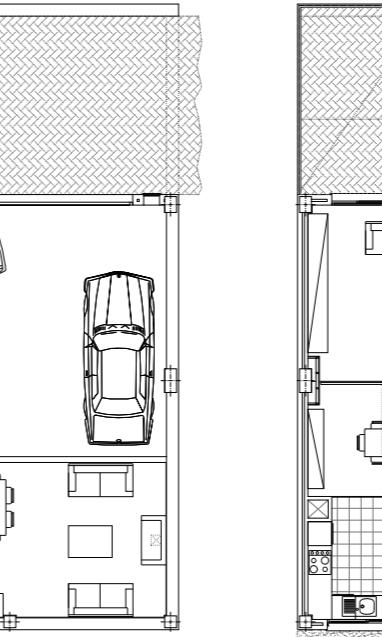
Development overall section - accommodation to existing topography

The residential development, located in Cuarte de Huerva, a commuters town in the surroundings of Zaragoza, was commissioned to accommodate six brand new demi-detached houses, which would include shared facilities and landscaped spaces, that

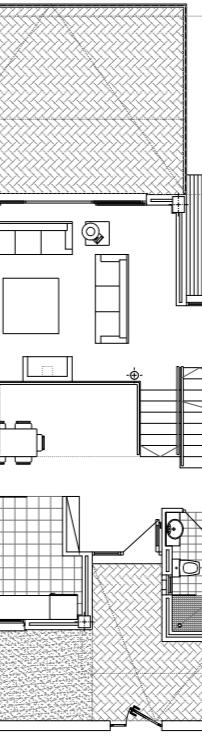
would bring the new estate to a high standard.

Not only give the stepped structures, which conveniently adjust to the existing steep terrain, an extra architectural interest to the residential dwellings, but also they help to split pedestrian and wheeled

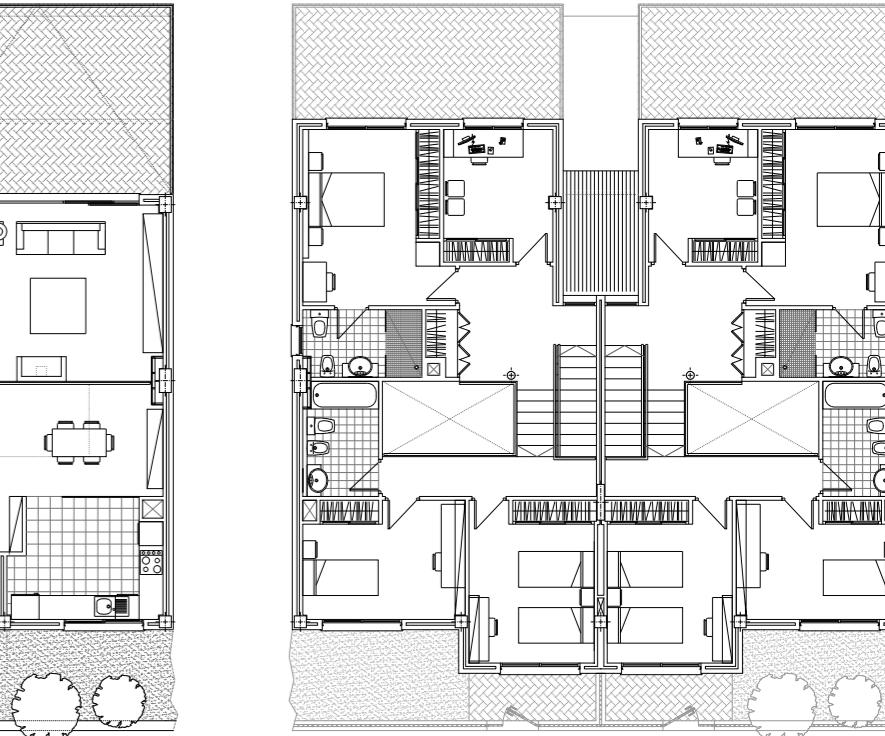
accesses at different levels and façades for each house. Furthermore, this also provides a number of private gardens and terraces, facing different orientations, which opens each property up towards the landscape.



