A PANTONE PIXELSCAPE: NEGOTIATING THRESHOLDS THROUGH GRADIENTS

PROBLEM STATEMENT

Background

Sant Feliu de Llobregat is a city in the province of Barcelona. With the La Salut dry stream running through, the city is in close proximity to the Collserola Natural Park and the Llobregat River. The goal of the project is to reimagine, redesign and restore the relationship between Collserola Natural Park & Llobregat River following the natural stream of La Salut through the town of Sant Feliu with an integrative design approach. We aimed to redefine this relationship through the La Salut stream which connects the two, through better articulation of the blue and green infrastructure to a more resilient territory through three main aspects: biodiversity, connectivity, and productivity. The Llobregat River covers most of the province of Barcelona. There are multiple natural streams, La Salut being one of them, which are gradually becoming disrupted and canalized unfortunately due to dense urban fabrics and discontinuity of natural systems. The stream of La Salut is an essential component of the site that connects the Collserola natural park, agricultural park, and the Llobregat river with a potential to host all three aspects, and we aim to strengthen this connection so that this idea could be implemented along any location to identify the possibilities and integrate the natural systems. The stream gets canalized due to urbanization and then through the treatment plant it is continued to the Llobregat river. The memory of water gets completely lost during this transition.

Brief

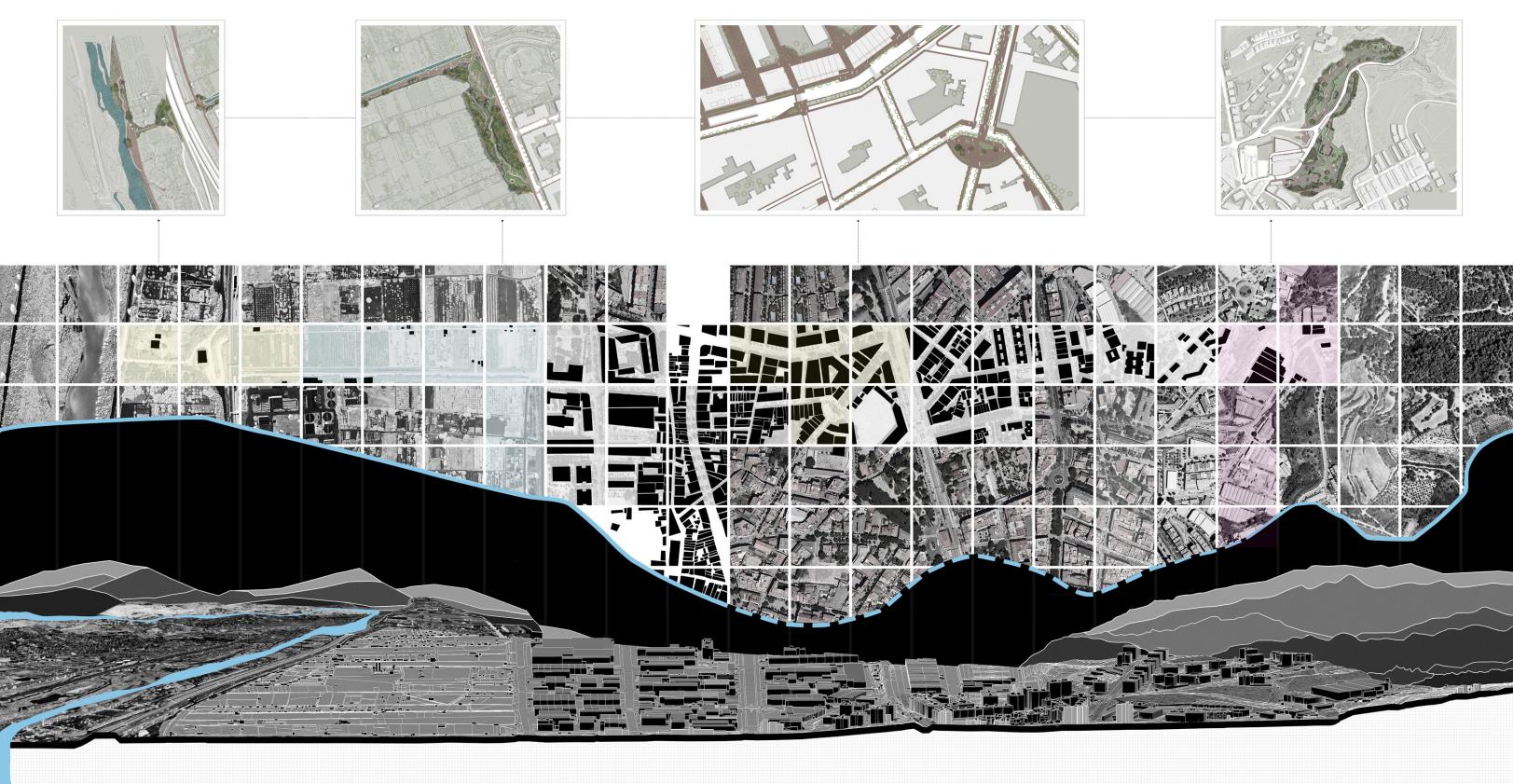
Sant Feliu is a well-established city with a close community and a rich culture. Multiple cultural events and festivals make use of the various plazas and public spaces in the city. While the residents of Sant Feliu care about their culture they also care about their elders. A history of infrastructure improvements reveals how the city incorporates disability-friendly locations and an acceptance of change and improvements. With highly successful public areas the city requires little change to revive the memory of the stream. The agricultural area being free of major infrastructures to enhance the sense of openness. The main areas of concern lie in the urban edge, as it is occupied by abandoned industrial land and the hard transition lines between land use throughout the city. The segmentation of the city is very noticeable when isolating the major land uses. The agricultural lands, the forests, and the shrubby vegetation on the north side, and three major roads, mainly highways and railways that pass through the site segment the ecology across the site. The presence of fragmented and scattered land uses is evident in this fabric which hinders the continuity. The industrial sector creates a discontinuity of the natural system. The small island of industrial land towards the Collserola park is out of place and is in close proximity to the residential zone. This creates a harsh transition between the land use and adds to the disconnect in the site.

