

# A PANTONE PIXELSCAPE: NEGOTIATING THRESHOLDS THROUGH GRADIENTS

## *Project Goal:*

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. The main project goal was 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 name of this project is A Pantone Pixelscape: Negotiating Thresholds Through Gradients and the main project goal is 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 and Objectives:*

Being a group project, the work was divided in a way that my specific role was to work on the design concept, finalize the strategy, and produce drawings and renders. The work presented here is the outcome of my design strategies.

The approach began by focusing on the open and public spaces to find opportunities. Hence, the green and the open spaces were highlighted that can contribute to strengthening the relationship that was the project's goal. Public plazas on the site were also located 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, 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, the existing streets and urban infrastructure were studied to implement the connections between the public sites. Further study of the constellation generated three connectors, creating 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, a new system of connectors and a gradient of soft transitions were generated.

## *Problems Present:*

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.

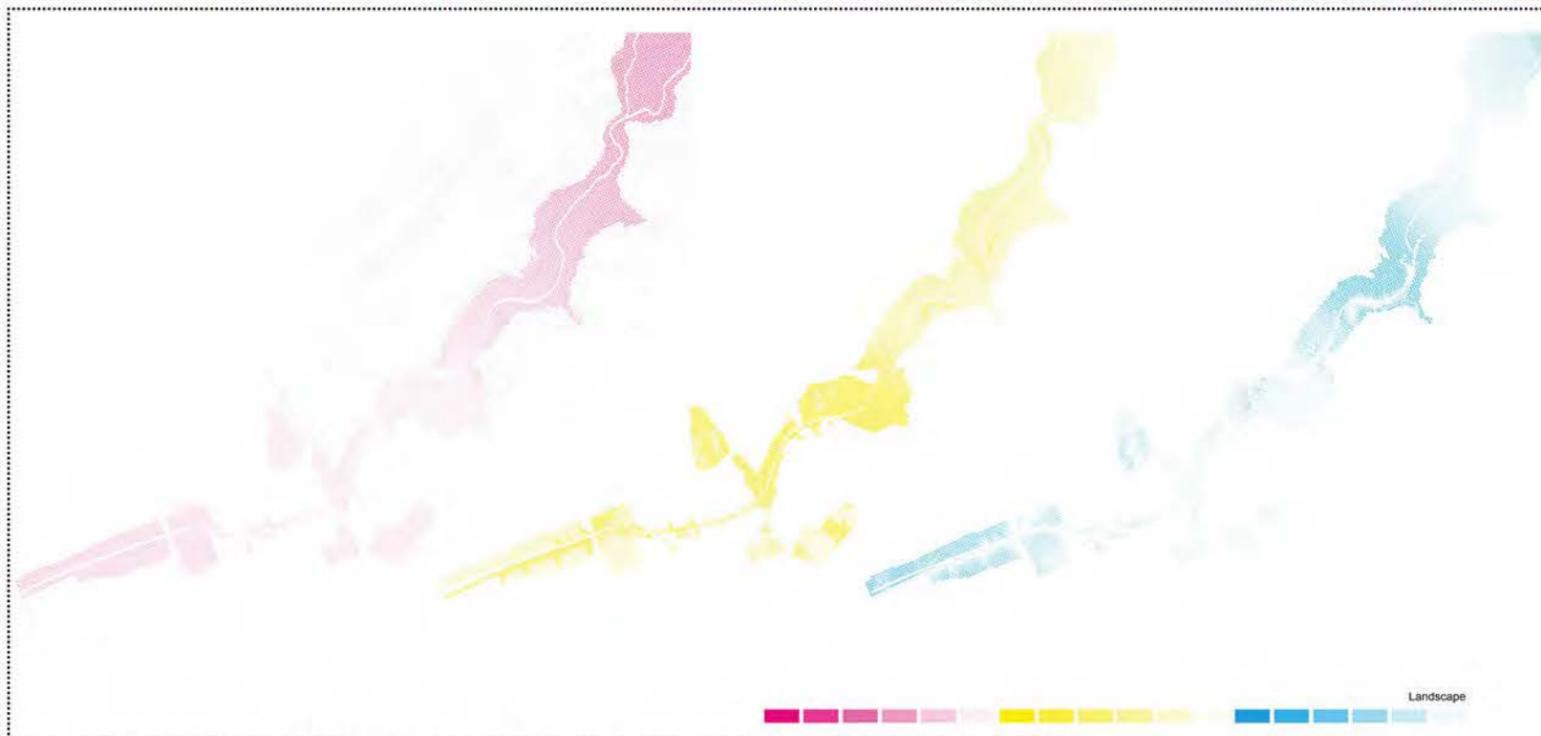
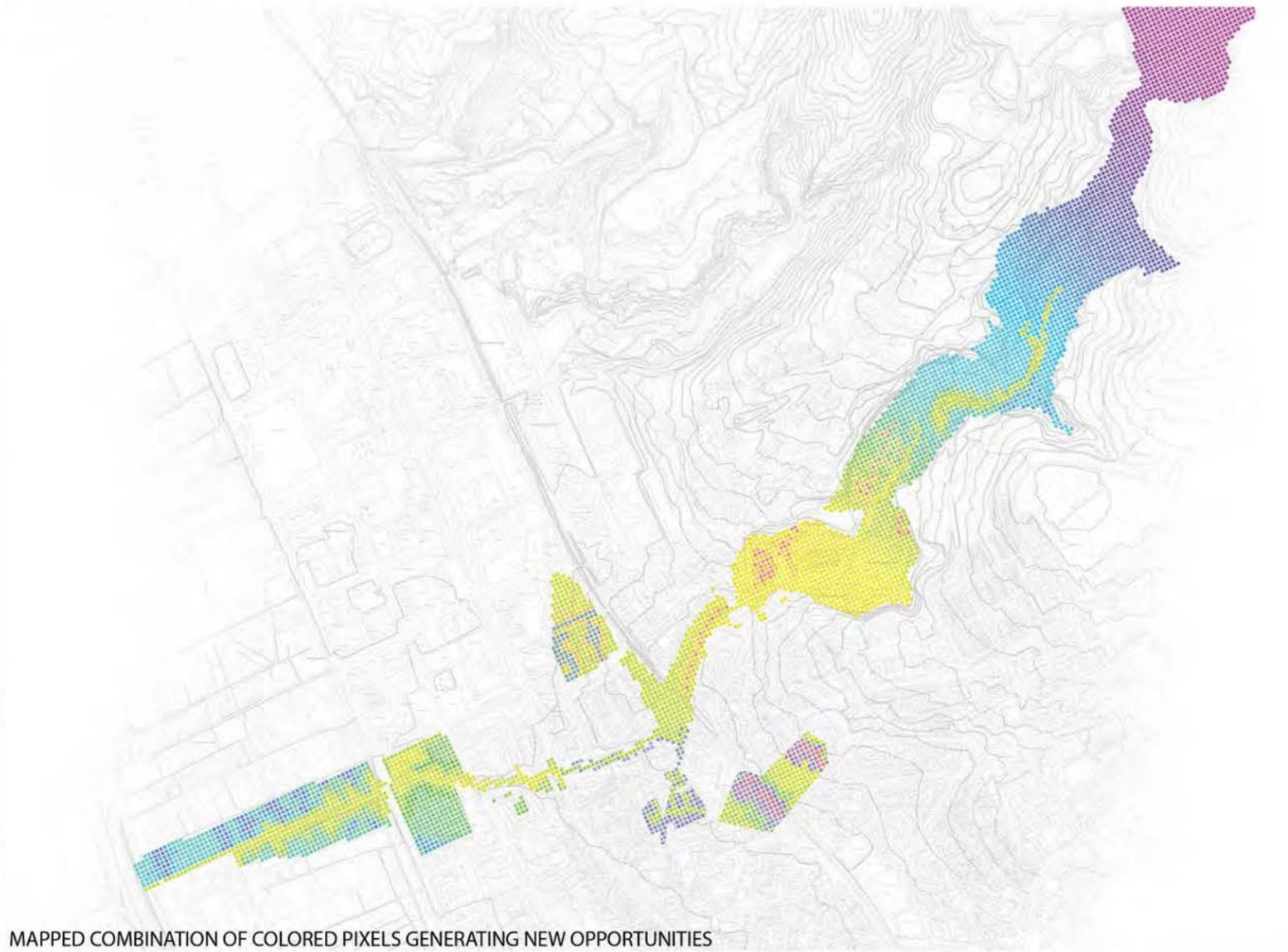
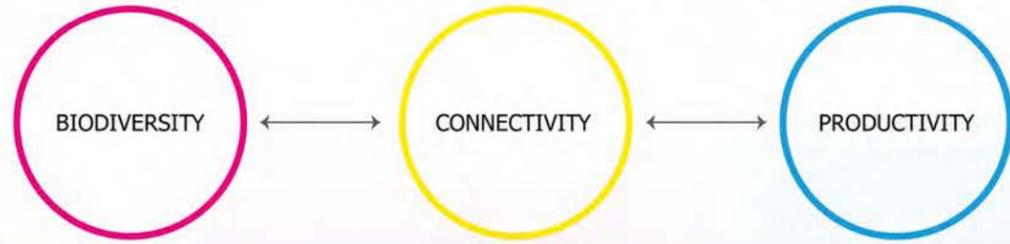
## *Gradients and Pantone:*