Floor plan 0



Floor plan 1



Floor plan 2

2.3 // APARTMENTS AND SPORT FACILITIES IN BENIDORM

Benidorm - Alicante, Spain



Floor 01-13 type B



Visualisation 1 overall



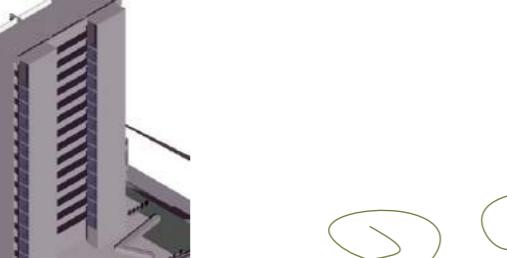
Floor 01-13 type A



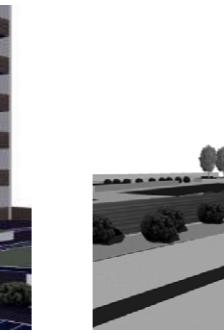
Visualisation 2 overall



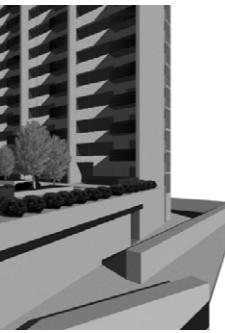
Ground floor



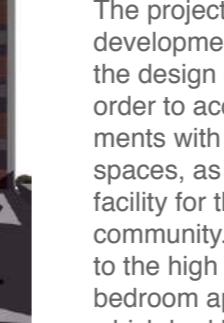
Visualisation 3 overall



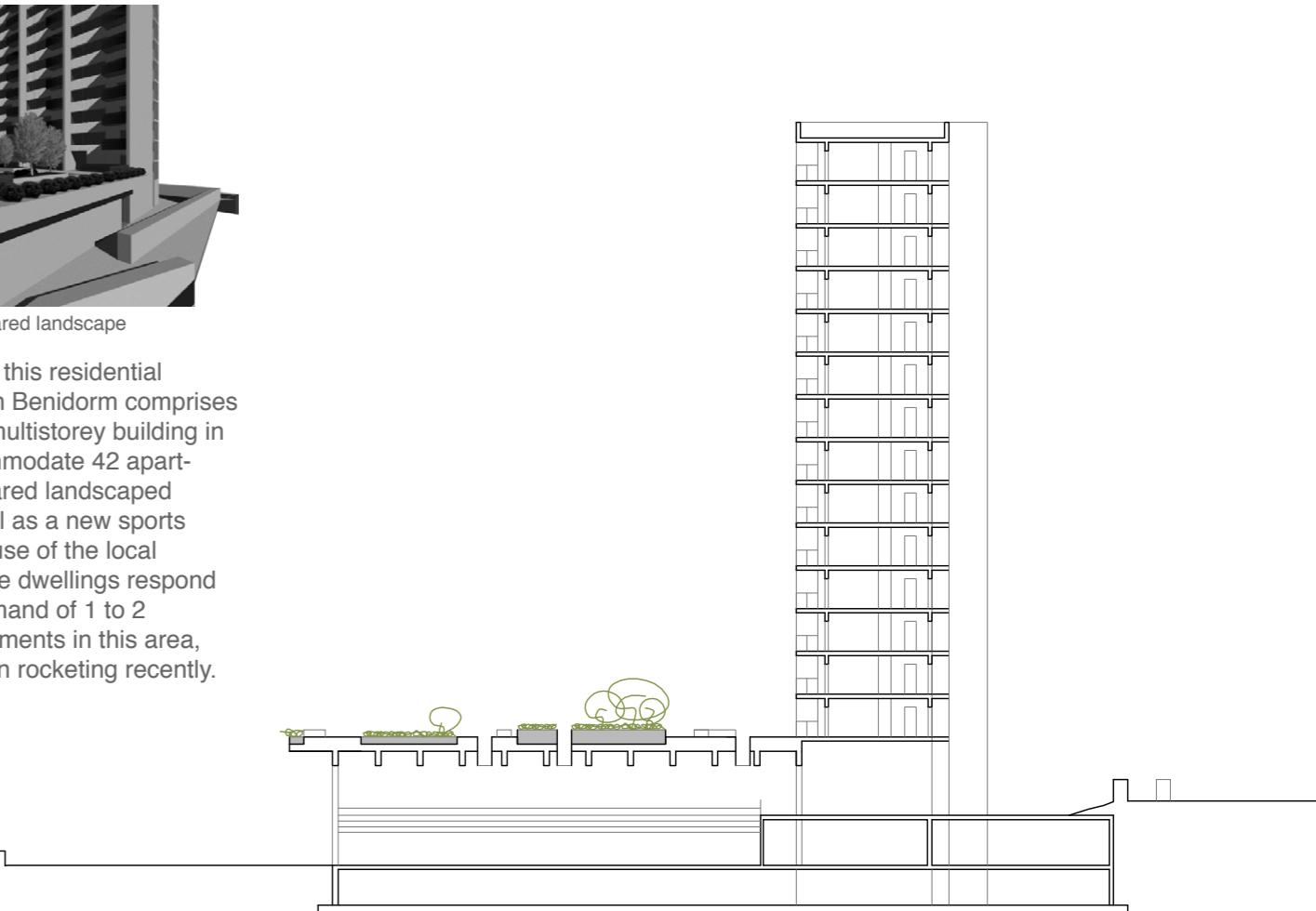
Visualisation 4 shared landscape



Visualisation 5 shared landscape



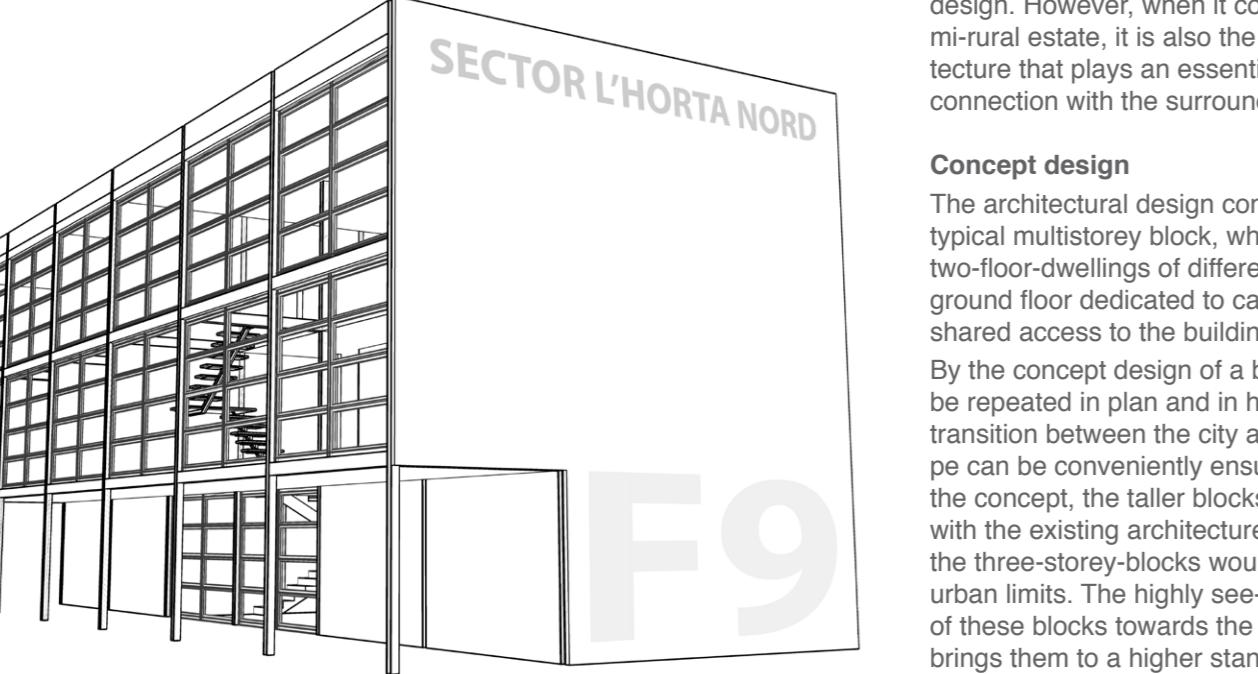
Visualisation 6 shared landscape



The project for this residential development in Benidorm comprises the design of multistorey building in order to accommodate 42 apartments with shared landscaped spaces, as well as a new sports facility for the use of the local community. The dwellings respond to the high demand of 1 to 2 bedroom apartments in this area, which had been rocketing recently.

2.4 // APARTMENTS IN L'HORTA NORD

Alboraia - València, Spain



Context

This project for a residential development responded to the need of designing a softer urban border along the north outskirts of the city of Valencia, enhancing its urban limits with the existing agricultural lands, so that both can tie in far better with one another.

The number, size and location of residential blocks are highly important in the urban design. However, when it comes to a semi-rural estate, it is also the type of architecture that plays an essential role in its connection with the surrounding landscape.

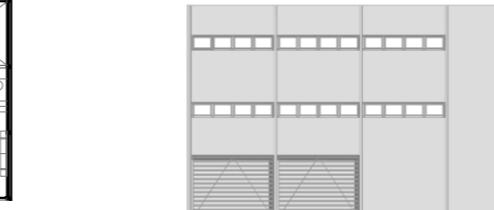
Concept design

The architectural design consists in a typical multistorey block, which comprises 2 two-floor-dwellings of different sizes with a ground floor dedicated to car park use and shared access to the building.

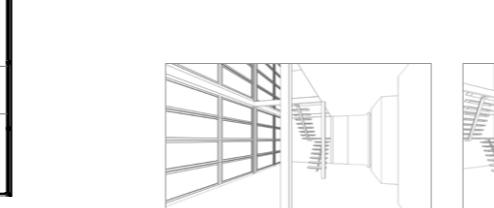
By the concept design of a block that can be repeated in plan and in height, a good transition between the city and the landscape can be conveniently ensured. Following the concept, the taller blocks could tie in with the existing architecture, whereas the three-storey-blocks would fit better the urban limits. The highly see-through feeling of these blocks towards the crops is what brings them to a higher standard.



