

Country /City Spain /Barcelona

University / School Universitat Politècnica de Catalunya / ETSAB and EEAB

Academic year 2022/23

Title of the project 4,2km through a mosaic of landscapes

Authors Vincent de Gasperi, Ariadna Garriga Ballarín and Cristina Pellisé de Urquiza



TECHNICAL DOSSIER

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Authors Vincent de Gasperi, Ariadna Garriga Ballarín and Cristina Pellisé de Urguiza

Title of the course Landscape design studio IV

Academic year 2022/23

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Written statement, short description of the project in English, no more than 250 words

Located in Barcelona, 4.2km through a mosaic of landscapes is proposed as a circuit that breaks the impermeability of the limits of the Montbau neighborhood and the feeling of isolation of its inhabitant

- 4.2KM is a walking route that links neighbourhoods and connects the Parc de Collserola and the Montbau neighbourhood with La Clota, on the other side of the motorways.
- 4.2KM of healthy habits to bring a system of parks and green public spaces, integrating adjacent opportunity areas into this system.
- Health, biodiversity and vitality converge, while at the same time highlighting the existing cultural and natural heritage.

The intervention programme is based on 5 transversal principles: calm transitions between landscapes, pedestrian priority, continuous canopy, connection between neighbourhoods and permeability of pavements:

- The sections with steep slopes are modulated, making a friendly route with non-stop alternatives and recovering the old paths;
- The two pedestrian crossings are promoted over the ring roads, and the road reorganisations that favour pedestrians, while an alternative route for bicycles is also provided;
- The existing canopy is completed and an urban forest is created, so that the green continuity is also a benefit for biodiversity;
- A permeable walkway is established which is a connection in itself, but also between neighbouring districts where there were previously impassable pedestrian barriers;
- All those solutions designed to retain rainwater in situ and its use or filtration into the groundwater level are incorporated.

For further information

Máster d'Arquitectura del Paisatge - UPC

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SCHOOL PRIZE

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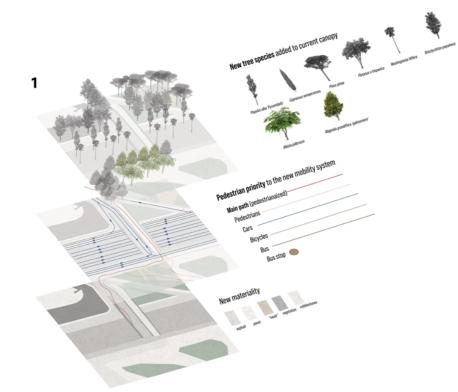
Máster d'Arquitectura del Paisatge - UPC

BUILDING THE LANDSCAPE FROM A HEALTH AND SUSTAINABILITY PERSPECTIVE Establishing a **social** and ecological connection along a **ENTRANCE** TO THE NATURAL PARK OF **COLLSEROLA** circular pathway Historical path of Sant Cebrià PROMOTING SOCIAL ATTRACTION **CENTERS** OF THE NEIGHBOURHOOD 血 **ECOLOGICAL** AND Frida Kahlo garden **PEDESTRIAN** BRIDGE **PEOPLE** AND **VEHICLES** BRIDGE Actual view of the bridge Actual view of the bridge Les Rieres d'Horta path La Clota park Landscape diversity Social uses

THE NEW MOBILITY SYSTEM

The current mobility is modified to guarantee a continuous 4.2 km road that prioritises pedestrians, a cycle lane is proposed and different parking areas are marked out for both residents of the Montbau neighbourhood and possible visitors.





Current situation

-Forest path -Degraded nearby vegetation -Problems due to stones falling (rainy season) onto paths

PROPOSAL





Earth retaining walls with stone gabions functioning as benches

Maintenance of earth

Current situation
-Pacified path
-Space without vehicular traffic -Impermeable pavement -Closed green area

PROPOSAL



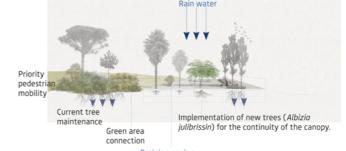
Isadora Duncan street

street

Vayreda

street

Poesia



Current situation

-Space without vehicular traffic -Impermeable pavement -Closed green area

PROPOSAL

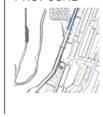




Current situation

-Narrow walkways -Impermeability of pavements -Lack of a continuous canopy

PROPOSAL



trees (Platanus and *Crataegus* Current tree

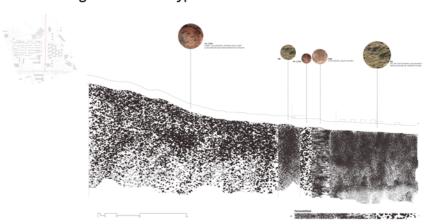
> existing pavements of Montbau

INCREASING PERMEABLE PAVEMENTS

It is decided to change the materiality of the pavement to generate a route of 1km of permeable urban road, 1.5km of forest road, 1km of preserved historic road and 0.7km of impermeable urban road.