To soften edges and blur transition lines, gradients of color and the possible mixtures of these colors were generated. 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 three 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, a gradient throughout the site was generated. 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.

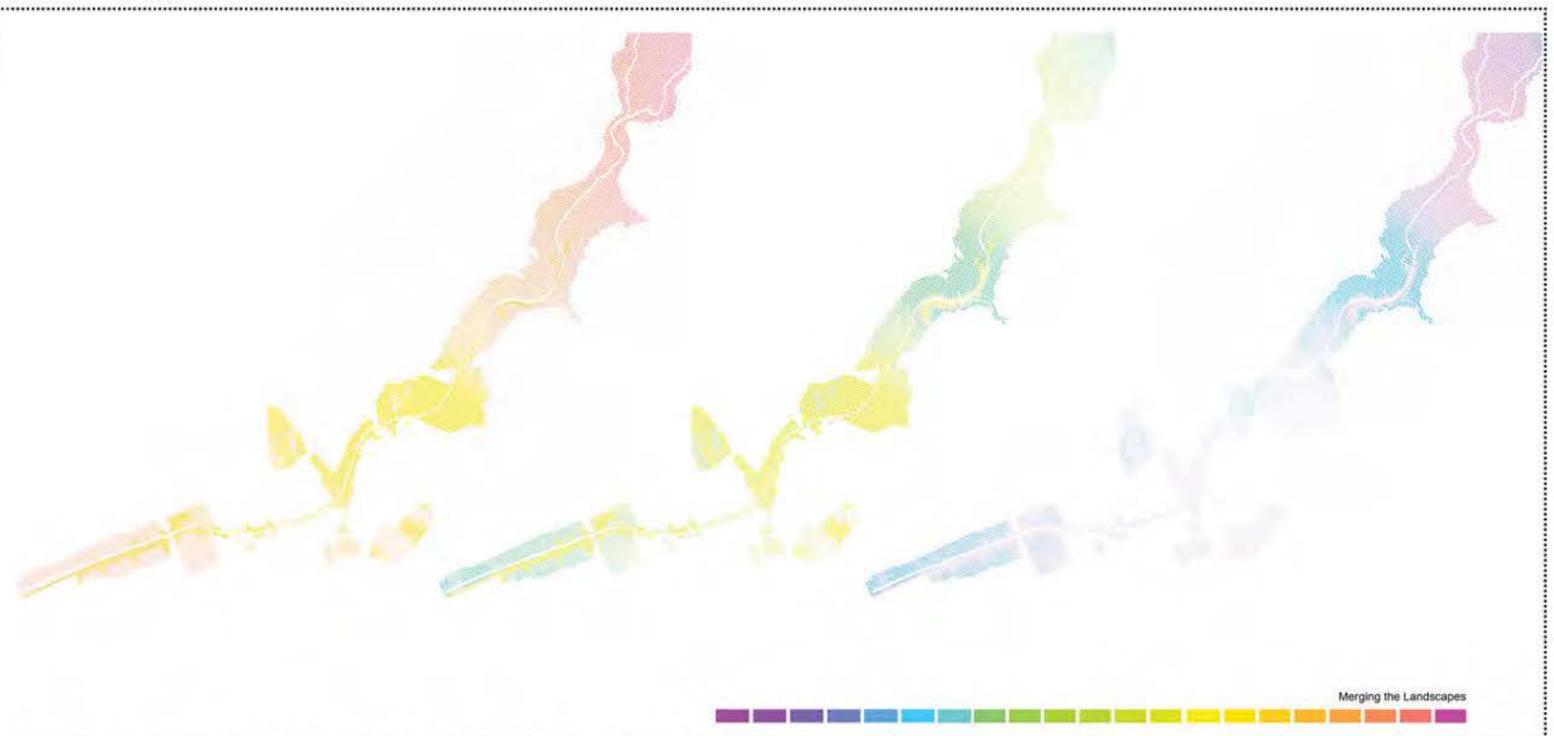
# A PANTONE PIXELSCAPE: NEGOTIATING THRESHOLDS THROUGH GRADIENTS

Location: Sant Feliu de Llobregat, Barcelona, Spain

REDEFINING THE RELATIONSHIP BETWEEN COLLSEROLA NATURAL PARK AND LLOBREGAT RIVER  
THROUGH **LA SALUT** DRY STREAM  