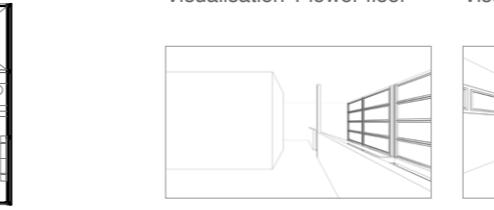
Typical floor plan 2B



Typical floor plan 1B



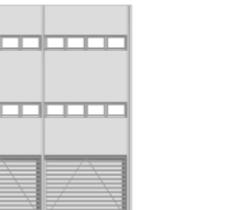
Typical floor plan 2A



Typical floor plan 1A



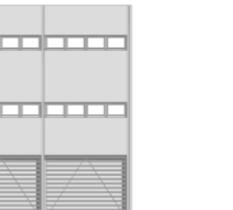
North façade



South façade



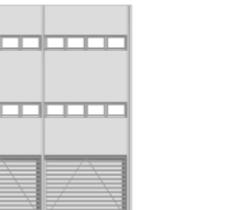
Long section 1



Long section 2



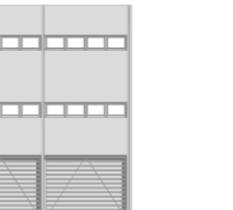
Cross section 1



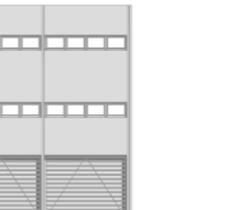
Cross section 2



Cross section 3



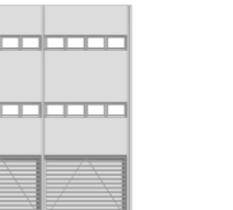
Visualisation 1 lower floor



Visualisation 2 lower floor



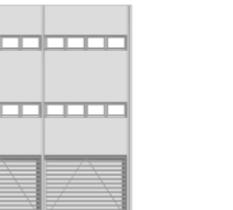
Visualisation 3 upper floor



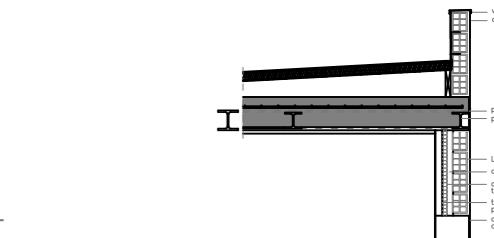
Visualisation 4 upper floor



Long section 3



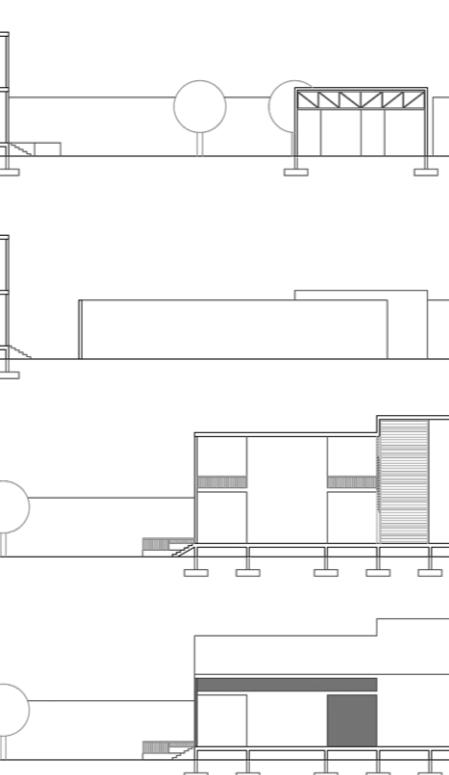
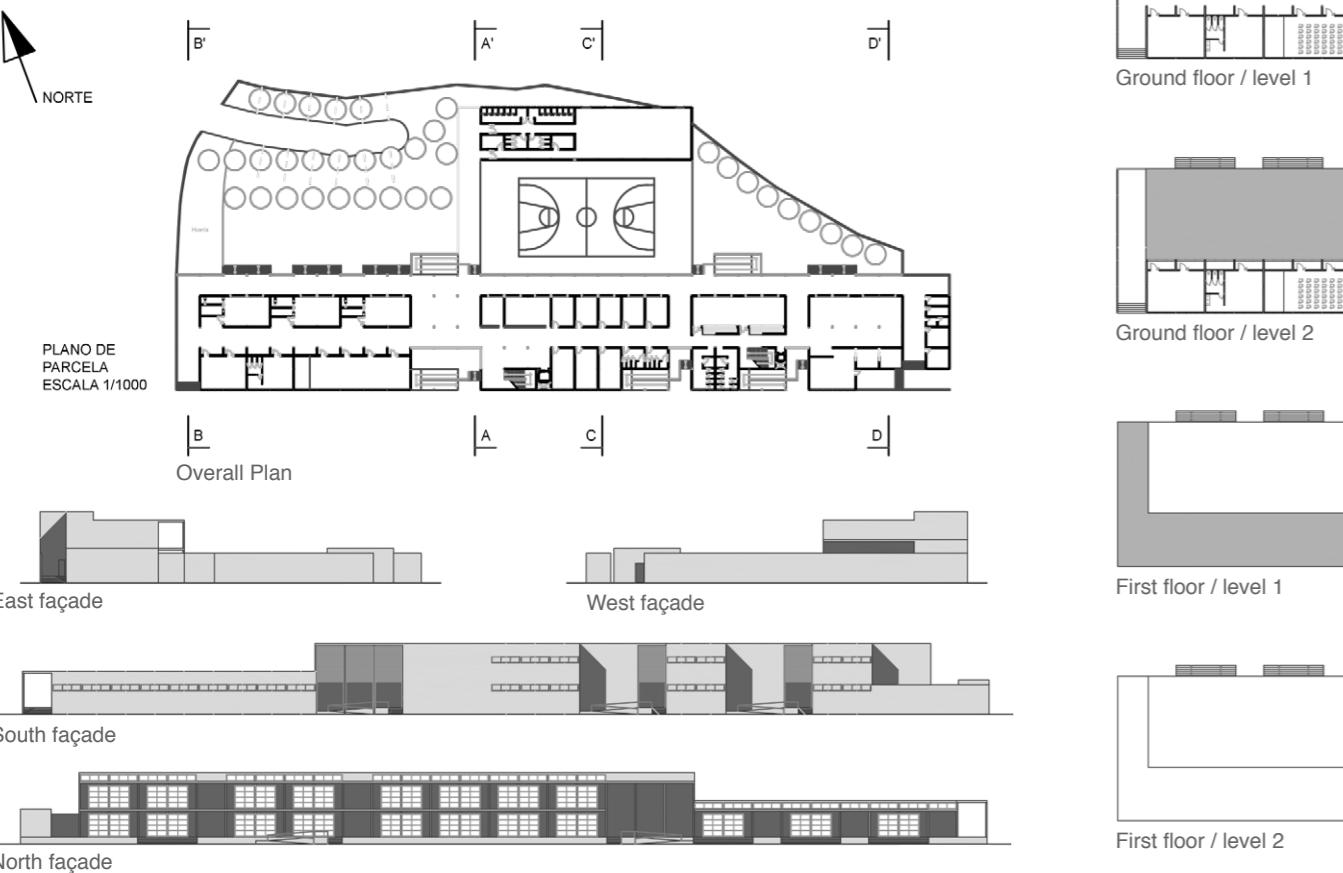
Cross section 3



Façade detail

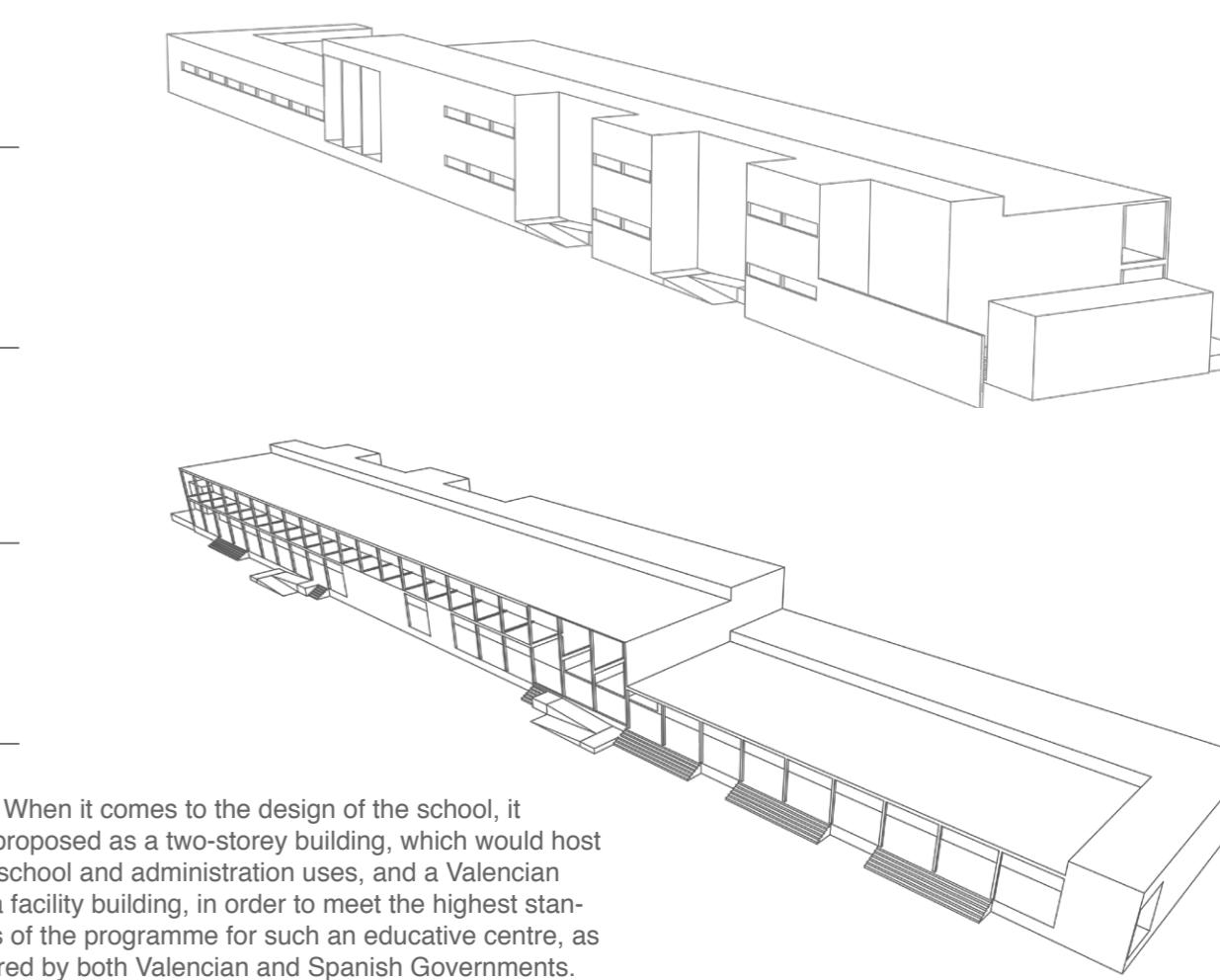
2.5 // PRIMARY SCHOOL IN ALBORAIÀ

Alboraia - Valencia, Spain



The project for L'Horta Nord Primary School, in Alboraia, was designed to tie in with the Urban Development Masterplan of L'Horta Nord, developed in 2000 within a UPV research project for the north outskirt of Valencia, which eventually resulted in a considerable number of proposals, many of which would be built during the years

