



Country /City Spain / Reus

University / School Universitat Rovira i Virgili (URV) / Reus Architecture School (EAR)

Academic year 2018-2022

Title of the project A projects project

Authors First and second year students of Design and Urbanism Studios

TECHNICAL DOSSIER

Title of the project	Pavelló entre Noguers Tetralogy, a Projects Project
Authors	First and second year students of Design and Urbanism Studios
Title of the course	Reimagining the public space
Academic year	2018-2022
Teaching Staff	Lara Alcaina, Arturo Frediani (leading faculty), Quim Rosell, Anna Royo, Ferran Tiñena, Raquel Casals, Jaume Farreny, Gemma Ferré, Joaquin Pérez, Josep Maria Toldrà (leading faculty)
Department / Section / Program of belonging	Design and Urbanism Studios
University / School	Universitat Rovira i Virgili (URV) / Reus Architecture School (EAR)



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

A PROJECTS PROJECT:

The above 4 design projects of the students are framed in the period of the first 4 semesters of the career. The Design and Architectural Drawing studios, in the first year, and the Design and Urbanism studios, in the second year, are coordinated with each other to offer students an initial training in which we shamelessly mix the realms of Architectural Design, Urbanism and Landscape Architecture that other schools strictly separate. We do not know if we are, therefore, presenting now a fifth project of the students or merely claiming that the previous ones should be read following a coherent storyline.

Such a story began with an exhibition on projects in the landscape, which gathered in a simple but elegant open-air pavilion, infiltrated among walnut trees, a selection of the best Catalan architectural practices on the landscape carried out between 2000 and 2017, thus fulfilling an important pedagogical mission. After the exhibition the place became a discreet presence between the architecture school and the URV's economics faculty until the dean of the latter threatened to demolish it. It was then necessary to dismantle it and both its disappearance and its slats became the excuse to propose up to 4 exercises in which the students would turn it successively into an ephemeral installation, a meeting space in front of the school, a bird observatory by the Llobregat river and, finally, into the mournful manifestation of its mere absence.

For further information

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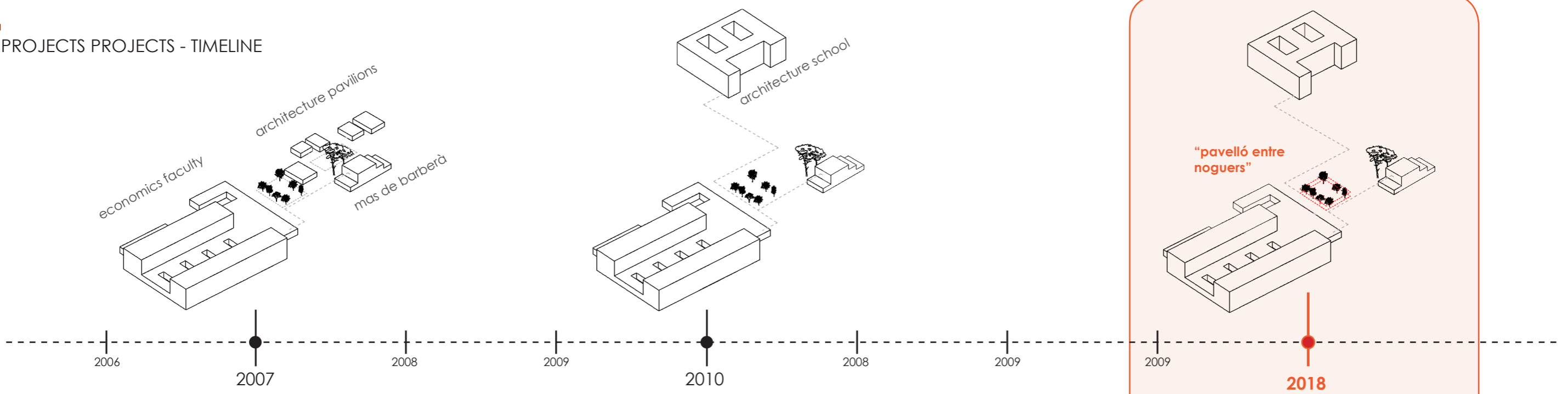
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12th International Biennial Landscape Barcelona

Barcelona November 2023

SCHOOL PRIZE



EAR ARCHITECTURE SCHOOL PAVILIONS

7 walnut trees on the Bellisens Campus of the Rovira i Virgili University (URV) of Reus house the space where the Pavilions of the School of Architecture (EAR) are located.



NEW EAR ARCHITECTURE SCHOOL BUILDING

The EAR school of architecture moves to a new building in 2018 and the pavilions are demolished.

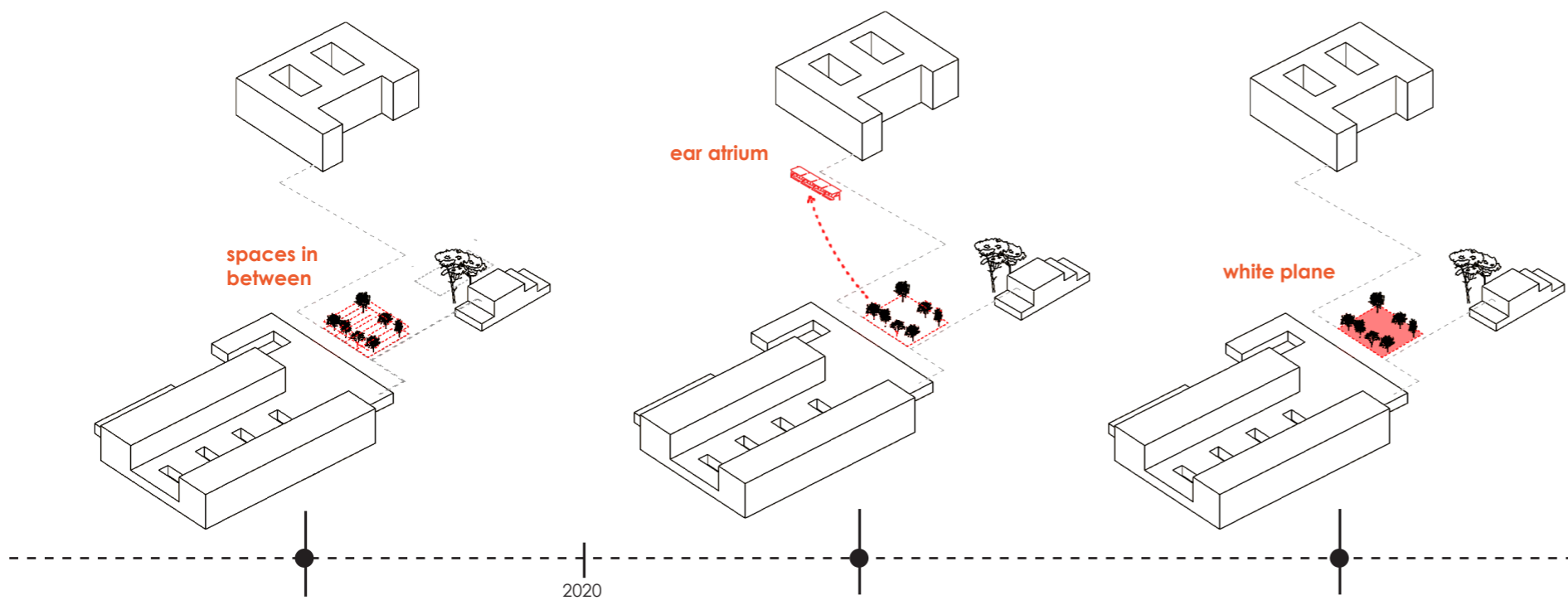


"pavelló entre noguers"

2018

PAVILION BETWEEN WALNUT TREES
© Jaume Farreny & Ramon Fité

68 pinewood frames embrace the 7 walnut trees to host the travelling exhibition "Arquitectures en el paisatge/ Catalonia 2000-2007". "The presence of an absence" is built, recalling the teaching activities of the school's pavilions.



2019 IN-BETWEEN SPACES

A double textile façade, formed by an interior rectangle embracing the seven walnut trees, plus an exterior rectangle that would separate the pavilion from the rest of the Bellisens Campus.



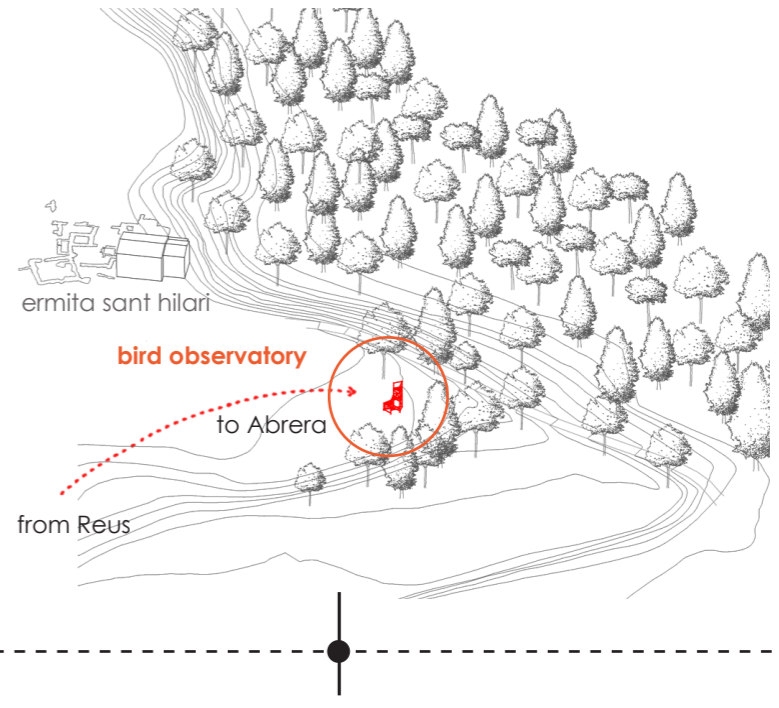
2021 EAR ARTRIUM

New meeting space at the anonymous landscape facing the School of Architecture. 70% recycled timber of the Pavilion between walnut trees. Design and Urbanism Studio I.