The name of our project is A Pantone Pixelscape: Negotiating Thresholds Through Gradients and in this project, we aim to redefine and restore the relationship between Collserola Natural Park and the Llobregat river by creating thresholds through gradients in the form of pixels.

Strategy

We began our approach by focusing on the open and public spaces to find opportunities. Therefore, we started by highlighting the green and the open spaces that can contribute to strengthening the relationship that we wanted to establish. We also located the public plazas on the site to understand the activities that happen in different seasons and are widely used by the residents, with high accessibility for all age groups. Unfortunately, the city disrupts the fabric, and to regain the connection, we proposed to integrate the spaces through a probable constellation that weaves and merges the two, thus generating a network of connectivity, stitching the spaces to become a unified system. After analyzing the fragmentation and visualizing the constellation of connectivity we went through the existing streets and urban infrastructure to implement the connections between the public sites. Initially, we thought of only working along the stream in this axis and try to put everything on this axis, but as we began analyzing the constellation, it became apparent that there are three connectors, generating a whole new system of connectivity. Although it is disrupted by infrastructures, it reveals itself through the open spaces. By acting in these three connectors, we can create a new system of connectors and a gradient of soft transitions.

Analytical Section of the Site



DESIGN CONCEPT

Gradients and Pantone

To soften edges and blur transition lines we began thinking in gradients of color and the possible mixtures of these colors. A color was allocated to each of the three key concepts. The colors yellow, magenta, and blue reflect connectivity, biodiversity, and productivity, respectively. When the three primary colors are combined, a new pantone is created that will be applied along with the site. This pantone was generated in the form of pixels which showed variations in their intensities in different locations of the site generating new possibilities. The tool kit's design interventions have been given a color depending on where they fall between our three key concepts. These interventions will be used to soften edges and establish inviting thresholds between land uses along the La Salut stream and the main connecting streets. The strategies would also be proposed throughout the area, along with the parks and public spaces that already exist. With all the strategies, we came up with a gradient throughout the site. The completed pixel map depicts the suggested interventions along the stream and the ones recommended in the existing public locations. The gradient of colors creates a more diverse and connected site. The drastic and harsh change between land uses is transformed into a soft gradient. The fragmentation in the site is removed as a new system of connections is created through the pantone. This is expected to be a catalyst that will promote similar changes and connections along Sant Feliu de Llobregat.

Thresholds

One site of intervention is the former industrial island that created a harsh transition between the natural park and the city. In times of heavy rainfall, this area gets flooded because of its lack of permeability and disrupts the fabric. The structures present here are mainly unused and we proposed to reuse this area as a park for the community, by bringing the public closer to the Collserola park filtering more green spaces to the industrial zone. To retain the memory industrial zone, the remaining functional companies were relocated to the bigger industrial zone and some of the building walls were kept as a memory of the space to work for the community. Native plantations were studied and incorporated on the site and transitions between the textures were generated.

The second intervention started with the open plazas in between the buildings, which generates a transitional moment creating an opportunity to intervene and choreograph a space. Water being a vital element of the city, we realized it is very important to work with the materials in the city and generate thresholds not only in spatial essence but also in terms of the pavements. The ground surface was highlighted which can be perforated with pockets of draining stones as clusters of drops that capture water, retain it, and bring the excess to the strip gardens, making visible the relationship between the surface landscape and the substrate, creating a transect of materials, thus, mitigating thresholds at a smaller scale, with a transition between the textures.