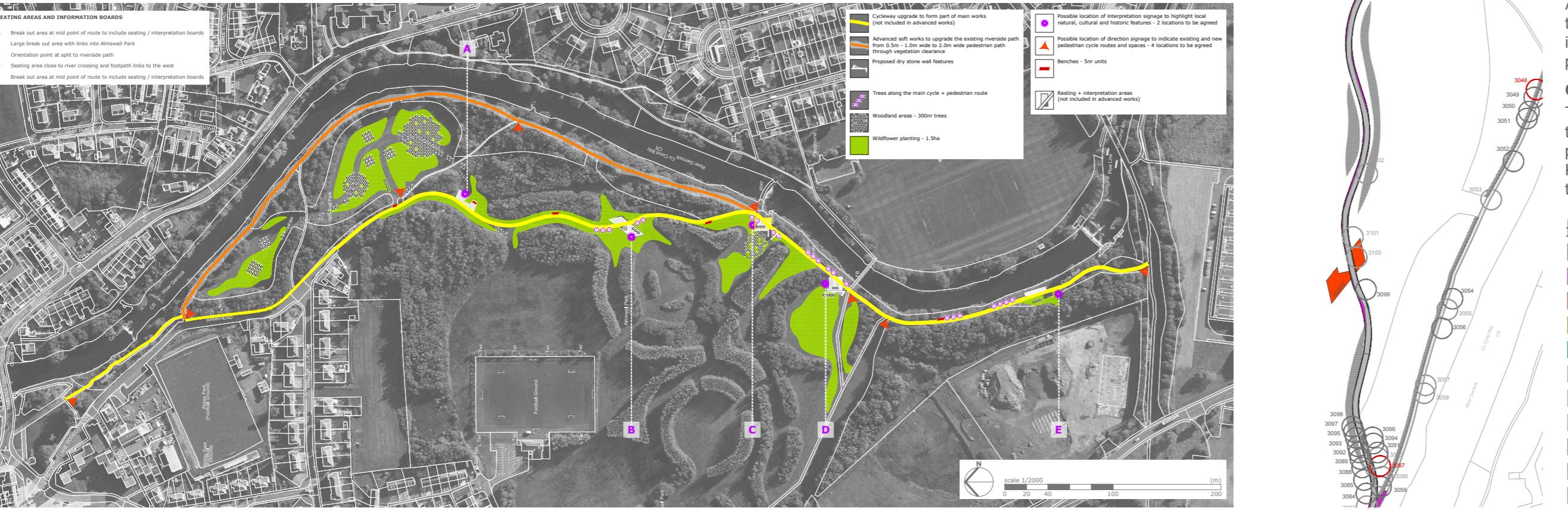
after. When it comes to the design of the school, it was proposed as a two-storey building, which would host both school and administration uses, and a Valencian Pilota facility building, in order to meet the highest standards of the programme for such an educative centre, as required by both Valencian and Spanish Governments.