2021 A WHITE RECTANGLE

The surface that delimited the defunct pavilion is dusted with gypsum plaster until the rectangle of 14.5 x 20.3 meters that occupied its structure is accurately whitewashed.



2022 BIRD OBSERVATORY BY THE RIVERSIDE

In Abrera, Barcelona using the remaining timber of the Pavilion between walnut trees. Design and Urbanism Studio II.





CONSTRUCCION PROCESS



"PAVELLÓ ENTRE NOGUERS" PAVILION BETWEEN WALNUT TREES by Jaume Farreny and Ramón Fité



DECONSTRUCTION



APPROPRIATION



THE PASSAGE OF TIME





Country /City Spain / Reus

University / School Universitat Rovira i Virgili (URV) / Reus Architecture School (EAR)

Academic year 2019-2020

Title of the project In-between spaces

Authors First year students of Design and Urbanism Studio

TECHNICAL DOSSIER

Title of the project	In-between spaces: Spontaneous decoration of the pavilion among walnut trees
Authors	First year students of Design and Urbanism Studio
Title of the course	Reimagining the public space
Academic year	2019-2020
Teaching Staff	Raquel Casals, Jaume Farreny, Gemma Ferré, Joaquín Pérez, Josep Maria Toldrà (leading faculty)
Department / Section / Program of belonging	Design and Urbanism Studio I
University / School	Universitat Rovira i Virgili (URV) / Reus Architecture School (EAR)



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

IN-BETWEEN SPACES:

Loos said that architecture begins with a protective covering: "Let's say that the architect's mission was to make a warm and habitable space. Carpets are warm and livable. This space could be solved by laying one of them on the floor and hanging tapestries so that they would form the walls. But with rugs you can't build a house. Both the carpet and the tapestry require a constructive framework to keep them always in the right position. Conceiving this framework is the architect's second task" (1).

The exercise of a day, In-between Spaces, doesn't deal therefore with the second, but with the first task of the architect, the covering that protects and identifies ourselves.

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After tying a clothes line around the perimeter of the pavilion structure between walnut trees, each student first hung 10 pieces of clothing of different sizes and colours and later two white sheets.

In this manner the first year students materialized a double textile façade, formed by an interior rectangle that embraced the seven walnut trees and defined an open-air classroom of about 300 m², plus an exterior rectangle that would separate the pavilion from the rest of the Bellisens Campus.

(1) LOOS, Adolf, "Das Prinzip der Bekleidung," Neue Freie Presse, Vienna, September 4, 1898.

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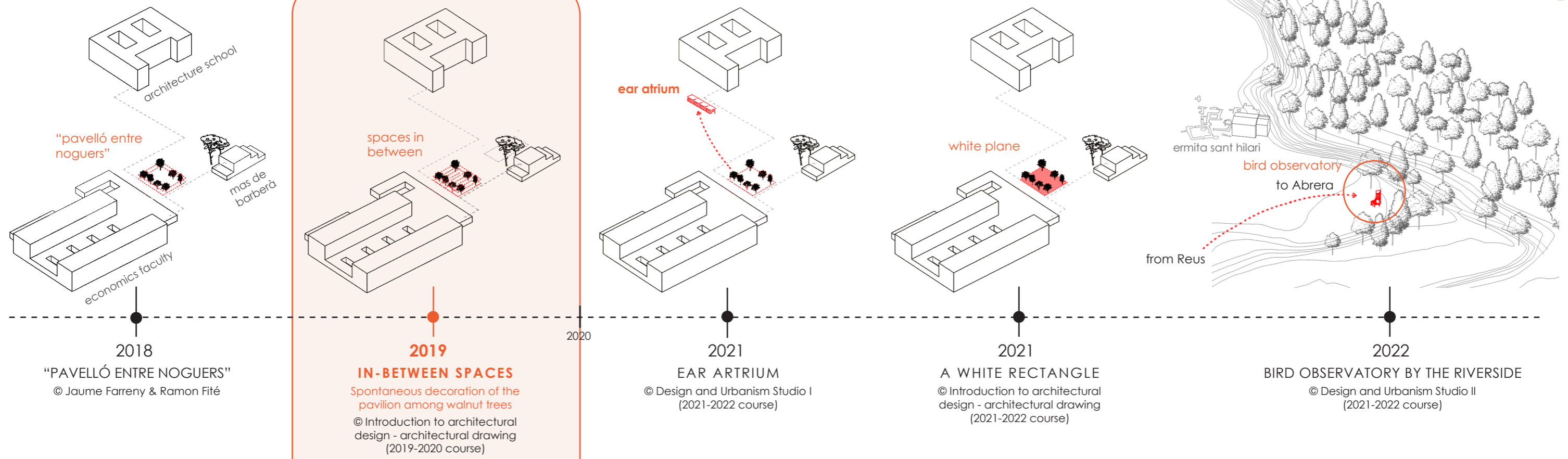
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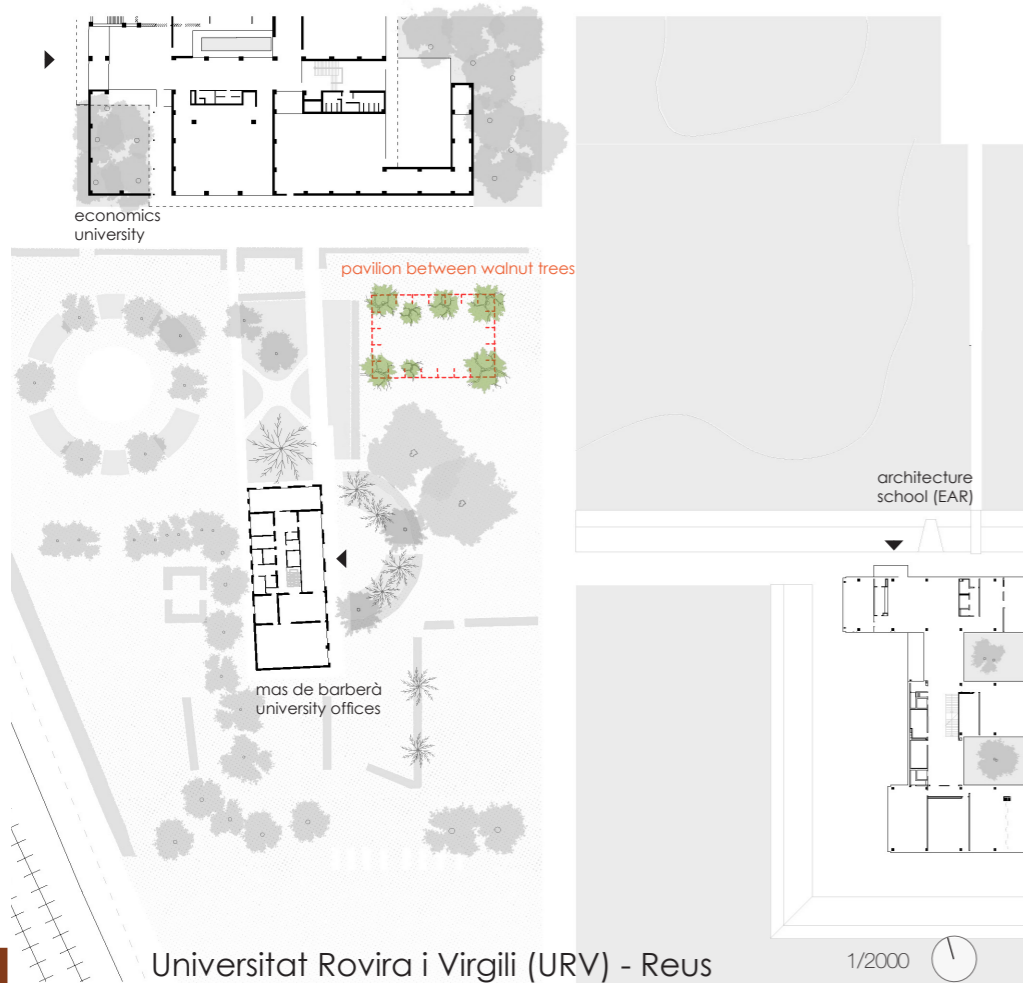
Barcelona November 2023