The third intervention is the entrance to the agricultural area which clashes with the city as the city abruptly cuts off the park. The stream on this site is held by an open channel that is not public or ecologically friendly. To create a sense of openness we proposed to enhance pedestrian circulation by creating a public-friendly channel and bringing the public closer to the river. The fact that there isn't much infrastructure on this site is what makes this space more attractive to the people, they bike and walk by this river, so we wanted to enhance that space by negotiating our third threshold space in this region and create a soft transition between the natural park and the city.

In the new thresholds, there are very few hard edges between the textures, increased native biodiversity, improved water management, pedestrian-friendly infrastructure, and increased sustainable sources of energy. As these complex and unsolved places continue growing, the landscape of tomorrow needs to go beyond through successive phases with time. To implement our interventions, we broke the project down into three comprehensive phases: Engagement and Information Gathering, Redeveloping the Urban Infrastructure, and Widespread Change.

To conclude, our approach and proposal to rescue the memory of the space began with the spaces around the La Salut stream. Through closer analysis, we began looking at the connecting streets between the spaces. Concluding with a more developed plan that incorporates both existing locations and the connecting streets. Overall, we aim to catalyze this process through our strategies which are represented through gradients in between the fabrics and thus negotiating thresholds through this pantone landscape, that we believe will work as a catalyst and enhance the stream.

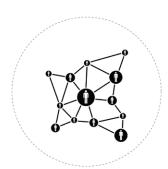
Design Phases

PROJECT PHASING

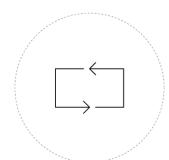
IMPLEMENTATION

DEVELOPMENT

ADAPTATION







ENGAGEMENT AND INFORMATION GATHERING

REDEVELOP URBAN INFRASTRUCTURE

WIDESPREAD CHANGE

TIMELINE



REDEVELOP URBAN INFRASTRUCTURE

CONSTRUCTION ALONG THE URBAN FRONT BEGINS.

THE REMEDIATION PROCESS IN THE INDUSTRIAL SITE CONCLUDES
WITH THE SAVING OF SELECTED
BUILDING AND THE DEVELOPMENT OF A NEW PUBLIC LOCATION. SMALL PROJECTS, SUCH AS RETENTION PONDS, BEGIN.

PRIVATE AND PUBLIC LOCATIONS BEGIN CONSTRUCTING SMALL INTERVENTIONS AS A RESULT OF INCENTIVES. LARGE PROJECTS BEGIN TO TAKE SHAPE.



REMEDIATION



SMALL PROJECT CONSTRUCTION







ENGAGEMENT AND INFORMATION GATHERING

BEGIN THE PROCESS OF COMMUNITY ENGAGEMENT TO INFORM ABOUT GOALS, FUTURE PLANS AND ALLOW PARTICIPATION IN THE PROCESS.

IMPLEMENTATION OF INCENTIVES FOR PRIVATE AND PUBLIC LOCATIONS TO BEGIN TALKS ABOUT CHANGES AND GAGE PARTICIPATION. ENGAGE WITH INDUSTRIAL SECTOR TO RELOCATE EXISTING COMPANIES AND BEGIN THE REMEDIATION PROCESS.

INVOLVING RESIDENTS IN THE PROCESS OF DELIBERATION AND DESIGN.



COMMUNITY ENGAGEMENT



INCENTIVES



ENVIRONMENTAL HEALTH

TOXICITY REPORTS AND TESTING OF VACANT INDUSTRIAL LAND TRANSPARENCY OF TESTING RESULTS AND POSSIBLE HEALTH ISSUES





WIDESPREAD CHANGE

LASTING EFFECTS OF THE INTERVENTION INCLUDE A STRENGTHENED COMMUNITY IDENTITY THROUGH CONNECTIVITY OF THE SITE. PROTECTION OF NATIVE FLORA AND FAUNA THROUGH VARIOUS INTERVENTIONS. WATER DAMAGE PREVENTION THROUGH GREEN INFRASTRUCTURE.