3 // SUSTAINABLE MOBILITY AND LANDSCAPE

1 // KILWINNING COMMUNITY LINKS

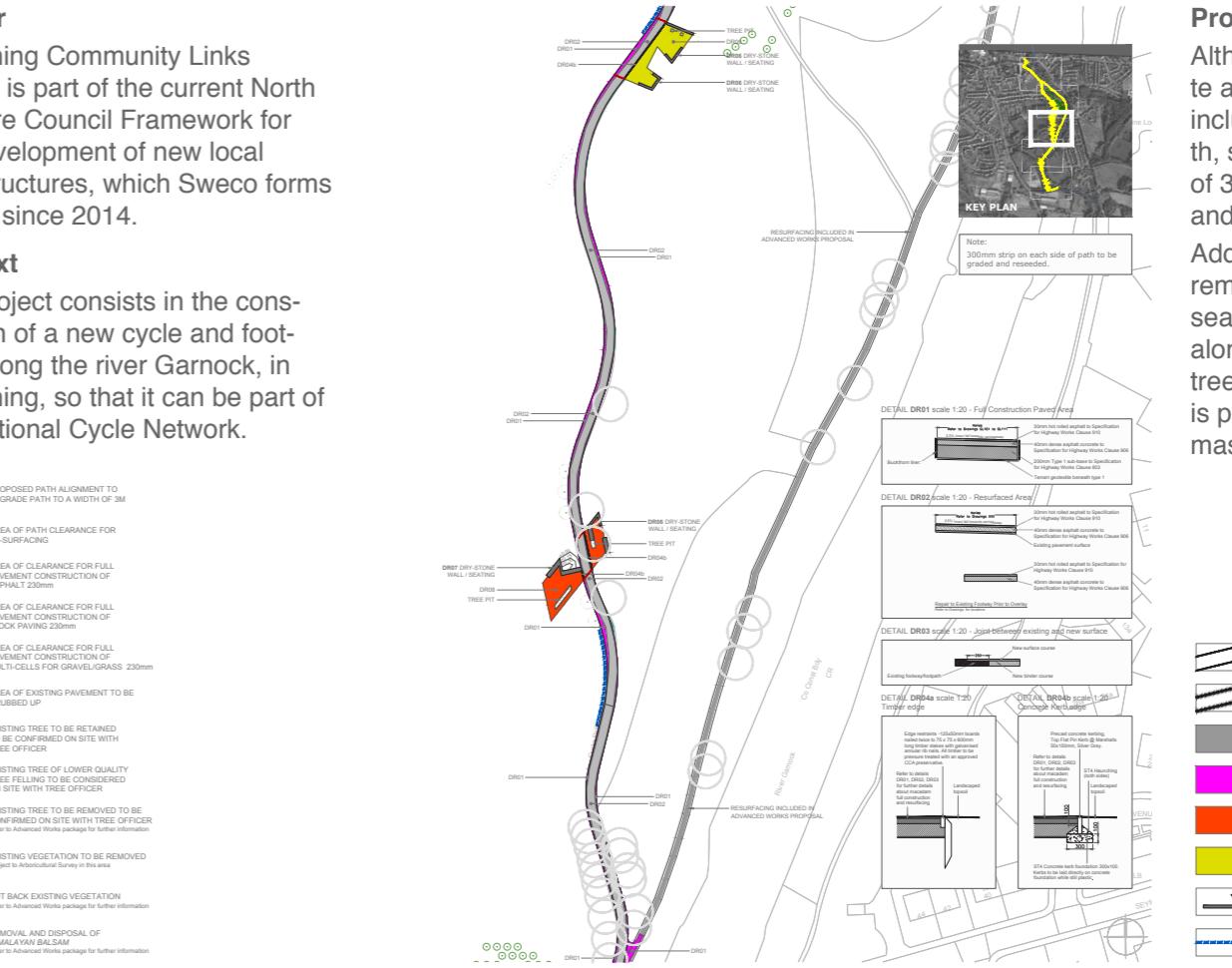
Ilwinning, North Ayrshire, Scotland UK



Landscape Masterplan

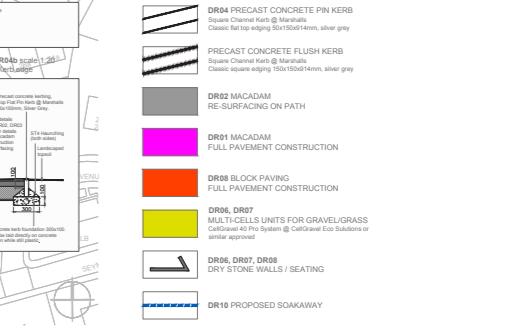
Links
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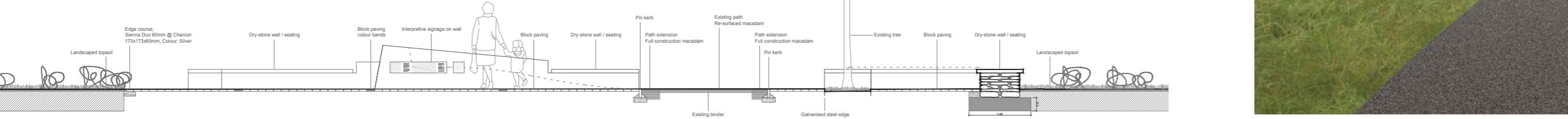
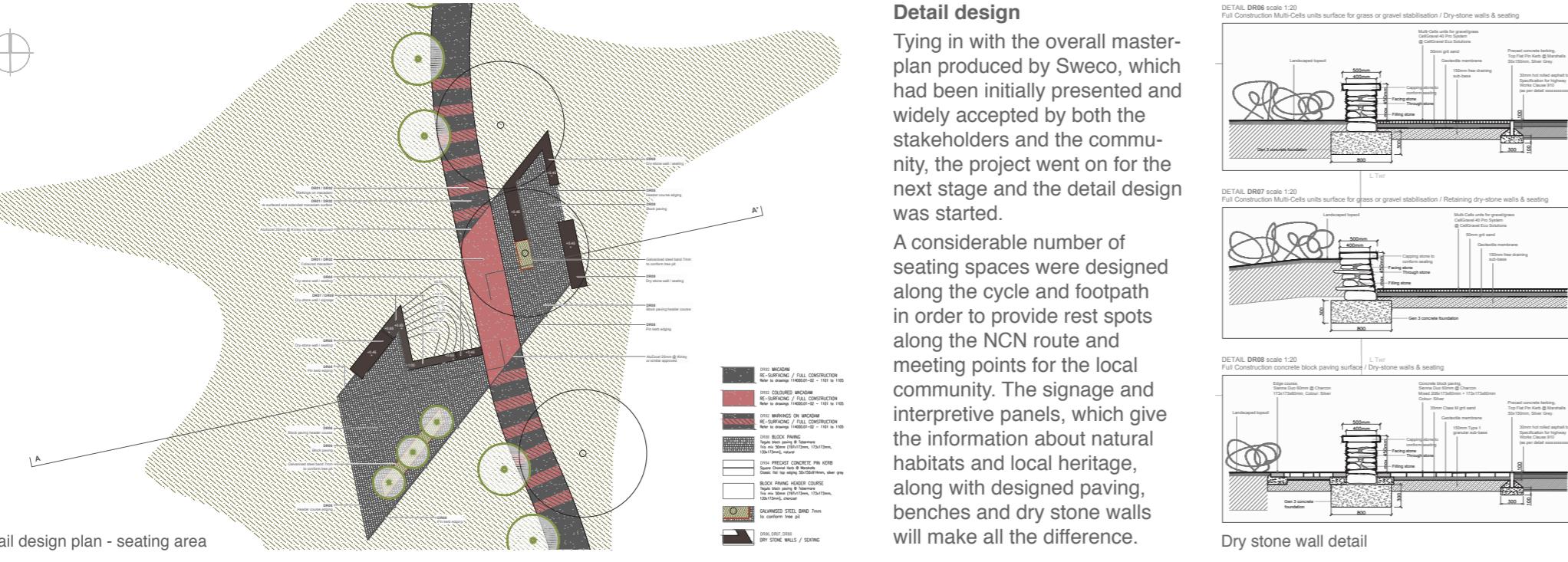
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1 / 1

Although part of the proposed route already exists, the new design includes an upgrade of this footpath, so that it has a constant width of 3m, in order to have both cycle and pedestrian uses.





Airline design section - seating area

as surface for grass or gravel stabilisation / Dry-stone walls

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2 // i3 ENTERPRISE ACTIVE TRAVEL LINKS
Ayrshire, North Ayrshire, Scotland UK

wine, North Ayrshire, Scotland UK



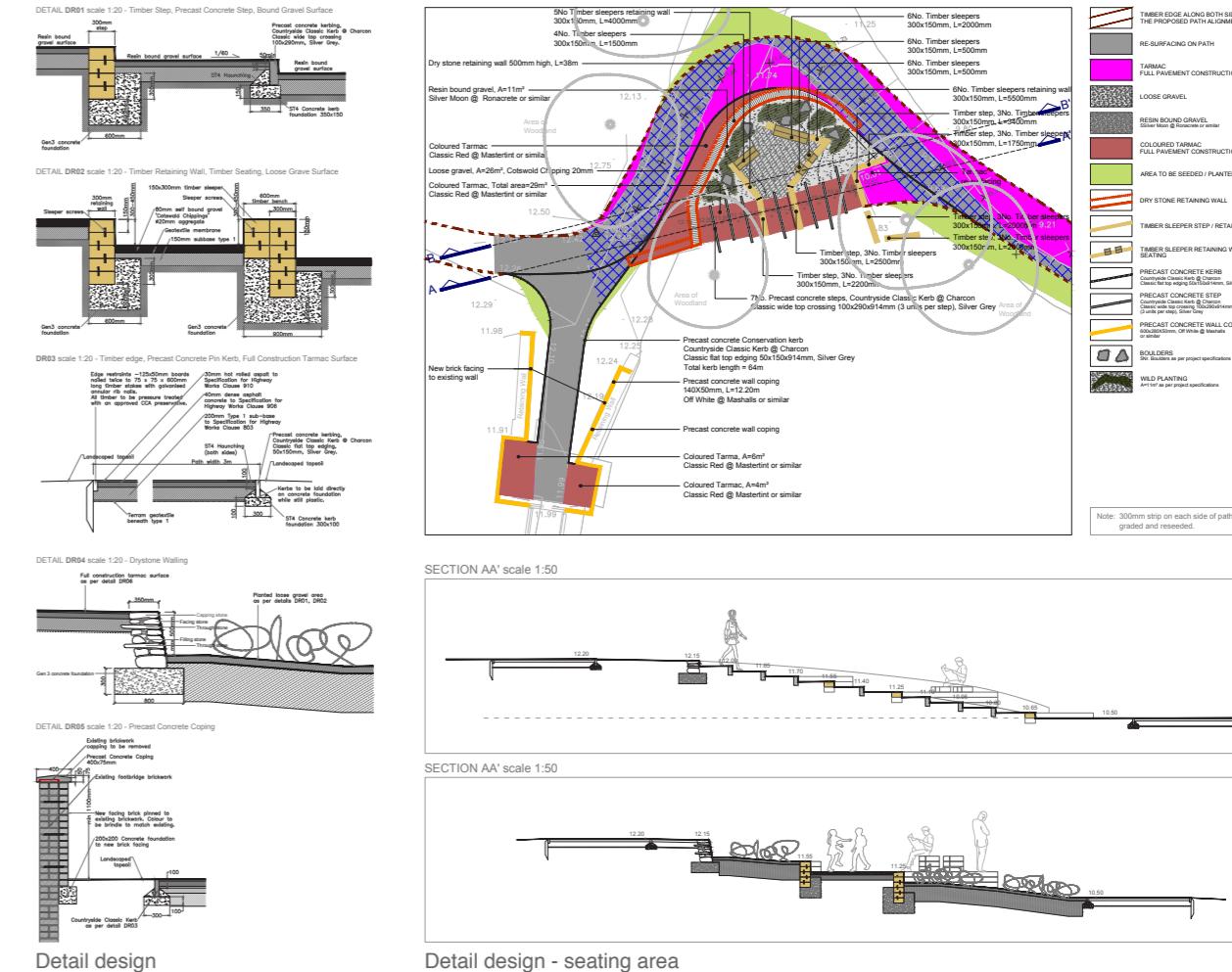
plan



DETAIL DR01 scale 1:20
300mm
span

ben3 concrete
in radome.