SCHOOL PRIZE

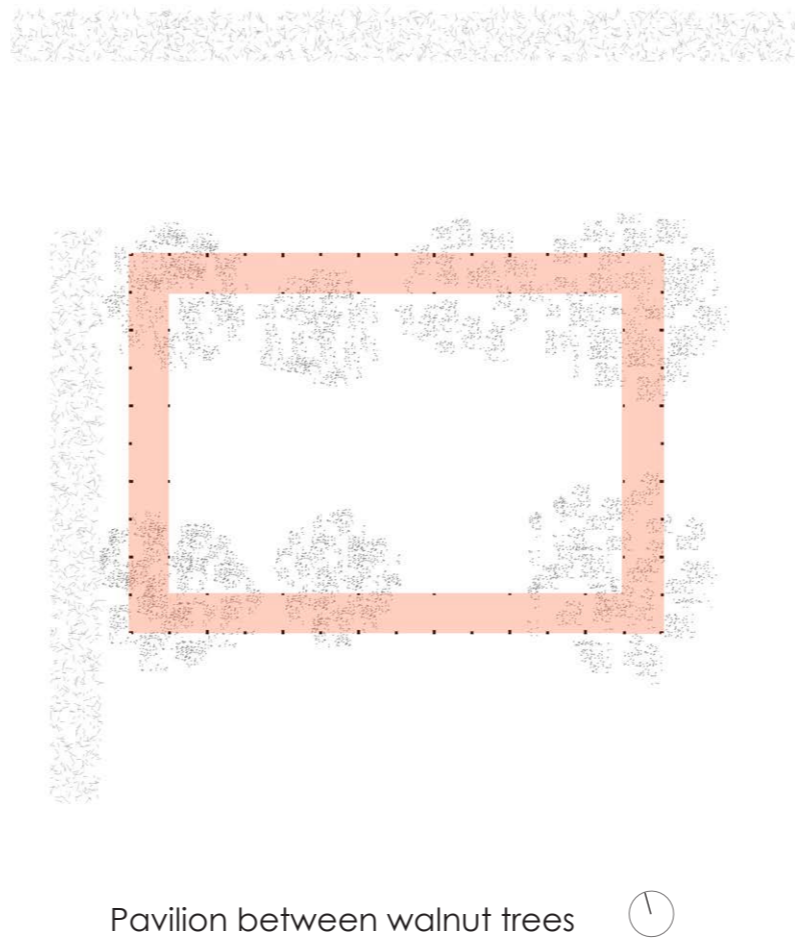
A PROJECTS PROJECTS - TIMELINE



SITE PLAN



GROUND FLOOR



REFERENCES









Country /City Spain / Reus

University / School Universitat Rovira i Virgili (URV) / Reus Architecture School (EAR)

Academic year 2021-2022

Title of the project Recycling the "Pavelló entre Noguers" into a meeting place facing the EAR

Authors Second year students of Design and Urbanism Studio II

TECHNICAL DOSSIER

Title of the project	Recycling the "Pavelló entre Noguers" into a meeting place facing the EAR
Authors	Second year students of Design and Urbanism Studio II (*)
Title of the course	Reimagining the public space
Academic year	2021-2022
Teaching Staff	Lara Alcaina, Arturo Frediani (leading faculty), Quim Rosell, Anna Royo, Ferran Tiñena
Department / Section / Program of belonging	Design and Urbanism Studio II
University / School	Universitat Rovira i Virgili (URV) / Reus Architecture School (EAR)



(*) Second year students of Design and Urbanism Studio II:

Hicham Ahayan, Andrea Alcantud, Xabier Allue, Muhannad Almahaini, Eric Arenas, Ana Bautista, Ilham Belhadj, Maria Carina Boiciuc, Mariam Boussof, Elsa Cabezas, Gerard Cambra, Jingxian Chi, Maria Victoria Civil, José Díaz, Júlia Espada, Roger Fernández, Raimundo Gernaert, Fernando Gonzalez, Juan Guitierrez, Nicolas Hiller, Noe Huguet, Maria Imerlishvili, Arnau Jordan, Jana Jurj, Daniel López, Melisa Maceda, Imad Maha, Andra Maier,

Laia Martí, Santiago Mayero, Blanca Mayor, Núria Menchon, Brigitte Milán, Anna Muñoz, Miriam Ortin, Júlia Palma, Miquel Palmer, Natalia Parra, Laia Piqué, Maria Radoi, Ingrid Reguant, Elena Ripeanu, Paula Roch, Joel Rodríguez, Diego Rodríguez, David Romero, Eric Rueda, Albert Sanromà, Mateo Santos, Susanna Sanz, Júlia Sarroca, Ariadna Serral, Èlia Soto, Sadibou Sow, Alex Subirats, Arnau Suñé, Pau Torné, Marc Traguany, Judit Vila, Joel Vilà.

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

EAR ATRIUM:

The "Pavelló entre Noguers", by Jaume Farreny and Ramon Fité, was an open-air exhibition space located opposite the URV's Faculty of Economics and next to the Reus Architecture School, which won the 2017 Ex-Aequo prize for outdoor spaces at the Mostra d'Arquitectura de Tarragona, corresponding to the fifth edition of the Alejandro De la Sota Awards.

In 2020, the Dean of the Faculty of Economics, feeling that the pavilion was violating his territory, gave the Dean of Architecture the option to remove the construction before he himself gave the order to demolish it.

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In response, at the beginning of the 2021/22 academic year and as part of the Design and Urbanism Studio I, a week-long collective design exercise was carried out which, by recycling the structure, would allow the second-year students to give their classmates a permanent space for socialising and resting in front of the School of Architecture.

In addition to the usual "learning by doing", the pedagogical objective was to test whether or not a specific intervention can contribute to the improvement of an inhospitable environment, and whether this can be possible at no cost and without leaving any carbon footprint other than that resulting from adding the students' physical effort to their intellectual effort.

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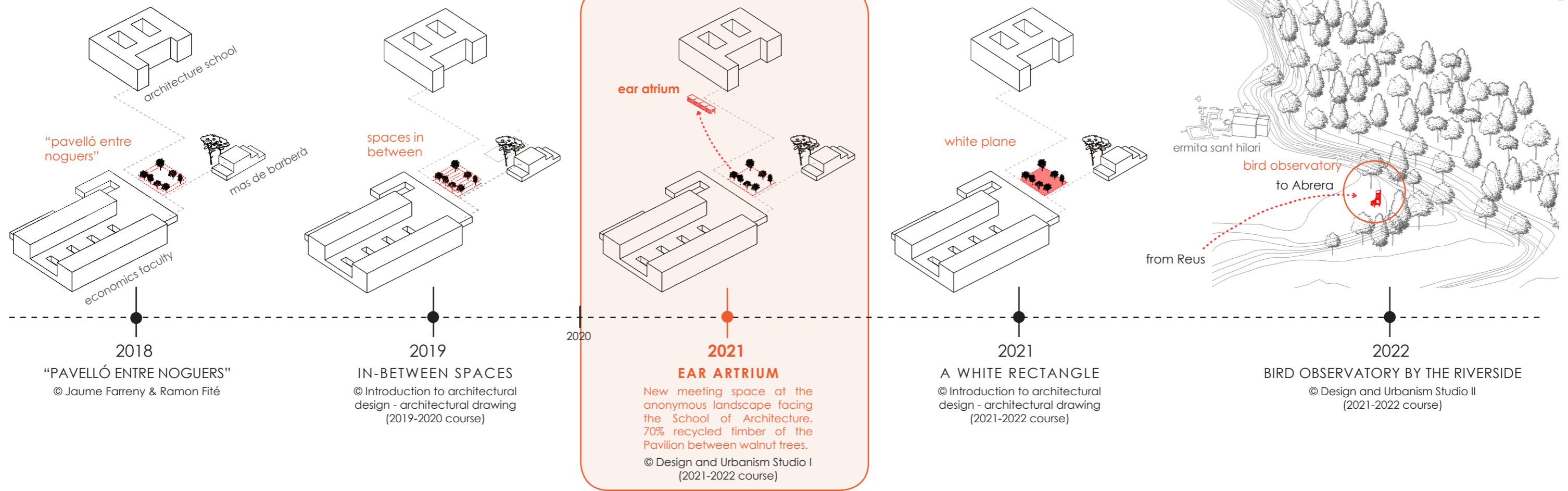
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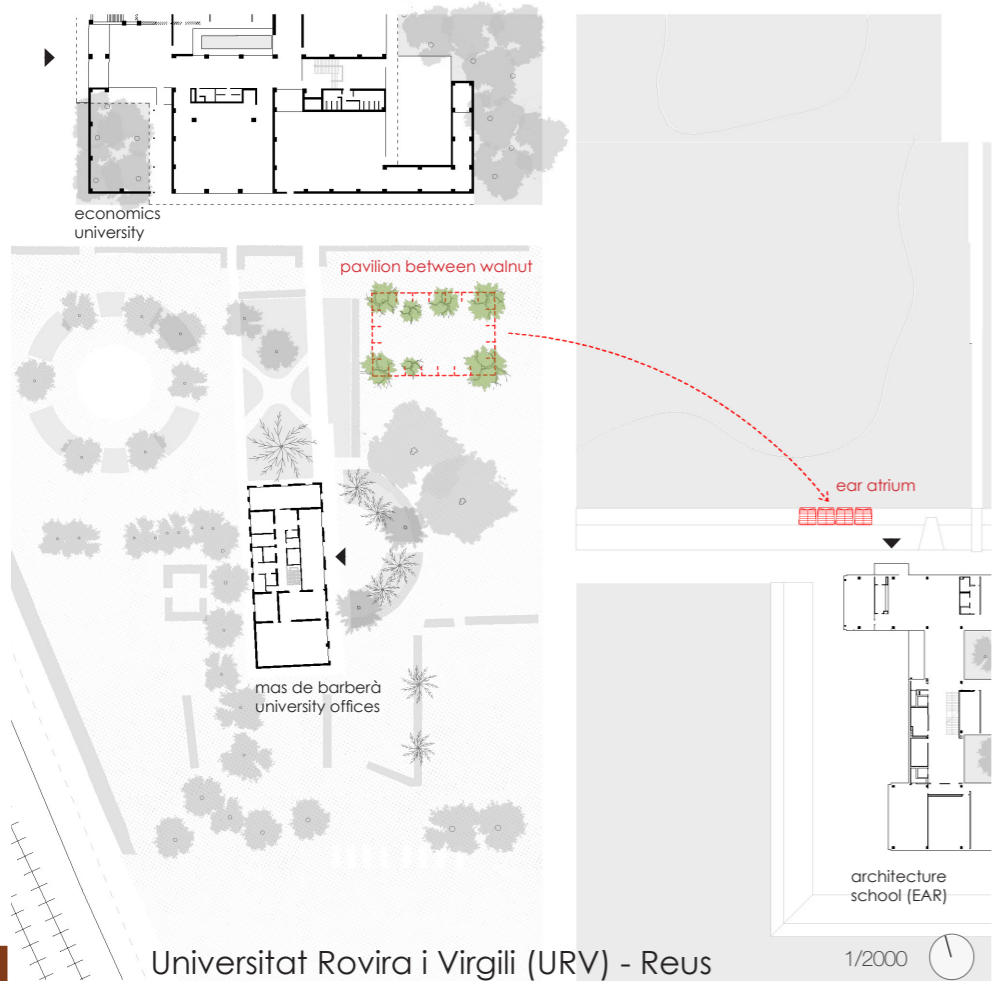
Barcelona November 2023