COMMUNITY FOCUS

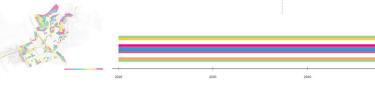


PROTECTION AND PREVENTION



HISTORICAL REMEMBERANCE

THE REVITALIZATION OF THE RIERA DE LA SALUT THROUGH THE INTERVENTIONS ALONG THE STREAM





A PANTONE PIXELSCAPE: NEGOTIATING THRESHOLDS THROUGH GRADIENTS

Location: Sant Feliu de Llobregat, Barcelona, Spain REDEFINING THE RELATIONSHIP BETWEEN COLLSEROLA NATURAL PARK AND LLOBREGAT RIVER TO STUDY, REDEFINE AND RESTORE THE RELATIONSHIP BETWEEN THE NATURAL THROUGH LA SALUT DRY STREAM ENVIRONMENTS IN SANT FELIU DE LLOBREGAT: THE PARK, THE RIVER AND THE BETTER ARTICULATION OF THE BLUE GREEN INFRASTRUCTURE TO A MORE RESILIENT TERRITORY THROUGH 3 ASPECTS NATURAL MEDITERRENEAN DRY STREAM; BY CREATING THRESHOLDS THROUGH GRADIENTS IN THE FORM OF PIXELS IS THE MAIN IDEA OF THIS PROJECT. THE PROCESS STARTED WITH EXPERIMENTING WITH THE INTENSITY OF THE THREE ASPECTS: BIODIVERSITY, CONNECTIVITY AND PRODUCTIVITY THROUGHOUT THE **BIODIVERSITY** CONNECTIVITY **PRODUCTIVITY** SITE IN SMALL PIXELS, WHERE THE VARIATIONS WERE FOUND. NEXT STEP INCLUDED OVERLAPPING THE DIFFERENT VARIATIONS TO SEE THE COMBINATION OF THE PERCENTAGE OF THE THREE ASPECTS IN DIFFERENT FORMS. FINALLY THE INTEGRATION OF THE THREE ASPECTS GAVE RISE TO NEW HUES AND SHADES, RESULTING IN NEW POSSIBILITIES AND OPPORTUNITIES TO STRENGTHEN THE RELATIONSHIP BETWEEN THE NATURAL HABITATS. MAPPED COMBINATION OF COLORED PIXELS GENERATING NEW OPPORTUNITIES

SITE ANALYSIS

IDENTIFYING LAND USES AND ANALYZING THE PRESENT SITUATION OF THE SITE

A|RESIDENTIAL AND COMMERCIAL UNITS CREATE A DENSE ZONE IN THE URBAN FABRIC. DIFFERENT MIXED USE RESIDENTIAL SPACES OPEN UP TO THE STREETS IN THE GROUND LEVEL ADJACENT TO THE STREAM.

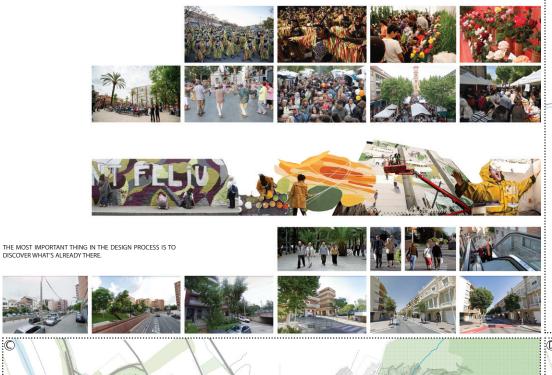
B| INDUSTRIAL SECTOR CULMINATES IN THE NORTH, LEAVING BEHIND SMALL ISLANDS IN BETWEEN, THUS CREATING A DISCONTINUITY OFNATURAL SYSTEMS AND HARSH TRANSITION. HEAVY RAINFALL RESULTS IN FLOODING OF THE AREA.

C| MAJOR PLAZAS AROUND THE STREAM TURN INTO BUSTLING HUBS OF EVENTS AND PROGRAMS. THE STREAM ALONG THE PERIPHERY SHOWS FRICTION OF THE LAND USES AND FRAGMENTED GREEN SPACES AND PARKS THROUGHOUT THE URBAN FABRIC.

D| IDENTIFYING THE PUBLIC AMENITIES AND THE PUBLIC SPACES WITH THE PLAZAS ON THE SITE INCLUDING THE EXISTING GREEN SPACES.