BETTER ARTICULATION OF THE BLUE GREEN INFRASTRUCTURE TO A MORE RESILIENT TERRITORY THROUGH 3 ASPECTS



EXPLORING THE DENSITY OF THE MAIN ASPECTS IN THE SITE THROUGH A SYSTEM OF COLORED PIXELS



IDEATING POSSIBLE COMBINATIONS OF MAIN ASPECTS FOR A MORE CONNECTED AND BALANCED SITE

# 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.

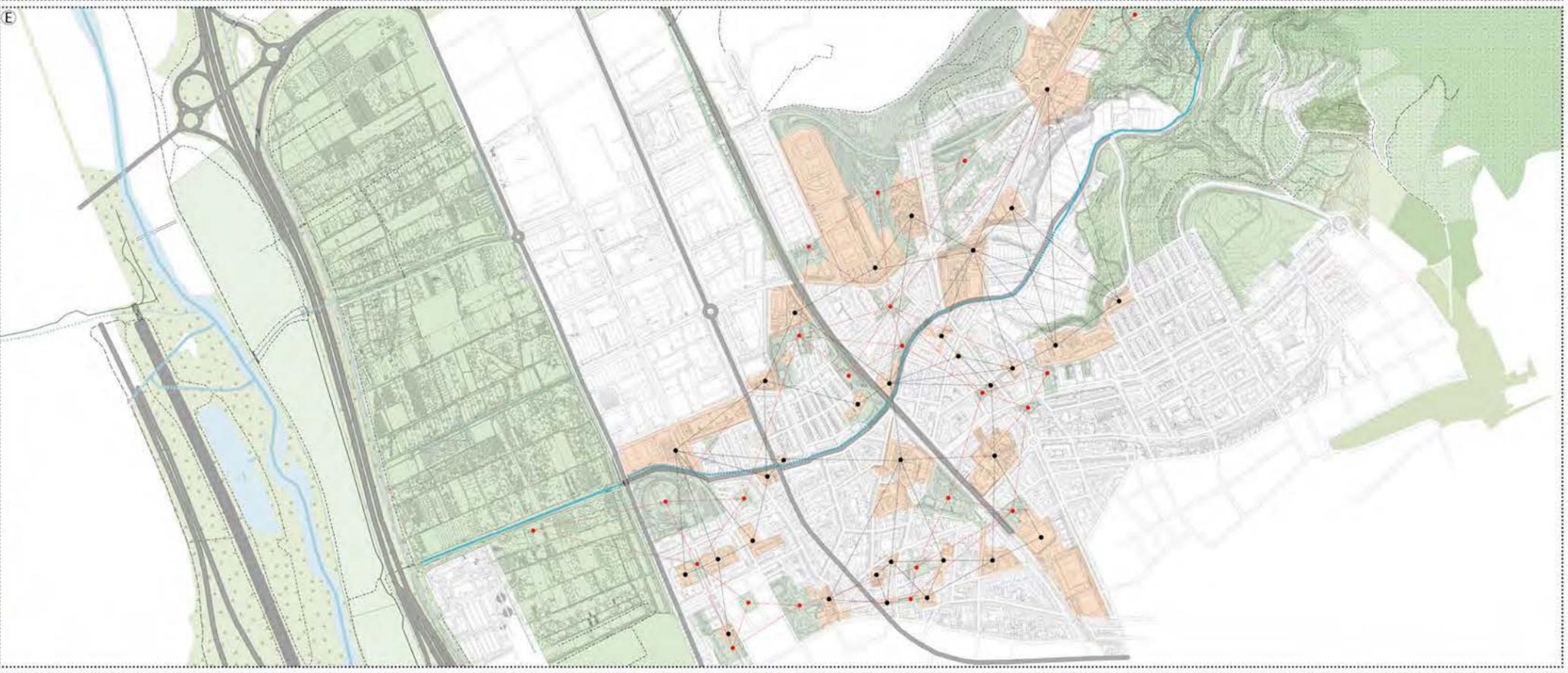
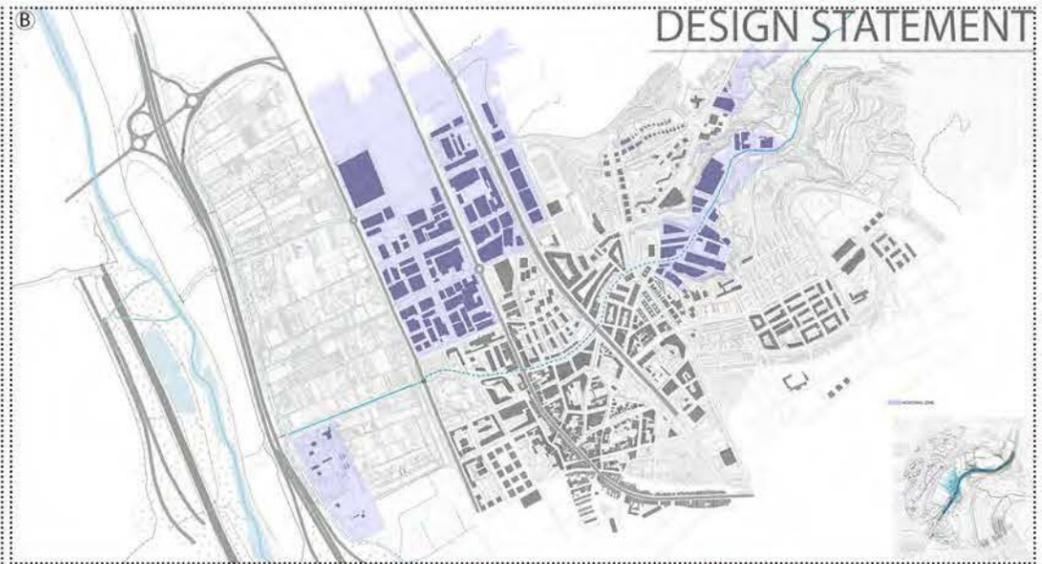
B| INDUSTRIAL SECTOR CULMINATES IN THE NORTH, LEAVING BEHIND SMALL ISLANDS IN BETWEEN, THUS CREATING A DISCONTINUITY OF NATURAL SYSTEMS AND HARSH TRANSITION. HEAVY RAINFALL RESULTS IN FLOODING OF THE AREA.