SCHOOL PRIZE

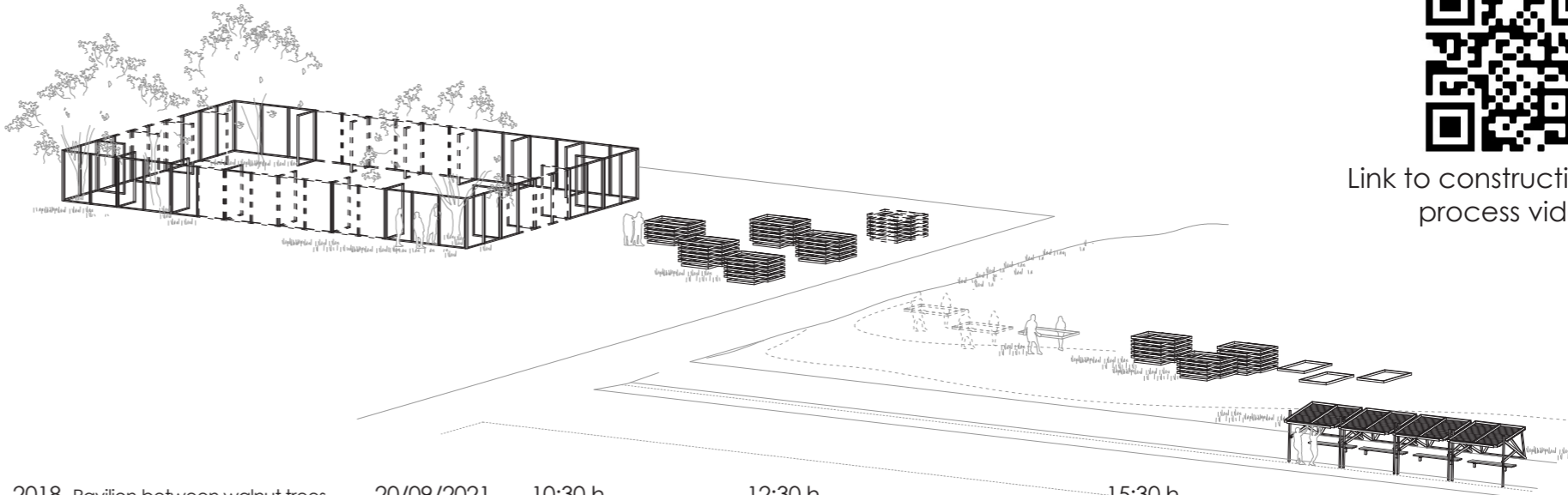
A PROJECTS PROJECTS - TIMELINE



SITE PLAN



DECONSTRUCTION, RECYCLING AND CONSTRUCTION PROCESS



Link to construction process video

2018 Pavilion between walnut trees



20/09/2021 10:30 h



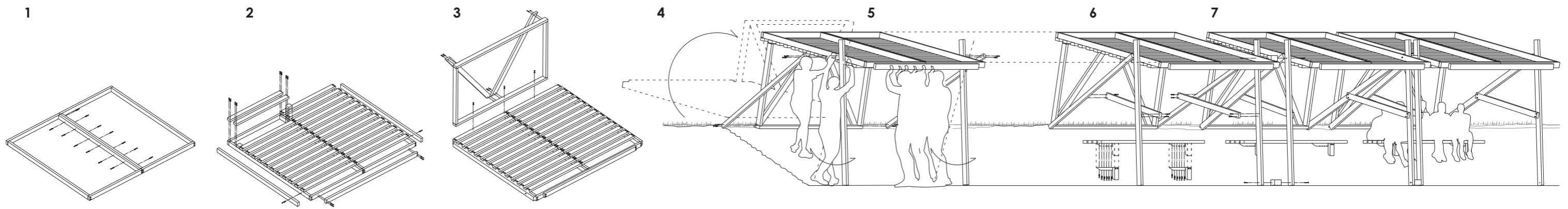
12:30 h



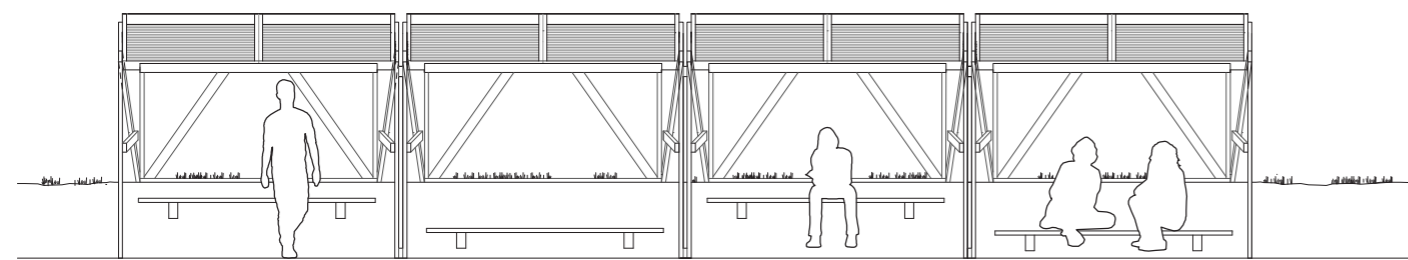
15:30 h



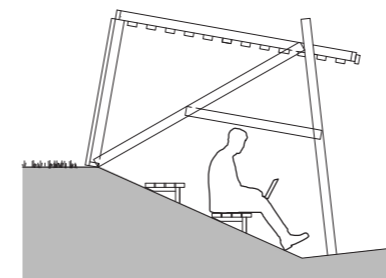
ASSEMBLY OF PERGOLAS AND BENCHES



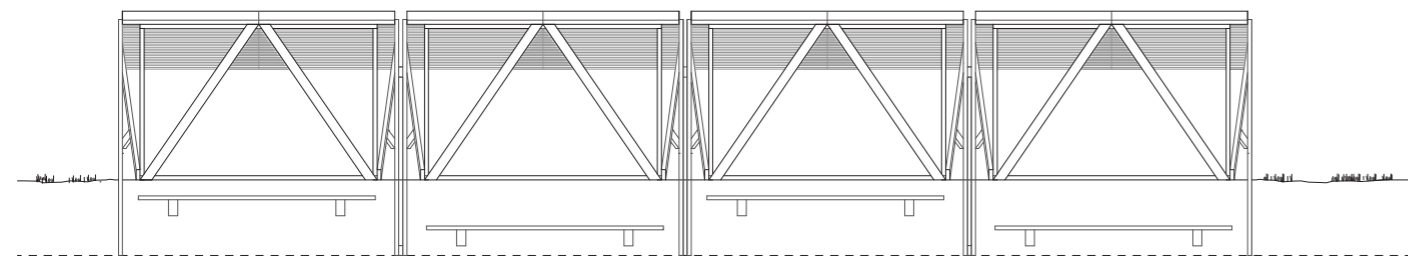
PLANS, ELEVATIONS AND SECTIONS AS BUILT



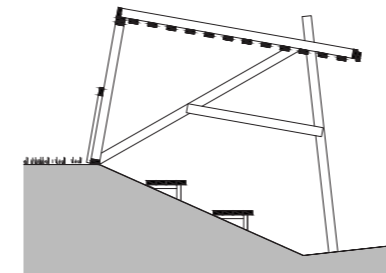
FRONT ELEVATION



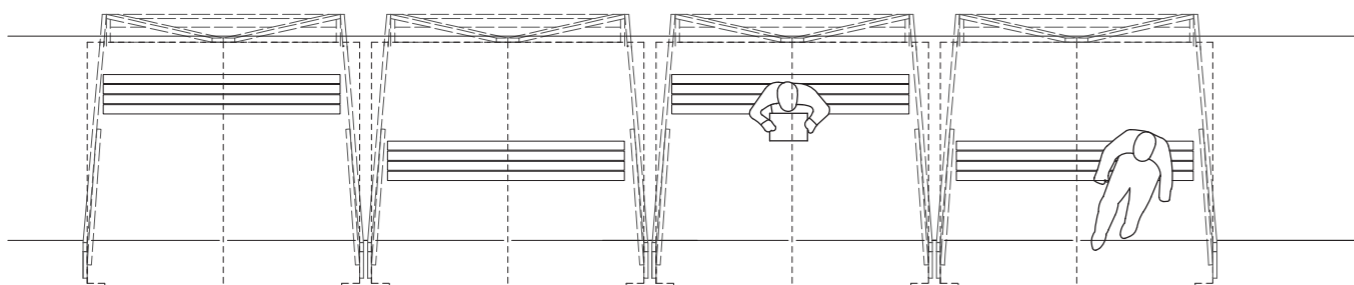
SIDE ELEVATION AA'