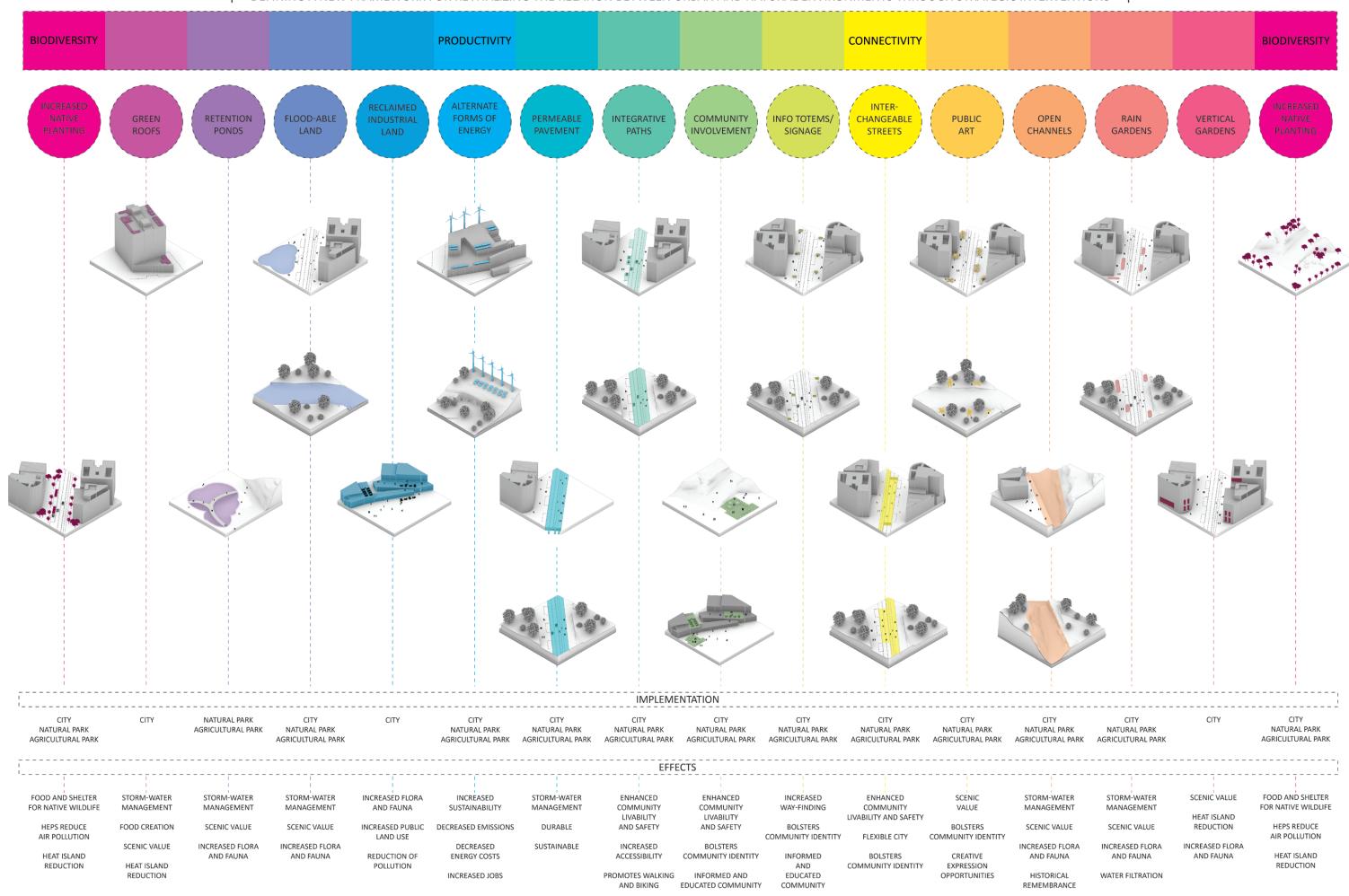
E| INTEGRATING THE SPACES THROUGH A PROBABLE CONSTELLATION THAT WEAVES AND MERGES THE TWO, THUS GENERATING A NETWORK OF CONNECTIVITY, STITCHING THE SPACES TO BECOME A UNIFIED SYSTEM.

F| INTERLINKING AND STRENGTHENING THE RELATIONSHIP WITH THE LA SALUT STREAM









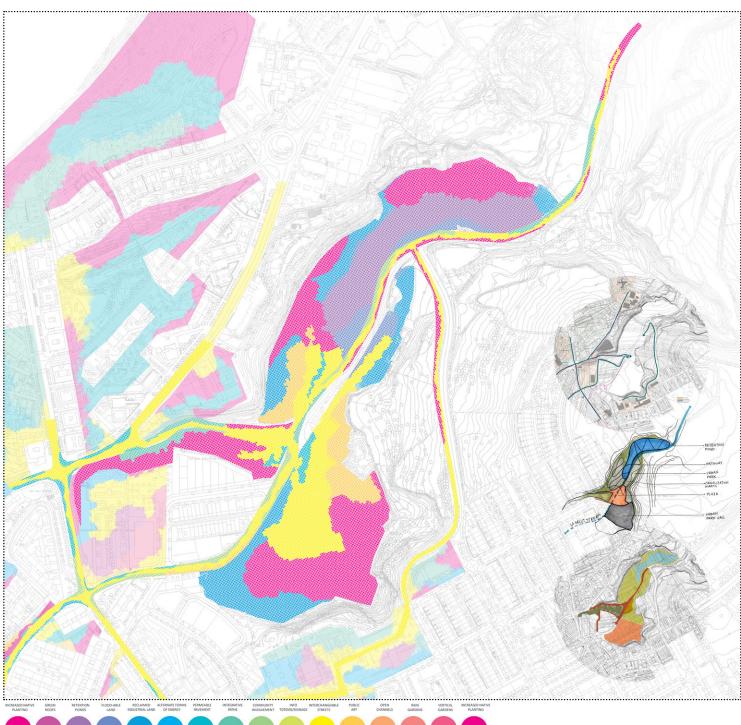
FORMATION OF THE NEW GRADIENT



FIRST THRESHOLD: INDUSTRIAL AREA

LOOKING AT THE URBAN EDGE, A MAIN PROBLEM IS THE ISLAND OF INDUSTRIAL BUILDINGS. THE DESIGN INTERVENTIONS WERE USED IN ORDER TO BLUR THIS LINE AND CREATE A SOFT TRANSITION BETWEEN THE NATURAL PARK AND THE CITY.