DETAIL DR04 scale 1:20



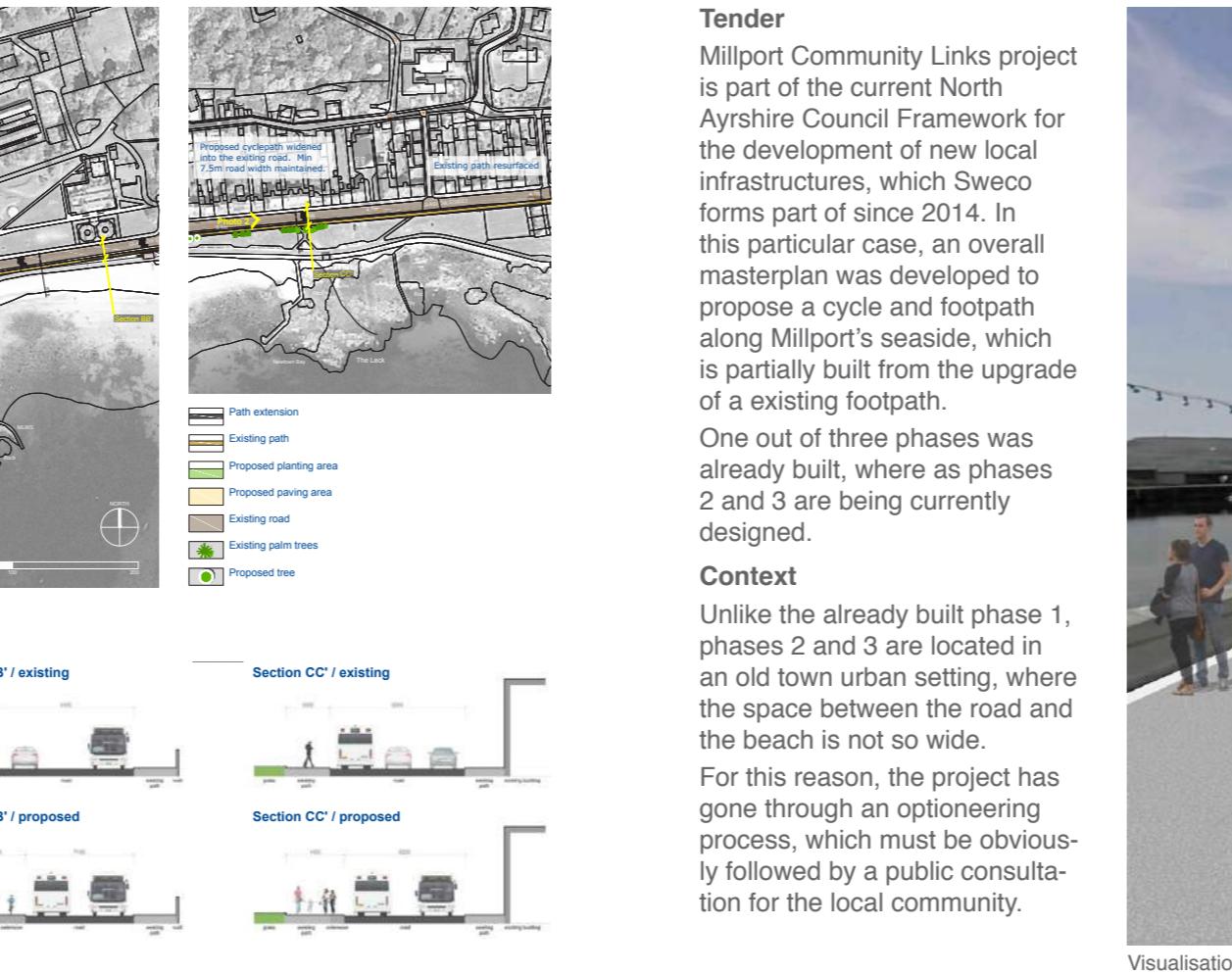
Detail design

3.3 // MILLPORT COMMUNITY LINKS

Millport, Island of Cumbrae, North Ayrshire, Scotland UK



Current state of site



Concept design optioneering

Tender

Millport Community Links project is part of the current North Ayrshire Council Framework for the development of new local infrastructures, which Sweco forms part of since 2014. In this particular case, an overall masterplan was developed to propose a cycle and footpath along Millport's seaside, which is partially built from the upgrade of a existing footpath.

One out of three phases was already built, whereas phases 2 and 3 are being currently designed.

Context

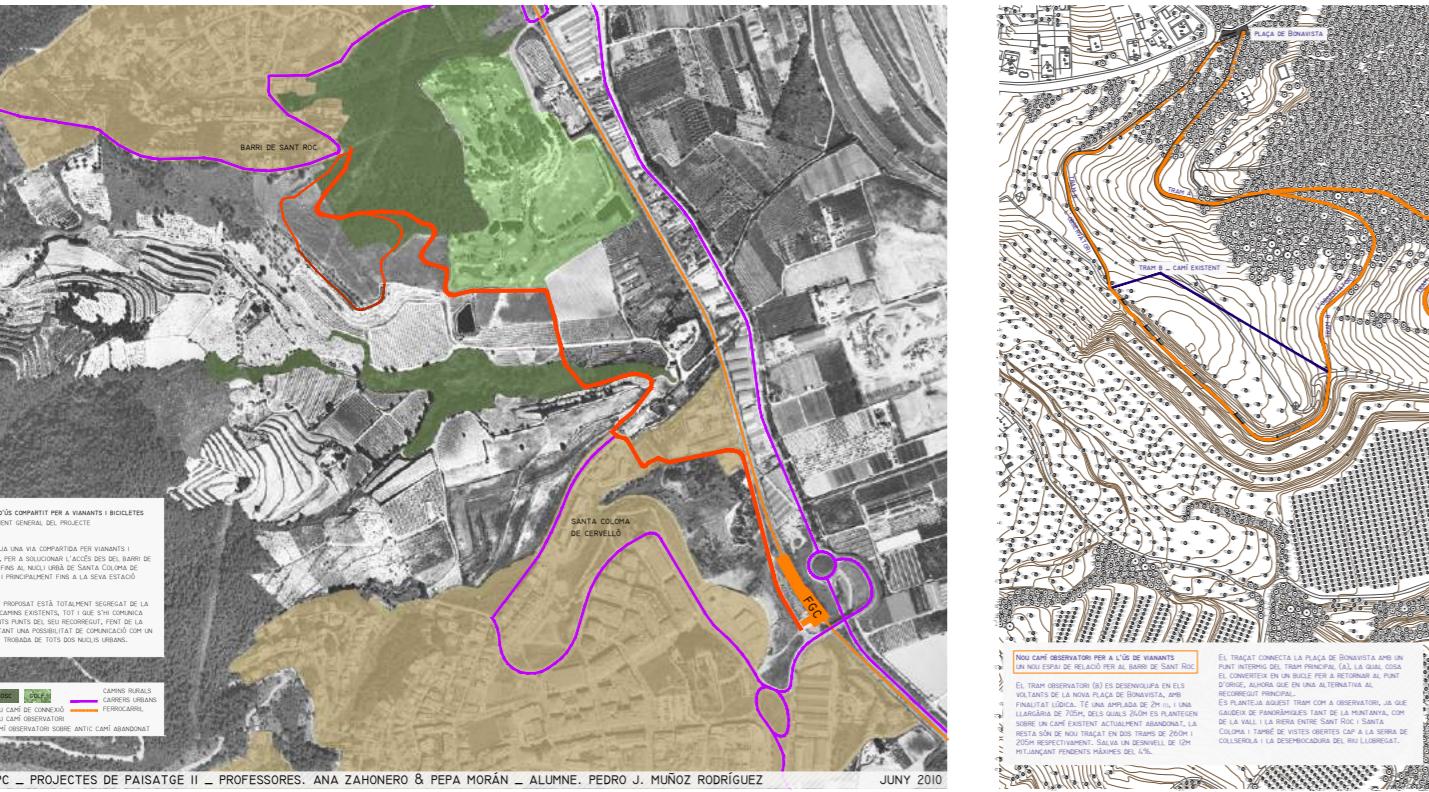
Unlike the already built phase 1, phases 2 and 3 are located in an old town urban setting, where the space between the road and the beach is not so wide.

For this reason, the project has gone through an optioneering process, which must be obviously followed by a public consultation for the local community.