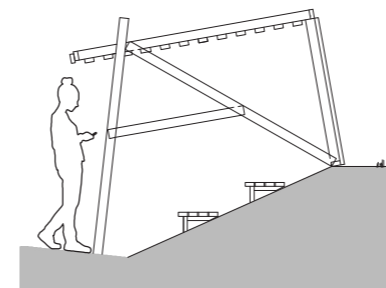
BACK ELEVATION



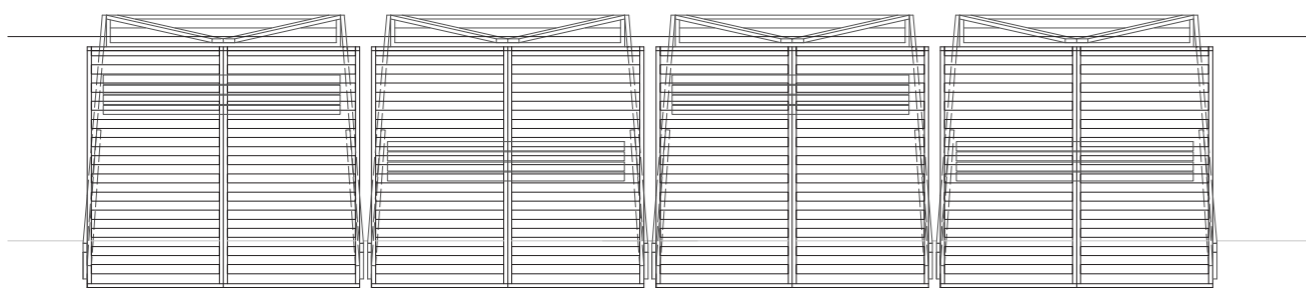
SECTION BB'



GROUND FLOOR level +0.00

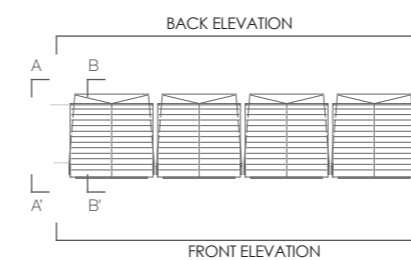


SIDE ELEVATION CC'



GROUND FLOOR level +3.50

1/75



TOOLS



4 electric drills
0.03 kW/h



3 battery screwdrivers
0.75 kW/h



1 radial machine
2.2 kW/h

Calculation of the total energy used by ELECTRICAL CONSUMPTION TOOLS

	Power (W)	Working hours (h)	Energy used (kWh)
3 battery screwdrivers	18	2	0,036
4 electric drills	18	2	0,036
1 radial machine	1500	0,25	0,375
Total Emissions de CO2: (0.036 x 3) + (0.036 x 4) + 0.375 = 0.951 kWh			

Comparison of CO2 emissions to create the TOOLS used

TOOLS	Units	Energy (kWh)	Useful life
	54	0.5	500
TOTAL : 54 x 0.5 / 500 = 0.054 kWh			

Comparison of CO2 emissions by people

	People	Quantity per day (kg)	Working hours (h)
WORKING ON THE SITE	50	1.2	5
SITTING IN CLASS	50	0.95	
TOTAL: 50 x (1.2 / 24) x 5 = 12.5 kg CO2			

EMISSIONS OF CO2 (KG CO2)

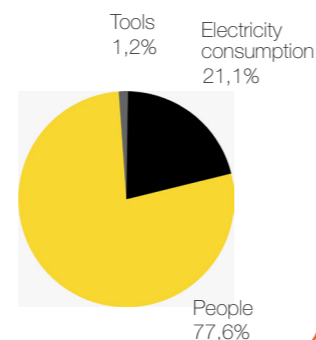
ELECTRICITY CONSUMPTION
0.951 X 0.357 = 0.34 KG CO2

PEOPLE
WORKING ON THE SITE
0.25KG PER PERSONA X 50 X 5H = 12.5 KG CO2

TOOLS
0.054KWH X 0.357 = 0.02 KG CO2

En total 12,86

CARBON FOOTPRINT
(electricity, people, tools)



PEOPLE



Total: 50 people
5 h



General coordinator



General Team coordinator



Health and safety coordinator



Transport manager



Filming maganer

... ON THE CO2 EMITTED (EMBODIED CARBON)

Embodied carbon comes from the consumption embodied energy consumed to extract, refine, process, transport and fabricate a material or product (including buildings). It is often measured from cradle to (factory) gate, cradle to site (of use), or cradle to grave (end of life). The embodied carbon footprint is therefore the amount of carbon (CO2 or CO2e emission) to produce a material.

It is a topic of rising importance. In fact, it is normally possible to reduce the embodied energy and carbon of a building or construction project by 10-20% without adding to the build cost. What's more embodied carbon is often 20-50%, or so, of the whole life energy and carbon of a building, i.e. when operational carbon emissions are considered.

Circular ecology. Making a Difference Together_ <https://circularecology.com/>

LIFE-CYCLE STATES OF EMITTED CO2
PERGOLA_ Sustainable construction (Re Use and Re Cycling)



MATERIALS



TIMBER

100%_Recycled
(of which 30% is left over for future actions)



SCREWS

33,1%_Reused (247ut)
66,9%_Contributed (500ut)



CO2 FOOTPRINT
(pergola timber)

Measurement of wood used:
140 de slats (1,35m)= 189m
140 de slats (2,35m)= 329m

Average wood density: 600kg/m³

Cross-section of slats: 45mm x 90mm

Coef. CO2 wood: 0,493CO2e/kg *

* The Inventory of Carbon and Energy (ICE database). JONES, Dr. Craig, Sustainable Energy Research Team (SERT), University of Bath, 2019

Wood volume:
(189+329)x0,09x0,045= 2,0979 m³

Wood weight:
2,0979 m³ x 600 kg/m³= 1.258,74 kg

Wood carbon footprint:
(1.258,74kgx0,493CO2e/kg)= 620,559 CO2e
620,559CO2e/4anys= 155,14 CO2e

CONCLUSION

The carbon footprint of the pergola in front of the EAR versus the "pavelló entre noguers" built in 2017 is 4 times lower. The CO2 impact on the environment has been reduced by this proportion or magnitude over the 4 years that have elapsed.

- CO2 Emission (material production) = 12.86 kg
- 100% recycled timber





Country / City Spain / Reus

University / School Universitat Rovira i Virgili (URV) / Reus Architecture School (EAR)

Academic year 2021-2022

Title of the project A white rectangle

Authors First year students of Design and Urbanism Studio

TECHNICAL DOSSIER

Title of the project	A white rectangle: Ghostly memory of the pavilion among the walnut trees
Authors	First year students of Design and Urbanism Studio
Title of the course	Reimagining the public space
Academic year	2021-2022
Teaching Staff	Raquel Casals, Jaume Farreny, Gemma Ferré, Joaquín Pérez, Josep Maria Toldrà (leading faculty)
Department / Section / Program of belonging	Design and Urbanism Studio I
University / School	Universitat Rovira i Virgili (URV) / Reus Architecture School (EAR)



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

A WHITE RECTANGLE:

Ghostly memory of the pavilion among the walnut trees.

After the walnut tree pavilion was dismantled almost three years after it was built, and its slats were used to build the pergolas in front of the architecture school, barely recognizable marks left by the reused structure remained on the ground.

The mourning we experienced due to the forced loss was then expressed through a brief practical exercise of a morning's duration, carried out by the first year students. The surface that delimited the defunct pavilion was dusted with gypsum plaster until the rectangle of 14.5 x 20.3 meters that occupied its structure was accurately whitewashed, distinguishing the old enclosure from the surrounding area.

The operation took solemnly place as a ritual of homage and recognition of the absent architecture.