THE TRANSITIONS THAT THE SITE FACES INCLUDE DRY AND WET SEASONS. THEREFORE A THRESHOLD BETWEEN THESE TWO SEASONS WERE PLANNED.



A CLOSER LOOK AT ONE OF THE FIRST PROPOSED AREAS OF INTERVENTION.

THE PARK IS A PLACE WHERE PEOPLE MEET UP, A PLACE WHERE TRADITIONS, LEGENDS AND POPULAR CUSTOMS ARE ROOTED. IT IS ALSO A PLACE OF GREAT VISUAL BEAUTY THAT PROVIDES AN OPPORTUNITY FOR POSITIVE CONTACT WITH NATURE, ARTISTIC DEVELOPMENT AND DISCOVERY





FLEXIBLE LANDSCAPE FOR A COMPLEX AND

TRANSITORY ENVIRONMENT IN SANT FELIU

FOR INCREASED BIODIVERSITY,
IDENTIFYING PLANT LIFE THAT WILL
SUCCEED IN THE SITE WITHOUT
NEGATIVELY IMPACTING THE
ENVIRONMENT IS CRUCIAL. TREE AND
SHRUB SPECIES THAT ARE ALREADY PART
OF THE ENVIRONMENT ARE IDENTIFIED
AND THAT WILL HELP SOFTEN THE HARD
EDGES OF THE SITE.



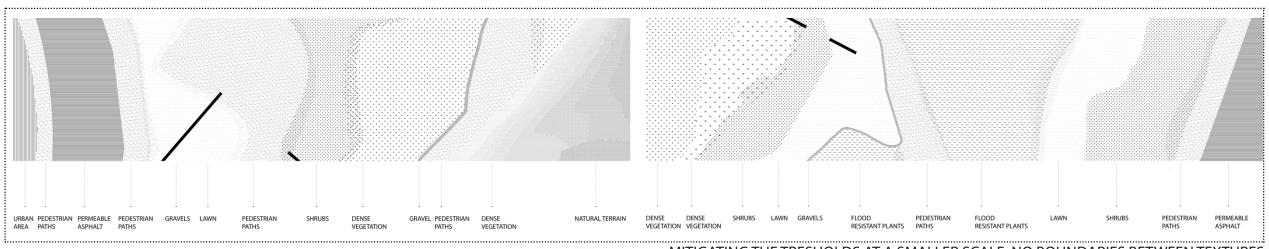
WORKING WITH NATIVE FLORA TO RENATURALISE THE FABRIC

THRESHOLD BETWEEN THE PARK AND THE URBAN AREA

THIS IS AN INDUSTRIAL AREA WHERE THE STRUCTURES ARE MAINLY UNUSED. PROPOSING TO REUSE THIS AREA AS A PARK FOR THE COMMUNITY, BY BRINGING THE PUBLIC CLOSER TO THE COLLSEROLA PARK, FILTERING MORE GREEN SPACES TO THE INDUSTRIAL ZONE.

TO RETAIN THE MEMORY OF THE INDUSTRIAL ZONE, THE REMAINING FUNCTIONAL COMPANIES WERE RELOCATED TO THE BIGGER INDUSTRIAL ZONE AND SOME OF THE BUILDING WALLS WERE RETAINED AS A MEMORY OF THE SPACE TO WORK FOR THE COMMUNITY.

TAKING A CLOSER LOOK AT THE NEW THRESHOLD, THERE ARE VERY LITTLE HARD EDGES BETWEEN THE TEXTURES. BY SOFTENING THESE EDGES, A BLUR BETWEEN LAND USES WAS CREATED FOR A MORE CONNECTED SITE.