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.

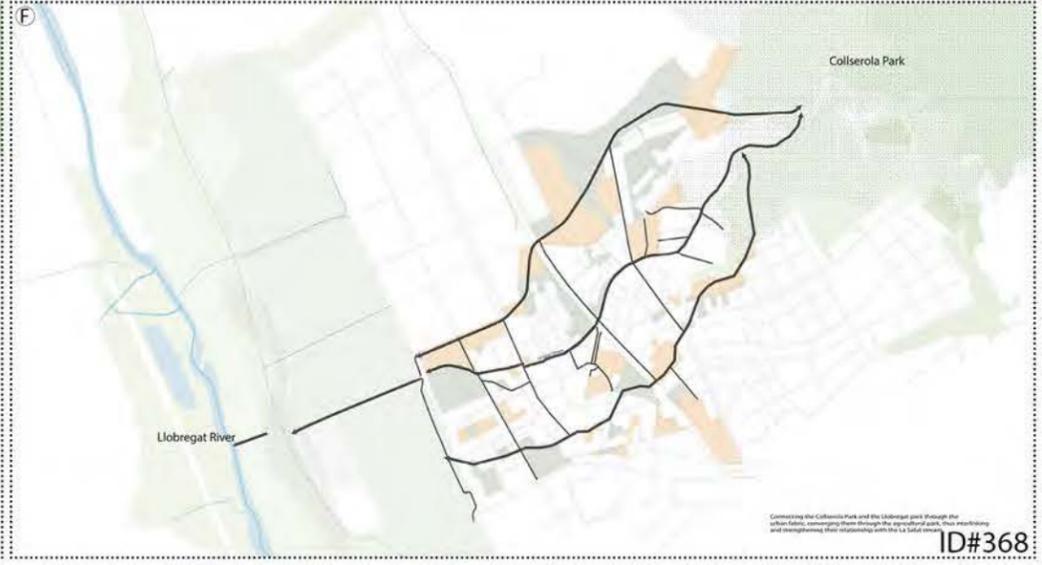
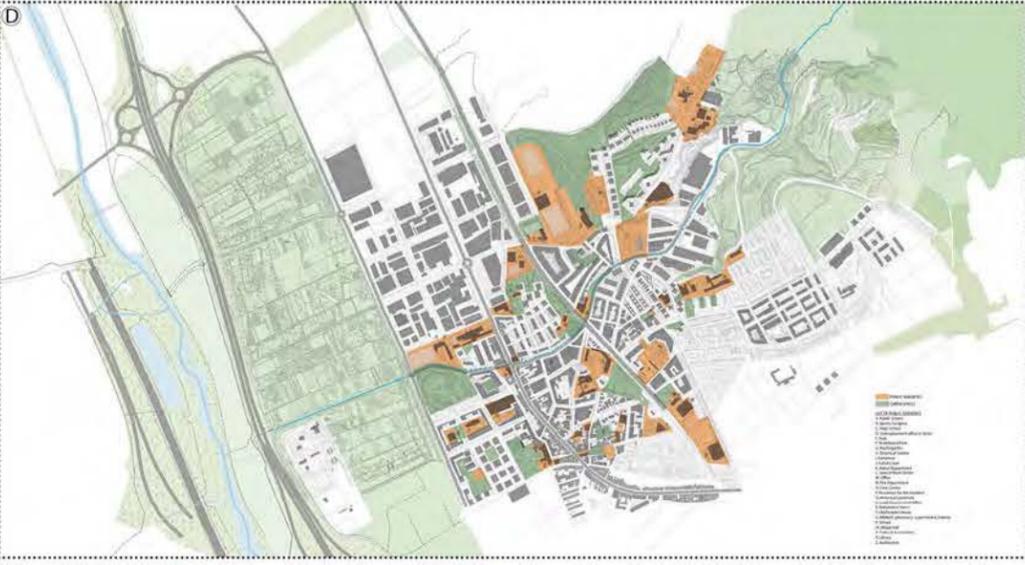
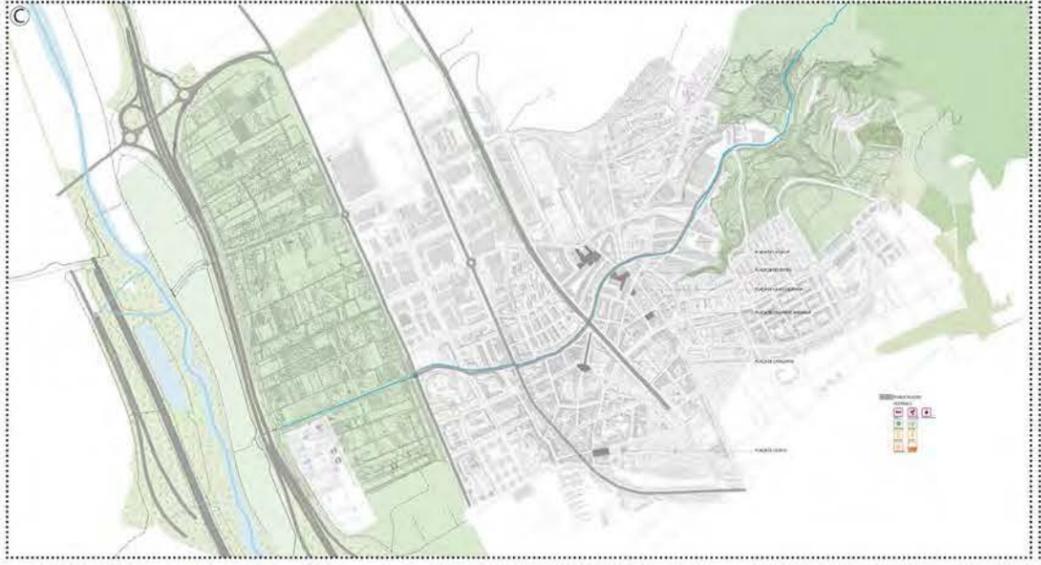
D| IDENTIFYING THE PUBLIC AMENITIES AND THE PUBLIC SPACES WITH THE PLAZAS ON THE SITE INCLUDING THE EXISTING GREEN SPACES.

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.