Understanding the different types of soil



Being aware of the current permeability of the pavements





IMPLEMENTING A GREEN CORRIDOR

The route is connected to a **system of green areas** of different typologies: urban parks and gardens, vegetable gardens, urban forest and natural park.

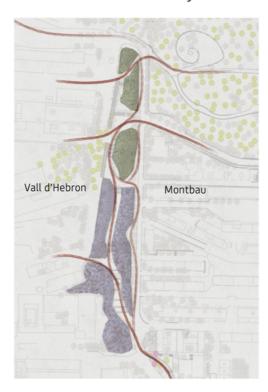


A continuous canopy is established along the entire route. The current tree species are maintained and new ones are implemented.



THE NEW URBAN FOREST

Serving as a transition space between the Montbau neighbourhood and the Vall d'Hebron hospital area, a new walkable urban forest has been incorporated. Through the Miyawaki planting method, new species are incorporated and the existing ones are maintained, thus generating benefits for the biodiversity of the area.



CURRENT TREES

Magnolia grandiflora Pinus pinea

Pinus halepensis Ligustrum lucidum

Pinus halepensis

Celtis sinensis

Prunus cerasifera 'nisardii'

Natural growth of a forest (200 years)



Miyawaki Method (20 years)



Urban transition forest

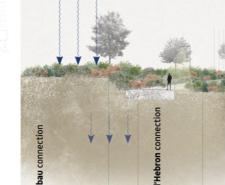
Trees		Bushes		Liana	
p f Arbutus unedo Celtis australis Crataegus monogyna * Fraxinus angustifolia * Acer monspessulanum * Juniperus oxycedrus Ligustrum vulgare Malus sylvestris Olea sylvestris * Platanus hybrida Populus alba Prunus spinosa Quercus cerrioides Quercus coccifer Quercus ilex Sorbus domestica Ulimus minor	b i .	Bupleurium fruticosum Buxus sempervirens * Calicotome spinosa * Cistus albidus * Cistus ladanifer * Cistus mospeliensis * Cistus salviifolius * Cornus sanguinea Daphne gnidium L. Ephedra fragilis Erica arborea * Euphorbia amygdaloides Genista umbellata * Lavandula stoechas Lotus dorycnium * Phillyrea angustifolia	b i	p f Acanthus mollis Alyssum maritium Anthirinum majus Anthirinum majus Asparagus acutifolius Brachypodium phoenicoides Calluna vulgaris Centranthus ruber Cytisus spinosus Doxantha unguis-cati Hedera helix Iberis sexatilis Lonicera complexa Phytolacca dioica Salvia rosmarinus Thymus vulgaris	b i
Anthropic transition urban forest	o i	p f	o i	p f	o i
Acer monspessulanum Arbutus unedo		Artemisia campestris Cistus florentinus Cistus ladanifer Cistus monspeliensis Colutea arborescens Coronilla mínima Rosa canina Rosmarinus officinalis Lavandula stoechas Erica arborea Erica scoparia Euphorbia amygdaloides Euphorbia amygdaloides Euphorbia serrata Genista umbellata Helichrysum italicum Myrtus communis Pistacia lentiscus Pyrus bourgaeana Rosmarinus officinalis Salvia lavandulifolia Sedum sediforme Thymus mastichina Thymus vulgaris Ulex parviflorus		Alyssum maritium Campsis radicans Centranthus ruber Convolvulus mauritanica Hardenbergia violacea Hedera helix Ipomoea indica Parthenocissus quinquefolia Parthenocissus quinquefolia Plumbago auriculata	

p: pioneer species **f**: facilitator species **o**: species for birds **i**: Species for insects

Currently







Spaces for observing the vegetation

Miyawaki method

Light for the walking areas Wooden benches Aquifer recharge Draining paving (cobble stones) Current tree Implementation of maintenancel plant species with the

Walking and resting areas

THE NEW CANOPY NEW STREET TREES

Prunis dulcis