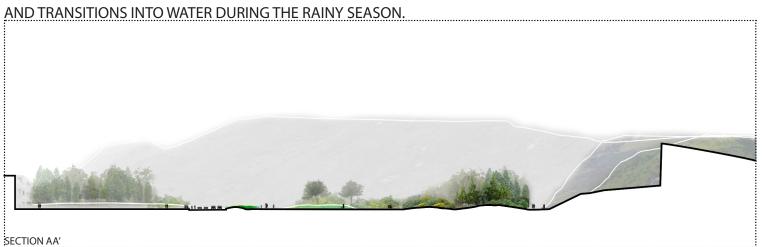


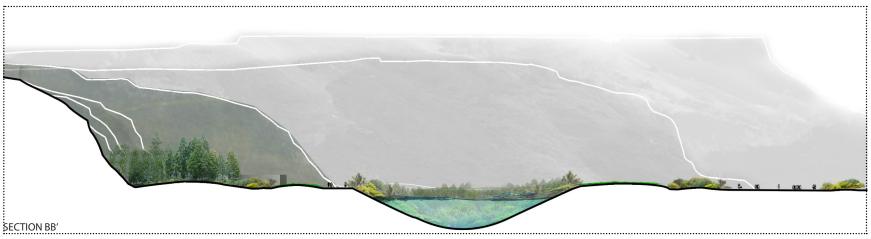
MITIGATING THE TRESHOLDS AT A SMALLER SCALE: NO BOUNDARIES BETWEEN TEXTURES



THRESHOLD BETWEEN THE PARK AND THE URBAN AREA

THESE SECTIONS DEPICT THE SHARED ECOTONE BETWEEN PEOPLE, FLORA AND FAUNA. THEY ALSO DEMONSTRATE THE SOFTER CITY EDGE THAT LEADS INTO THE NATURAL PARK. RETENTION PONDS ARE SHOWN THAT REMAINS DRY THROUGHOUT THE YEAR,





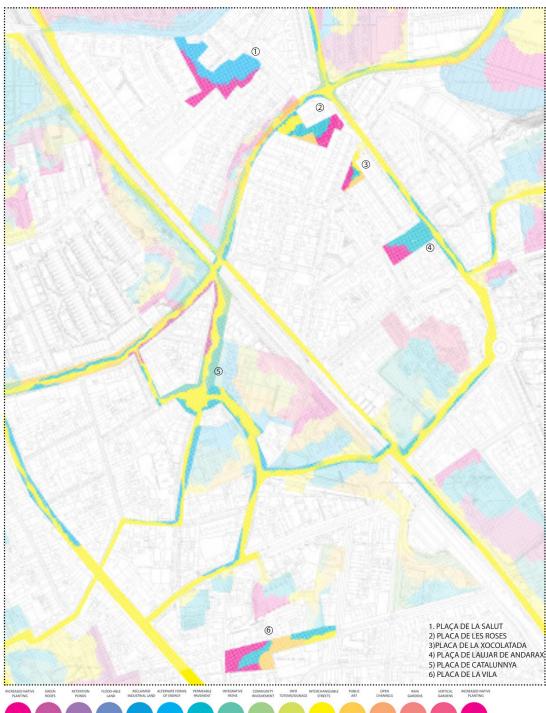
SHARED ECOTONE



SECOND THRESHOLD: URBAN AREA_PLAZAS

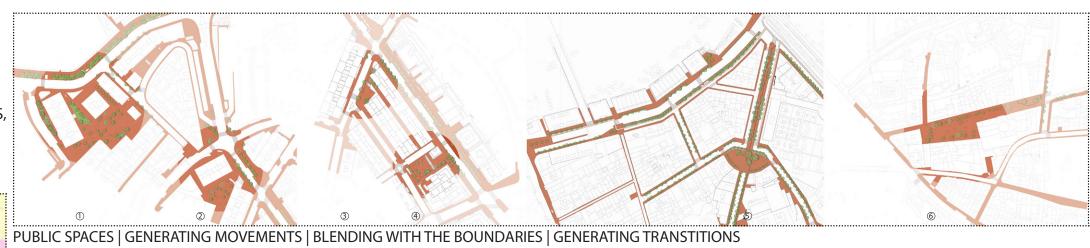
OPEN PLAZAS IN BETWEEN THE BUILDINGS, GENERATING A TRANSITIONAL MOMENT, CREATING AN OPPORTUNITY TO INTERVENE AND CHOREOGRAPH A SPACE.

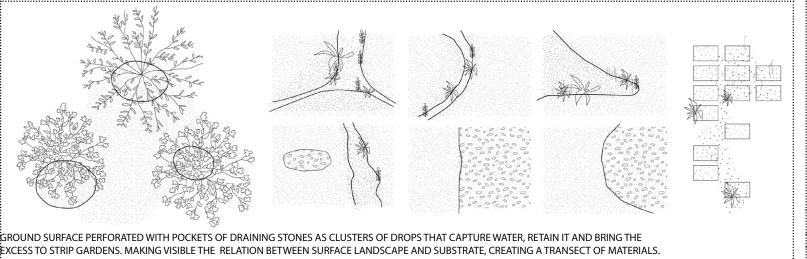
A SPACE MUTATES THROUGH TIME AND RELATES WITH ITS MATERIALS, ELEMENTS, DETAILS, TRANSITIONS, AND THESE OPEN PLAZAS IN THE CITY INTEGRATE WITH THE FABRIC, SERVING AS A SPACE FOR COMMUNITY ENGAGEMENT AND DIFFERENT FESTIVALS.