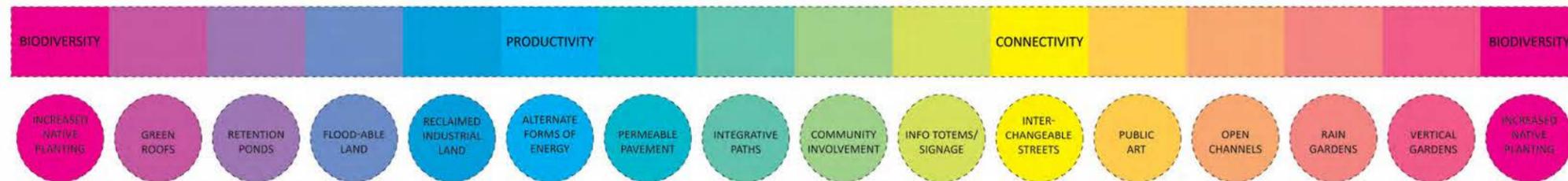
F| INTERLINKING AND STRENGTHENING THE RELATIONSHIP WITH THE LA SALUT STREAM



THE MOST IMPORTANT THING IN THE DESIGN PROCESS IS TO DISCOVER WHAT'S ALREADY THERE.



| DEFINING A NEW FRAMEWORK FOR REVITALIZING THE RELATION BETWEEN URBAN AND NATURAL ENVIRONMENTS THROUGH STRATEGIC INTERVENTIONS |