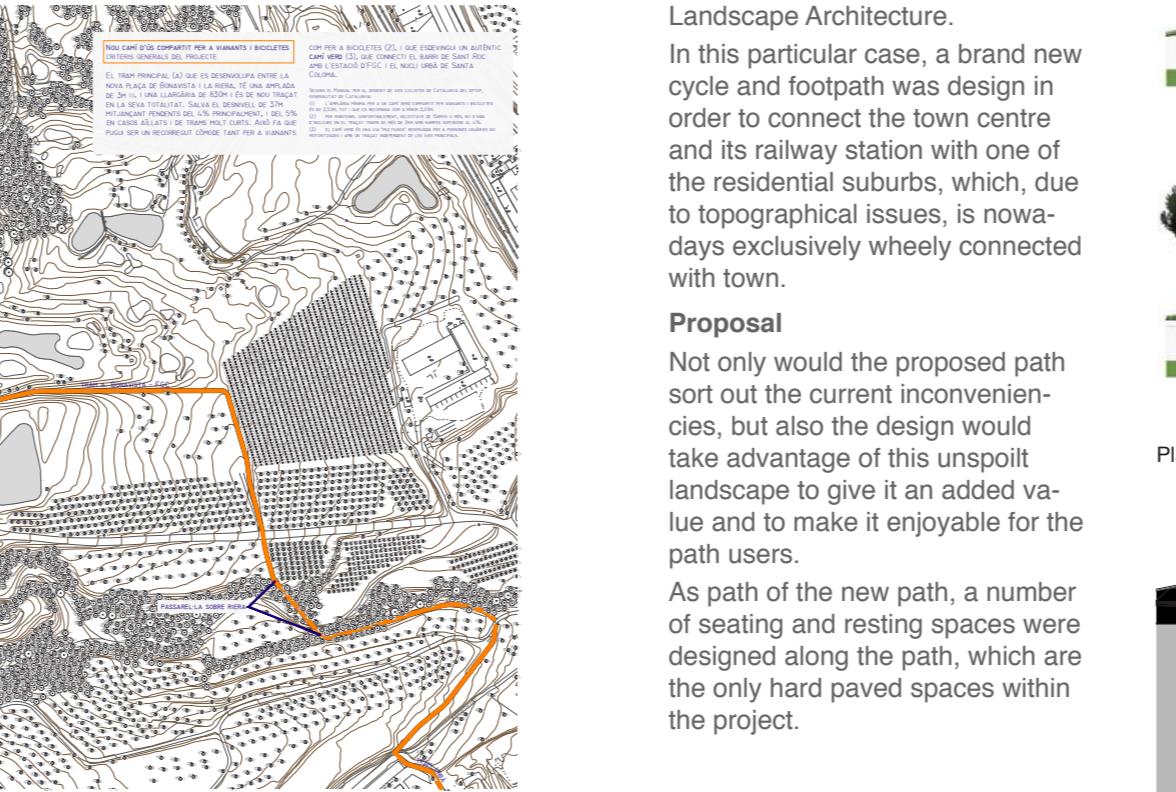


Visualisation of the proposal

4 // CYCLE PATH SANTA COLOMA DE CERVELLÓ
Santa Coloma de Cervelló, Barcelona
Case Study produced for MUP 2010 - ETSAB



rplan



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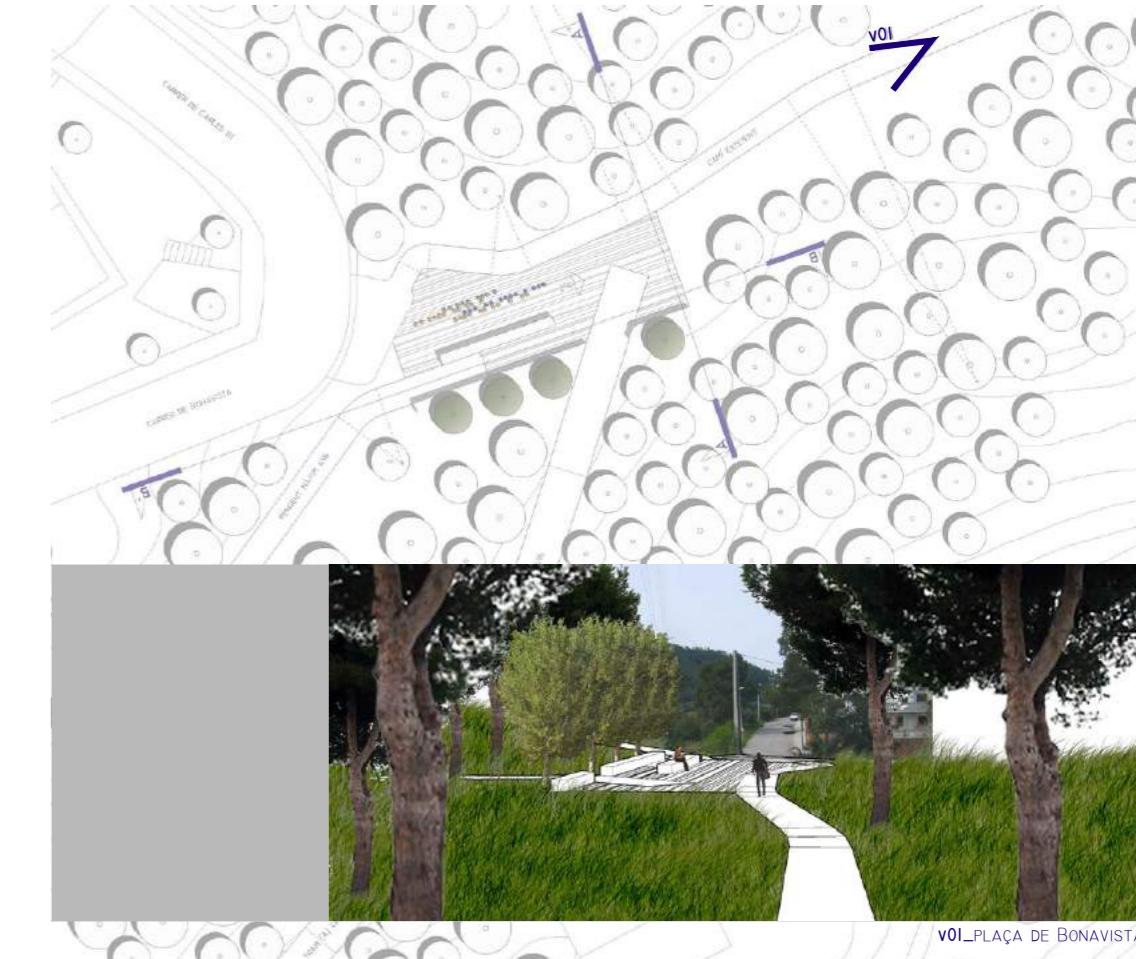
A photograph showing a paved path leading through a gate into a garden area with trees and a building in the background.

DATA REPORT
OAK MORTALITY
INDEX ACCUMULATED
BY REGION

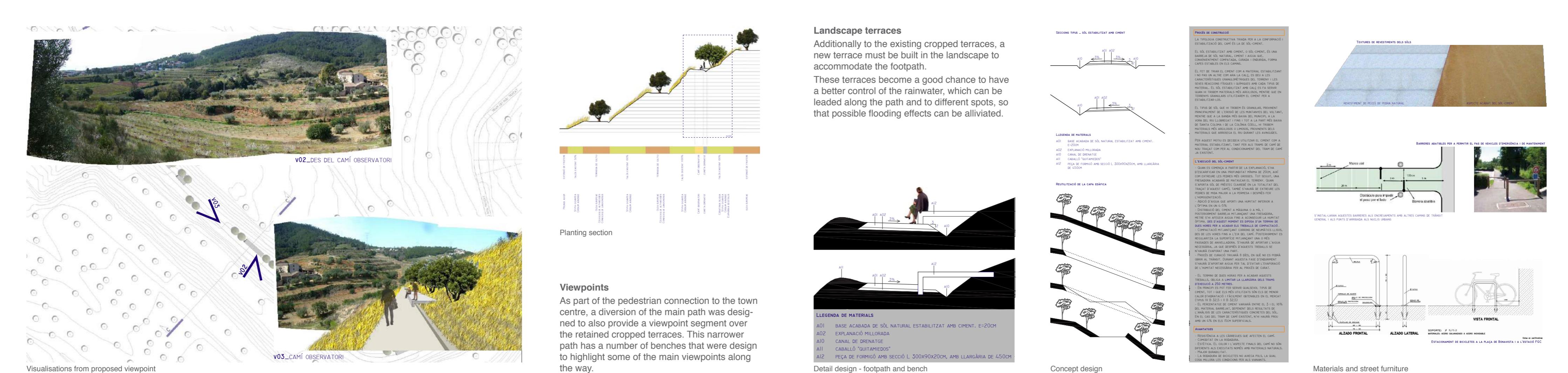
1

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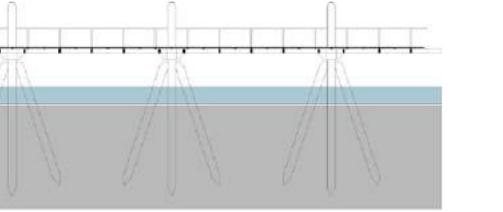