For further information

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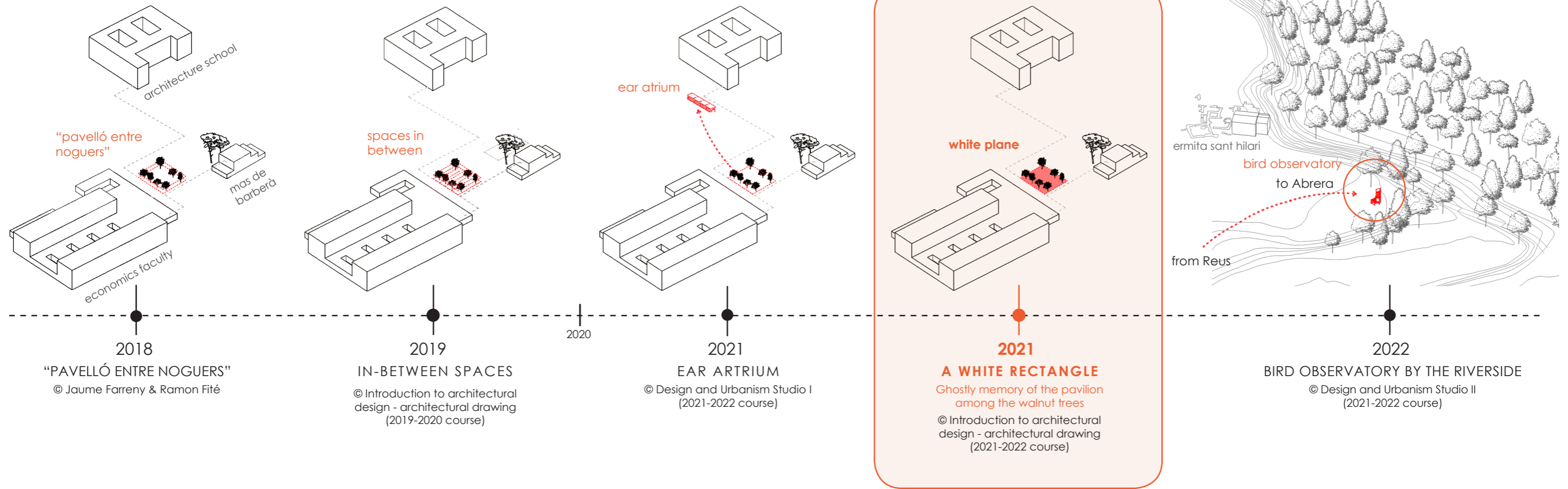
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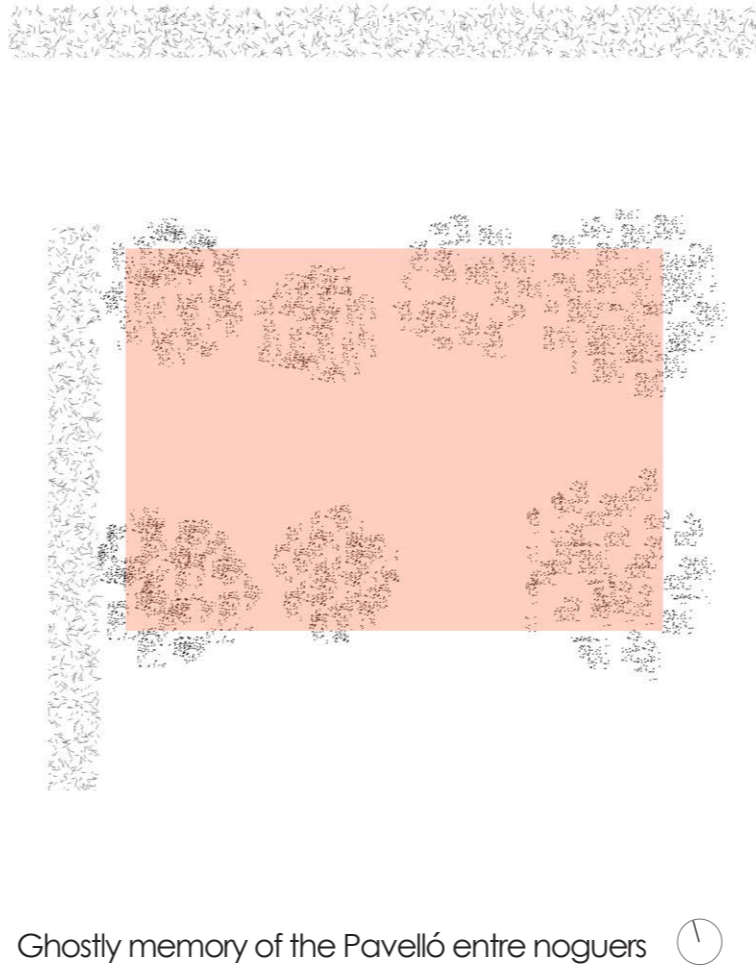
A PROJECTS PROJECTS - TIMELINE



SITE PLAN



GROUND FLOOR



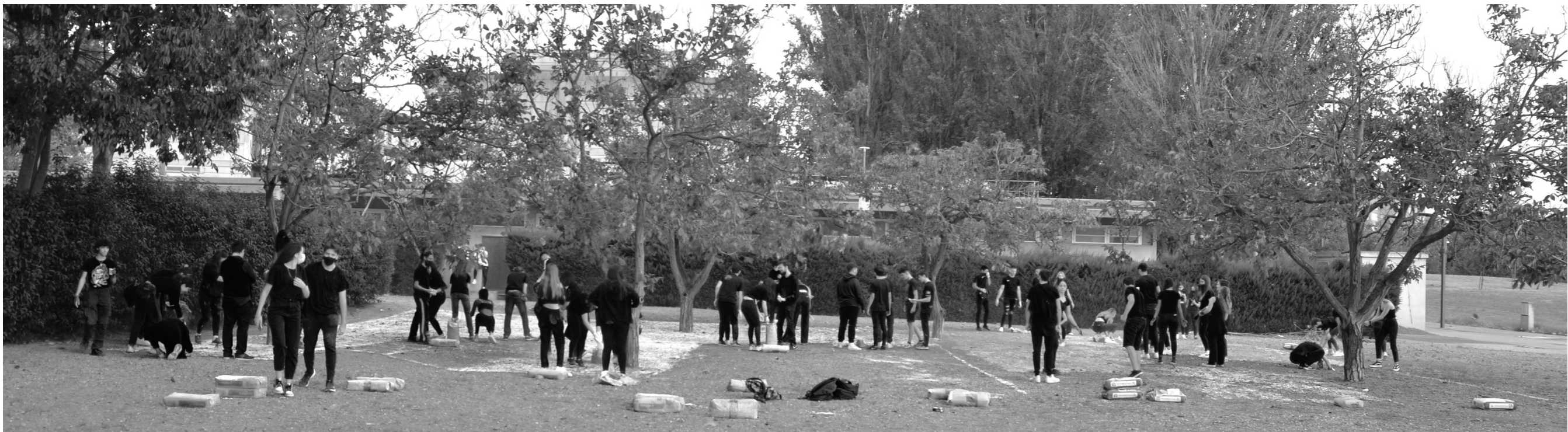
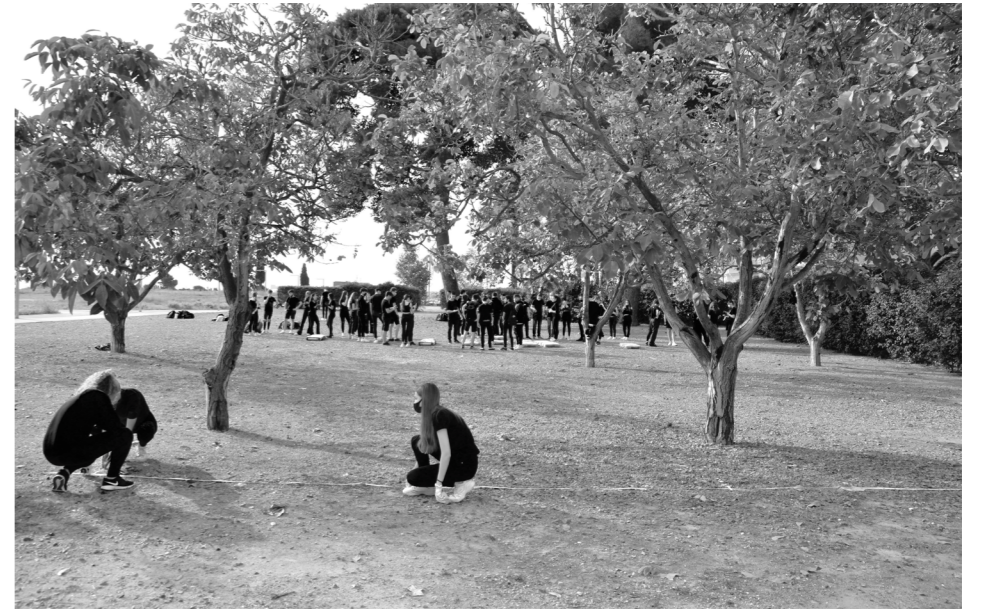
MATERIALS



Ghostly memory of the Pavelló entre noguers

The passage of time and gypsum plaster

CONSTRUCION PROCESS: PERIMETER MARKING AND START TO FILL WITH GYPSUM PLASTER







Country / City Spain / Reus

University / School Universitat Rovira i Virgili (URV) / Reus Architecture School (EAR)

Academic year 2021-2022

Title of the project Bird Observatory in the SPA (Special Protection Area) by the river Llobregat. Abrera, Barcelona, Spain.

Authors Second year students of Design and Urbanism Studio II

TECHNICAL DOSSIER

Title of the project	Bird Observatory in the SPA (Special Protection Area) by the river Llobregat. Abrera, Barcelona, Spain.
Authors	Second year students of Design and Urbanism Studio II
Title of the course	Natural & Human Heritage
Academic year	2021-2022
Teaching Staff	Lara Alcaina, Arturo Frediani (leading faculty), Quim Rosell, Anna Royo, Ferran Tiñena
Department / Section / Program of belonging	Design and Urbanism Studio II
University / School	Universitat Rovira i Virgili (URV) / Reus Architecture School (EAR)



(* Second year students of Design and Urbanism Studio II:

Xabier Allue, Eric Arenas, Ilham Belhadj, Maria Carina Boiciuc, Mariam Boussof, Gerard Cambra, Maria Victoria Civil, Júlia Espada, Carlos Galindo, Raimundo Gernaert, Fernando Gonzalez, Nicolas Hiller, Noe Huguet, Patricia Lardies, Melisa Maceda, Laia Martí, Lorena Martín,

Blanca Mayor, Núria Menchon, Brigitte Milán, Anna Muñoz, María Pineda Núñez, Miriam Ortin, Miquel Palmer, Natalia Parra, Maria Radoi, Elena Ripeanu, Paula Roch, David Romero, Eric Rueda, Albert Sanromà, Mateo Santos, Sílvia Solé, Sadibou Sow, Alex Subirats, Pau Torné, Marc Traguany, Judit Vila, Joel Vilà, Maria Virgili.

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

CONTEMPLATING NATURE, BIRD OBSERVATORY:

In the traditional cultures of hunters and gatherers, watching —waiting in silence for game— is a practice of capital importance for survival. The fusion with nature, achieved by spending hours watching and listening in solitude or in pairs, means that the people who don't yet cultivate the land, get to know the natural dynamics like no one else. Digital-born humans continue to feel pleasure as they return to nature. They inhale the scent of wet earth, listen to the tree leaves swaying in the wind and their gaze is enchanted by green meadows or the crystal clear water of a river. Sometimes they come across a bird or a mammal fleeing in fear. Living creatures have learned that human presence brings trouble.