A CLOSER LOOK AT THE SECOND PROPOSED AREAS OF INTERVENTION.

WATER BEING A VITAL ELEMENT OF THE CITY, WE REALIZED IT IS VERY IMPORTANT TO WORK WITH THE MATERIALS IN THE CITY, AND GENERATE THRESHOLDS NOT ONLY IN SPATIAL ESSENCE, BUT ALSO IN TERMS OF THE PAVEMENTS.









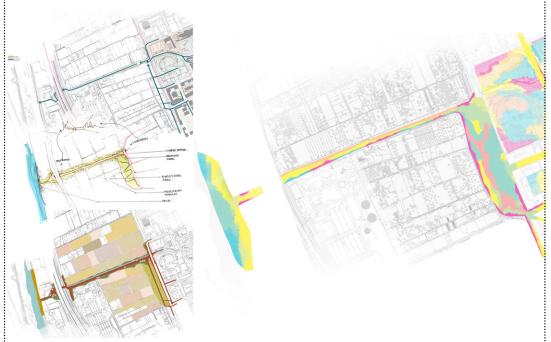
THIRD THRESHOLD: AGRICULTURAL AREA

THIS IS ANOTHER OF OUR PROPOSED AREAS OF INTERVENTION WHICH ACTS AS A BUFFER BETWEEN THE FABRIC AND THE AGRICULTURAL PARK. TO BRING THE RIVER CLOSER TO THE URBAN FABRIC BY CONNECTING IT THROUGH.

THE STREAM IN THIS SITE IS HELD BY AN OPEN CHANNEL THAT IS NOT PUBLIC OR ECOLOGICALLY FRIENDLY. TO CREATE A SENSE OF OPENNESS WE PROPOSE TO ENHANCE PEDESTRIAN CIRCULATION BY CREATING A PUBLIC FRIENDLY CHANNEL AND BRINGING THE PEOPLE CLOSER TO THE RIVER.









A CLOSER LOOK AT THE THIRD PROPOSED AREA OF INTERVENTION.

LESS INFRASTRUCTURE MAKES THIS SPACE MORE ATTRACTIVE, PEOPLE BIKE AND WALK BY THIS RIVER. TO ENHANCE THE SPACE BY NEGOTIATING THE THIRD THRESHOLD SPACE IN THIS REGION AND CREATE A SOFT TRANSITION.

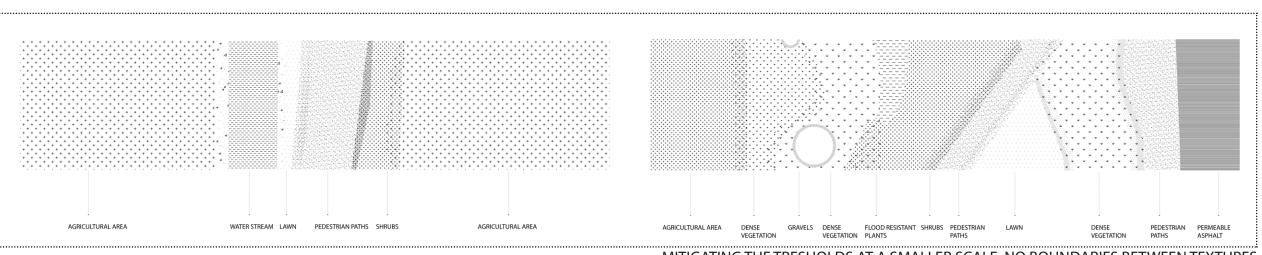


THRESHOLD BETWEEN THE AGRICULTURAL PARK AND THE URBAN AREA

THIS AGRICULTURAL AREA IS MAINLY PRIVATIZED BUT SOME POCKET SPACES HAVE BEEN GENERATED WHICH ACTS AS A BUFFER BETWEEN THE URBAN FABRIC AND THE RIVER, THUS CREATING AN ECOTONE.

EDGE OF THE URBAN FABRIC TRANSITIONS INTO THE SPACE AND MERGES WITH THE LANDSCAPE, CREATING A MOMENT OF TRANSITION.

TAKING A CLOSER LOOK AT THE NEW THRESHOLD, THERE ARE VERY LITTLE HARD EDGES BETWEEN THE TEXTURES. BY SOFTENING THESE EDGES WE AIM TO CREATE A BLUR BETWEEN LAND USES FOR A MORE CONNECTED SITE.



MITIGATING THE TRESHOLDS AT A SMALLER SCALE: NO BOUNDARIES BETWEEN TEXTURES