Detail design and visualisation

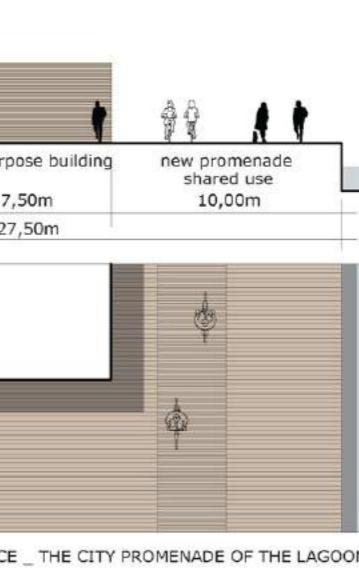
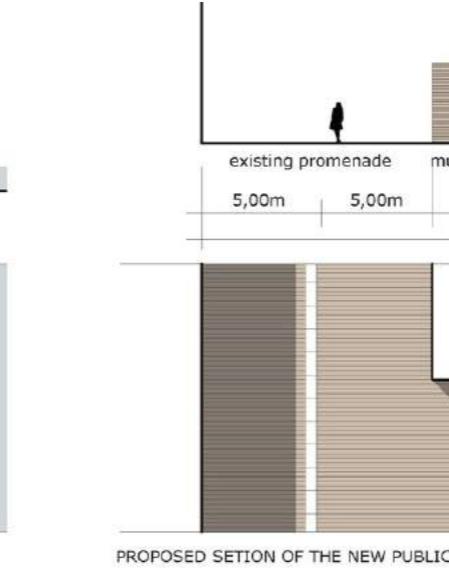
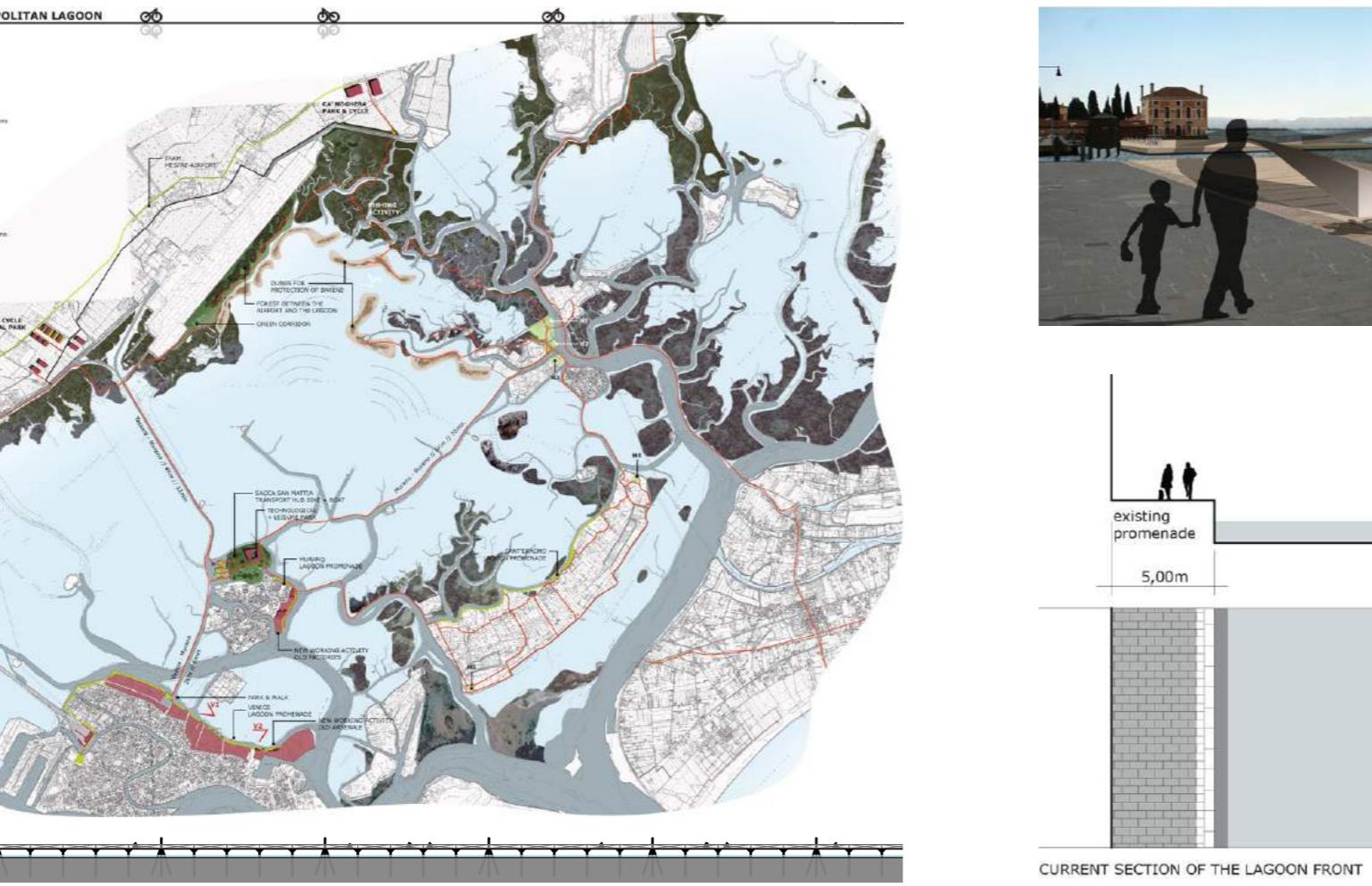


3.5 // RE-CYCLING VENICE

Venice Lagoon, Italy



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Context

The extremely intense concentration of tourism in Venice during in the last decades produced social, economical and demographical changes across the lagoon and its islands. Many of the industrial activity was closed down during the 20th century, and this caused the gradual abandonment of parts of the city, and even whole islands in the lagoon.

In these days, in which the communication is one of the most important factors that can significantly increase the local economy, not only can the proposed improvements for travel links be a good help, but also it is the protection of the local habitats of the lagoon what can make all the real difference.

Concept

The proposal comprises two main targets, which are the improvement of the travel links across the lagoon and the preservation and restoration of the natural habitats, which are so fragile and for so long time affected by the ships.

The main proposal consists in the design of a new cycle and footpath across de the lagoon, takeing advanteage of tge existing infrastructure along the canals.

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erosion

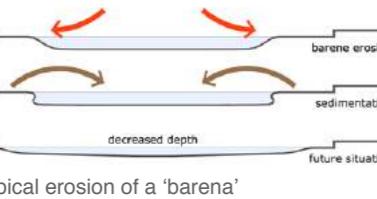


protection



new barene

'Barene' - current protection system



Habitat protection

Although the new cycle and footpath can disperse the amount of commuters and visitors travelling by 'vaporetti', there is still a risk of erosion of the 'barene' habitats, which has been intensified in the last years.

The design of a system of new islands can create a protection barrier that protects the 'barene' from the waves produced by 'vaporetti'.



VIEW 1

Visualisation 1 - proposed barrier island

Populus alba

Ulmus minor

Rubus ulmifolius

Crataegus monogyna

Coronia myrtifolia

Hedera helix

Clematis vitalba

Vinca difformis

Tamarix africana

Tamarix gallica

Saccharum ravennae

Tamarix africana

Tamarix gallica

Saccharum ravennae

scale 1/500

4units / 10m x 10m

4units / 10m x 10m

5units / 10m x 10m

planting density

4units / 10m x 10m

4units / 10m x 10m

5units / 10m x 10m

characteristics

height 2m - 3m

height 2m - 3m

height 1,5m - 2m

COVERED by planting 15%

Tamarix africana 4%

Tamarix gallica 2%

Saccharum ravennae

COVERED in 10 years 30%

Tamarix africana 13%

Tamarix gallica 10%

Saccharum ravennae 7%

COVERED in 25 years 60%

Tamarix africana 30%

Tamarix gallica 25%

Saccharum ravennae 5%

(the criteria for selecting the species is based in their resistance to brackish environments)

scale 1/500

FOREST VEGETATION

SANT'EIRASMO SALT MARSH // TESSERA SALT MARSH (BIG EROSION BY WAVES)

EXISTING MARSH VEGETATION TO PRESERVE AND POTENCIATE

ISOLA DEI LAGHI SALT MARSH

DESE TIDAL FRESHWATER MARSH

Juncus maritimus

Limonium serotinum

Spartina maritima

Phragmites australis

scale 1/500

scale 1/500