The first exercise of the second semester consisted on designing, choosing a strategic location and, finally, building a bird observatory or hide with the remaining left over from the construction of the pergola that already had taken advantage of the timber that once belonged to the pavilion between walnut trees. Hence, it was important for us to point out that architecture can reincarnate over time. By doing this the students could reuse the remaining slats of wood into a first intervention on the landscape that allowed them to experience the lower course of the Llobregat river as it passes through Abrera, that is to say, to better understand the natural setting for the creative exploration the students were about to perform the rest of the course.

For further information

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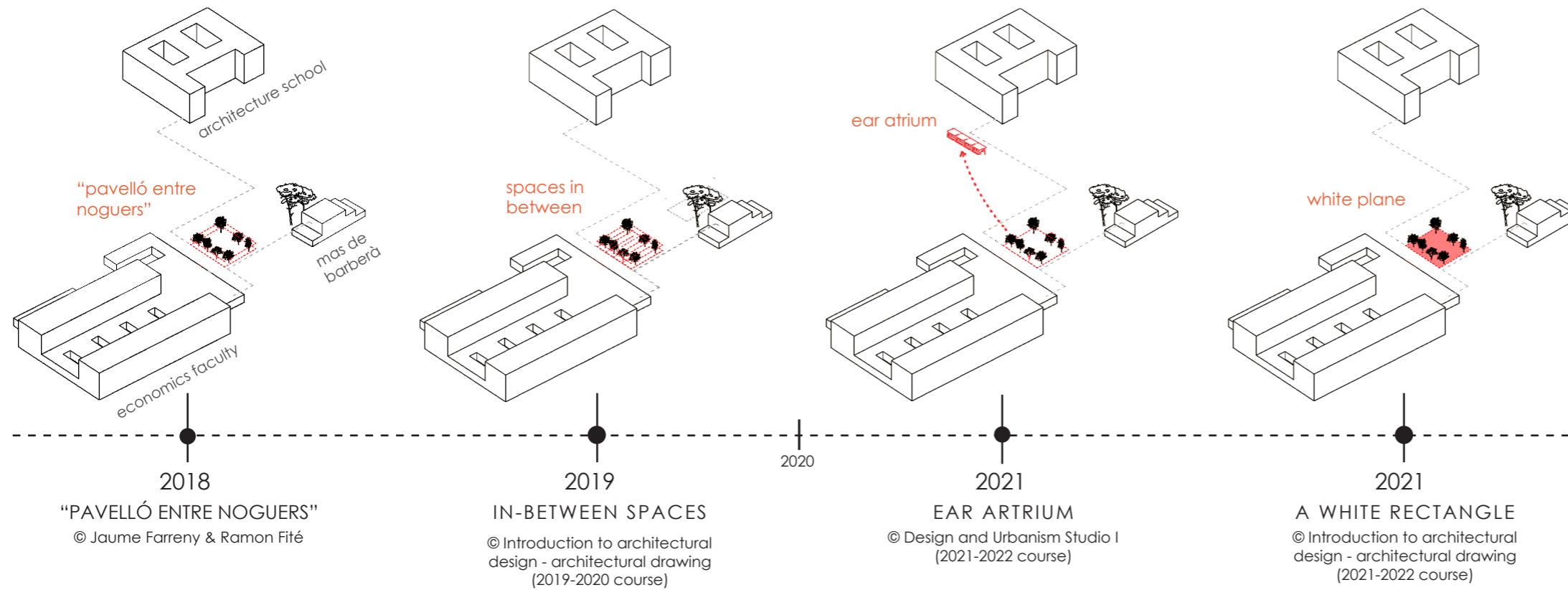
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SCHOOL PRIZE

A PROJECTS PROJECTS - TIMELINE



ermita sant hilari

bird observatory to Abrera

from Reus

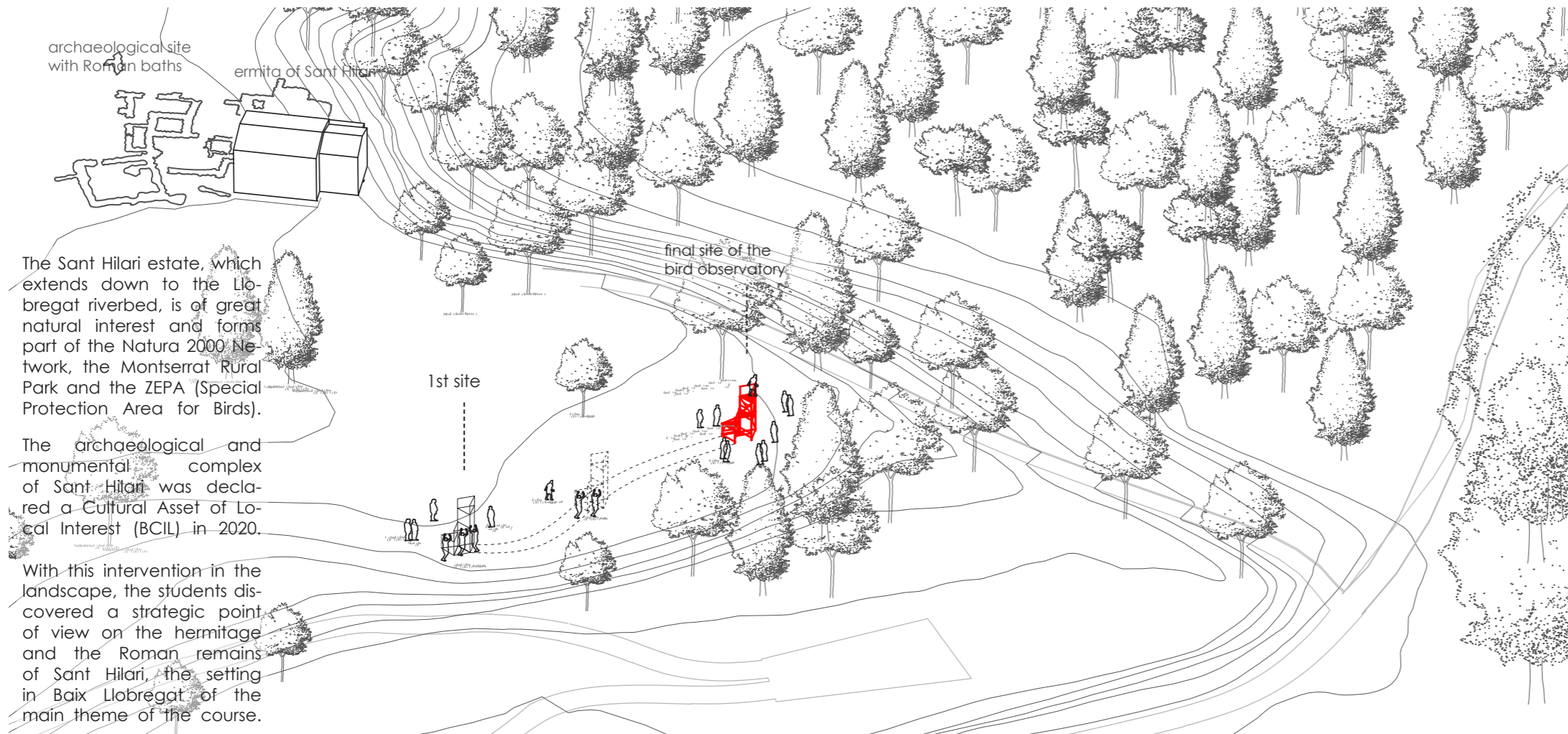
2022

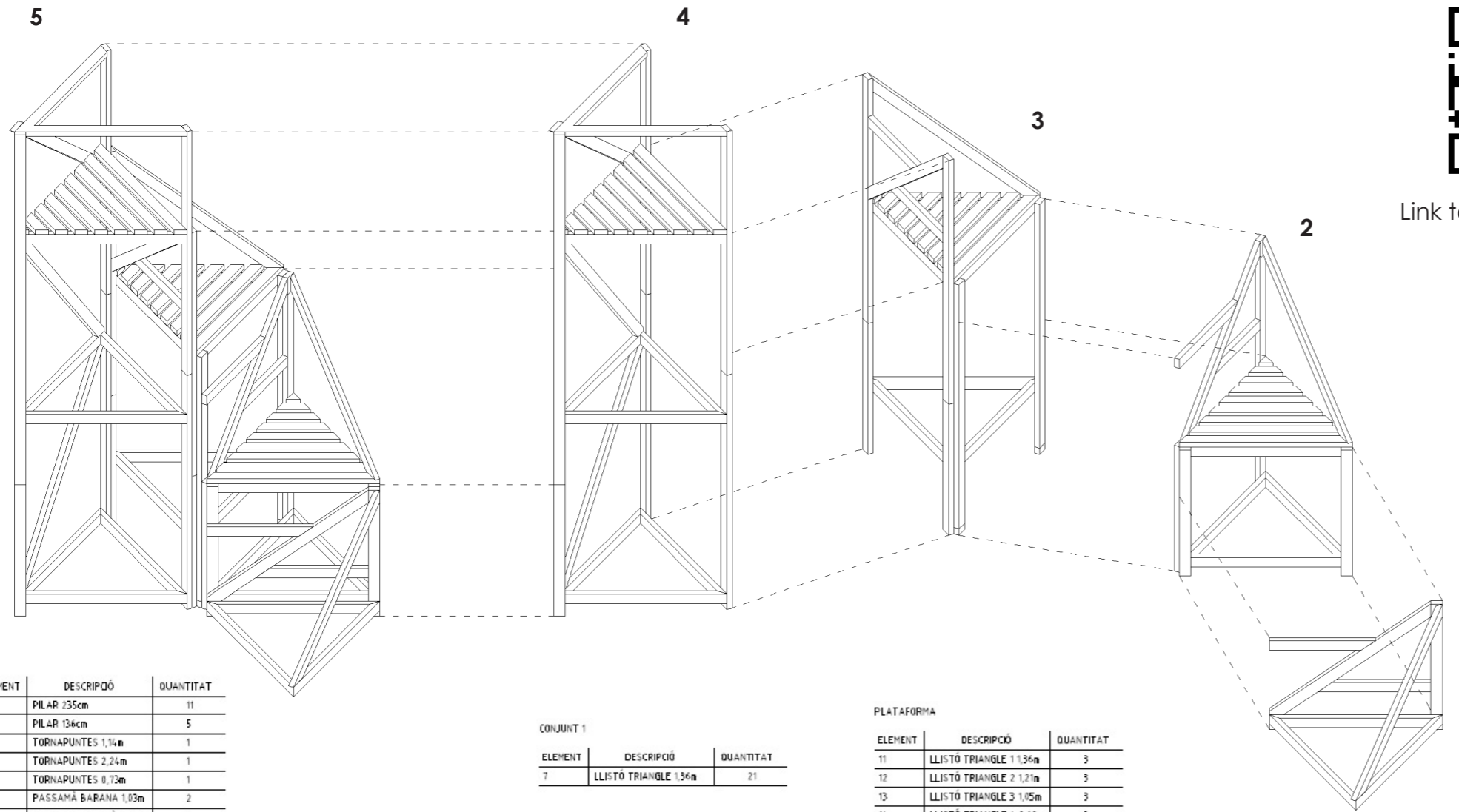
BIRD OBSERVATORY BY THE RIVERSIDE

In the second half of the year, the leftover wooden slats, approximately 25% of the structure of the Pavilion between Walnut trees, were reused for the design and construction of a bird observatory at the ZEPA of the Llobregat River in Abrera.

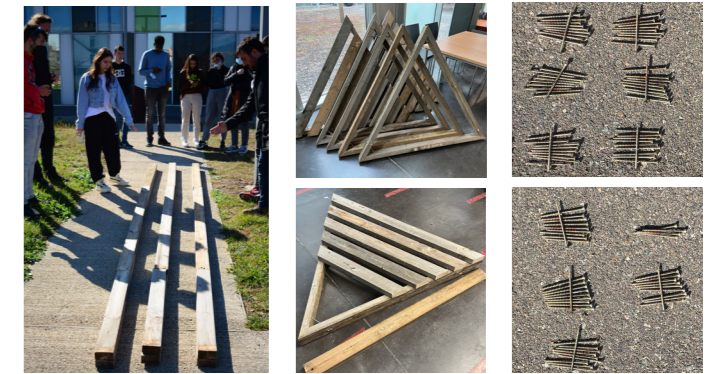
© Design and Urbanism Studio II (2021-2022 course)

SITE PLAN





Link to construction process video



ELEMENT	DESCRIPCIÓ	QUANTITAT
1	PILAR 235cm	11
2	PILAR 134cm	5
3a	TORNAPUNTES 1,14m	1
3b	TORNAPUNTES 2,24m	1
4	TORNAPUNTES 0,73m	1
5	PASSAMÀ BARANA 1,03m	2
6	ESCAIRE PASSAMÀ 0,075m	2
20	TORNAPUNTES 1,78m	2
21	TORNAPUNTES 1,74m	1
22	LLISTO TRIANGLE 1 0,85m	1
23	LLISTO TRIANGLE 2 1,36m	1
24	EXTENSIO PILAR 0,14m	4

CONJUNT 1

ELEMENT	DESCRIPCIÓ	QUANTITAT
7	LLISTO TRIANGLE 1,36m	21

CONJUNT 2

ELEMENT	DESCRIPCIÓ	QUANTITAT
8	DIAGONAL ESCALA 1,68m	3
9	GRAÓ 1 0,60m	3
10	GRAÓ 2 0,55m	3

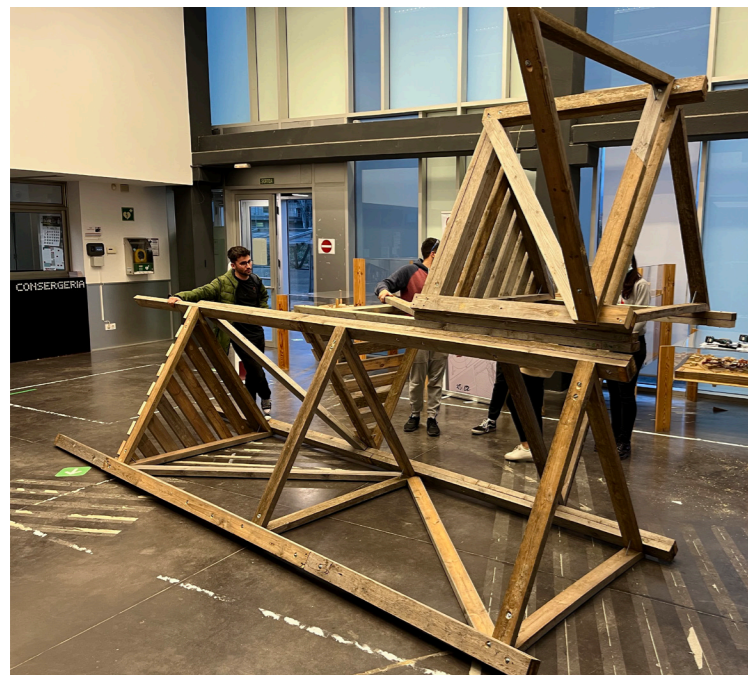
PLATAFORMA

ELEMENT	DESCRIPCIÓ	QUANTITAT
11	LLISTO TRIANGLE 1 1,36m	3
12	LLISTO TRIANGLE 2 1,21m	3
13	LLISTO TRIANGLE 3 1,05m	3
14	LLISTO TRIANGLE 4 0,90m	3
15	LLISTO TRIANGLE 5 0,74m	3
16	LLISTO TRIANGLE 6 0,59m	3
17	LLISTO TRIANGLE 7 0,43m	3
18	LLISTO TRIANGLE 8 0,27m	3
19	LLISTO TRIANGLE 9 0,12m	3

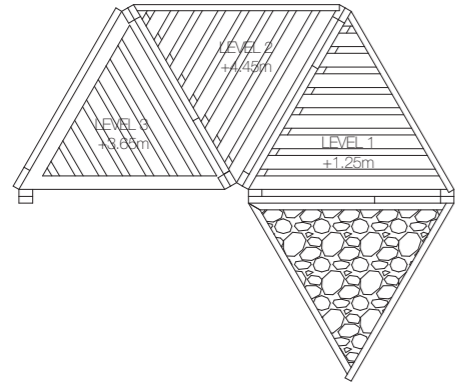
PRE-ASSEMBLY AT THE SCHOOL OF ARCHITECTURE OF REUS

TRANSFER OF THE SEMI-ASSEMBLED STRUCTURE FROM THE SCHOOL TO ABRERA

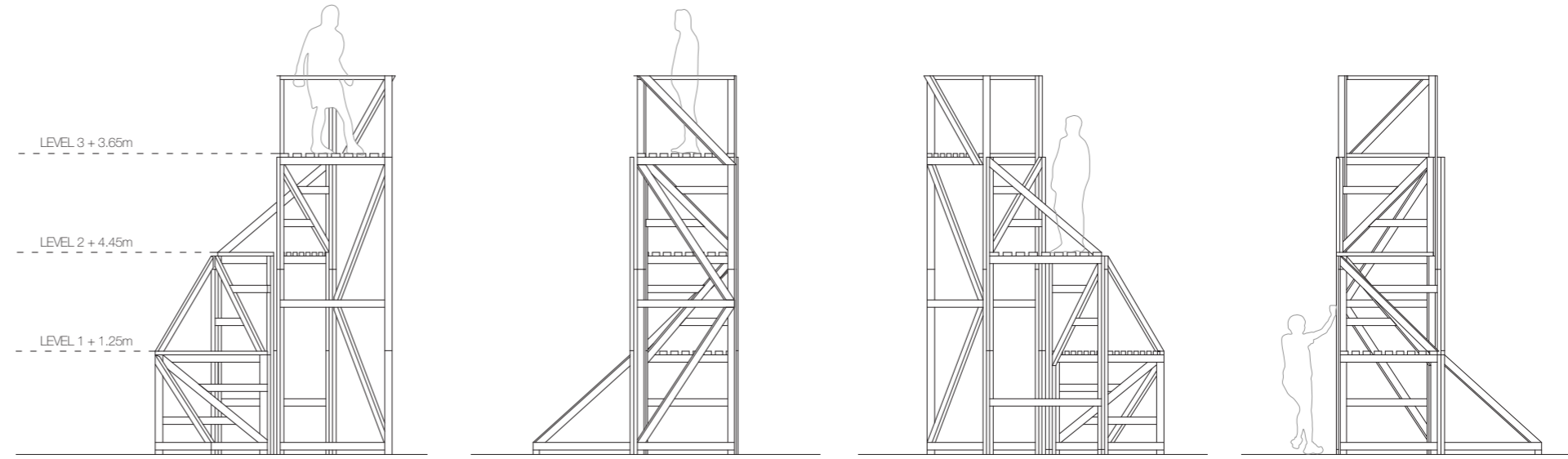
ERECTION OF THE STRUCTURE AT THE 1ND SITE



PLAN AND ELEVATIONS AS BUILT



1/50



1/75

ASSEMBLY OF THE STRUCTURE AT THE 1ST SITE AND SUBSEQUENT RELOCATION

LIFTING OF THE STRUCTURE AT THE 2ND SITE AND FINAL ERECTION

LOAD AND STABILITY TEST