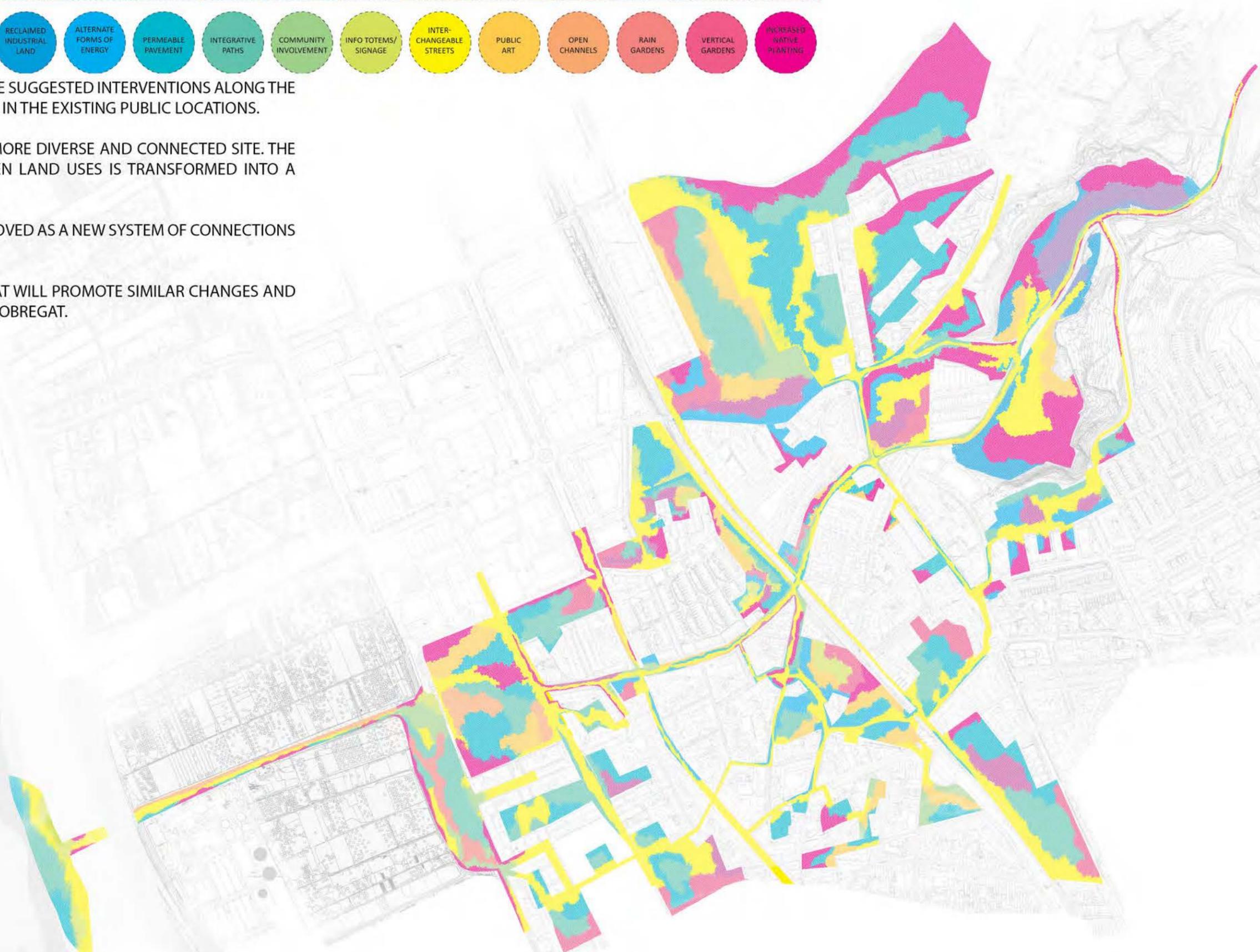


THIS COMPLETED PIXEL MAP DEPICTS THE SUGGESTED INTERVENTIONS ALONG THE STREAM AND THE ONES RECOMMENDED IN THE EXISTING PUBLIC LOCATIONS.

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.



## *Design Solutions*

### *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 reusing this area as a park for the community was proposed, 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.

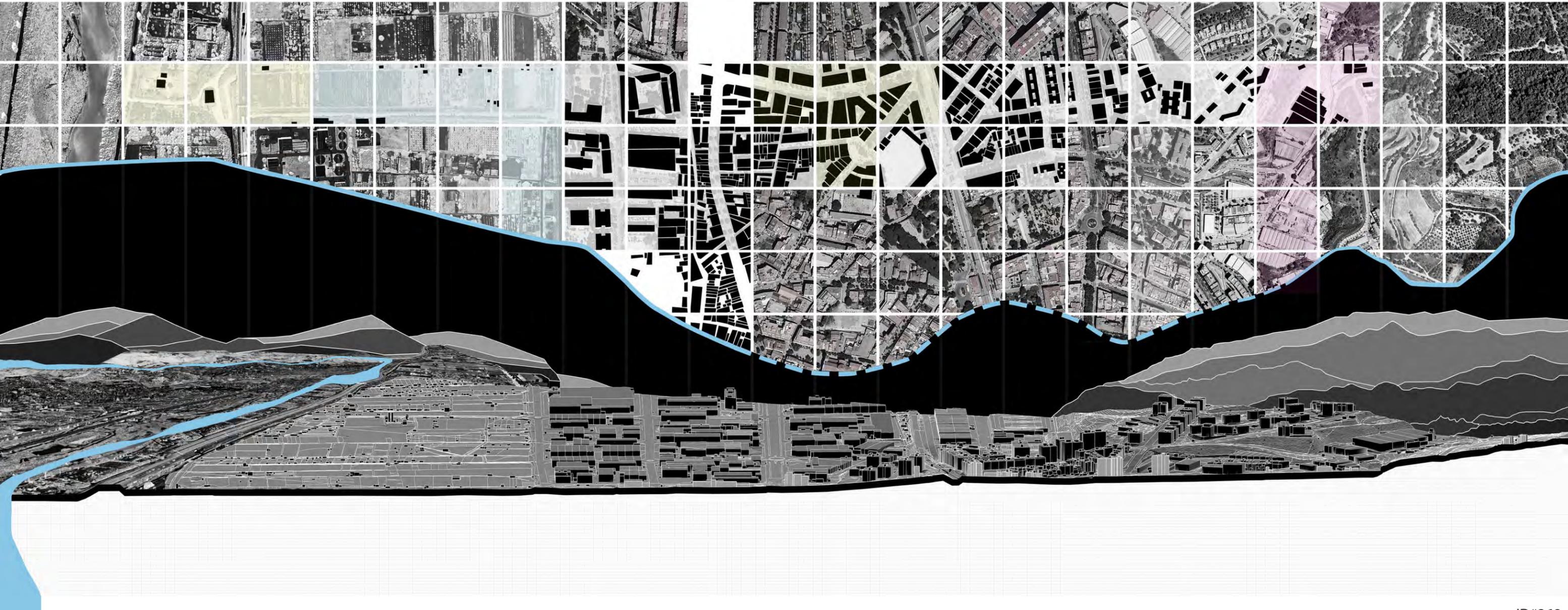
The second intervention started with the open plazas in between the buildings, which generates a transitional moment creating an opportunity to intervene and choreograph a space. Water being a vital element of the city, it was very important to work with the materials in the city and generate thresholds 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 pedestrian circulation was enhanced 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, the bike and walk by this river, so that space was enhanced by negotiating the third threshold space in this region and creating a soft transition between the natural park and the city.

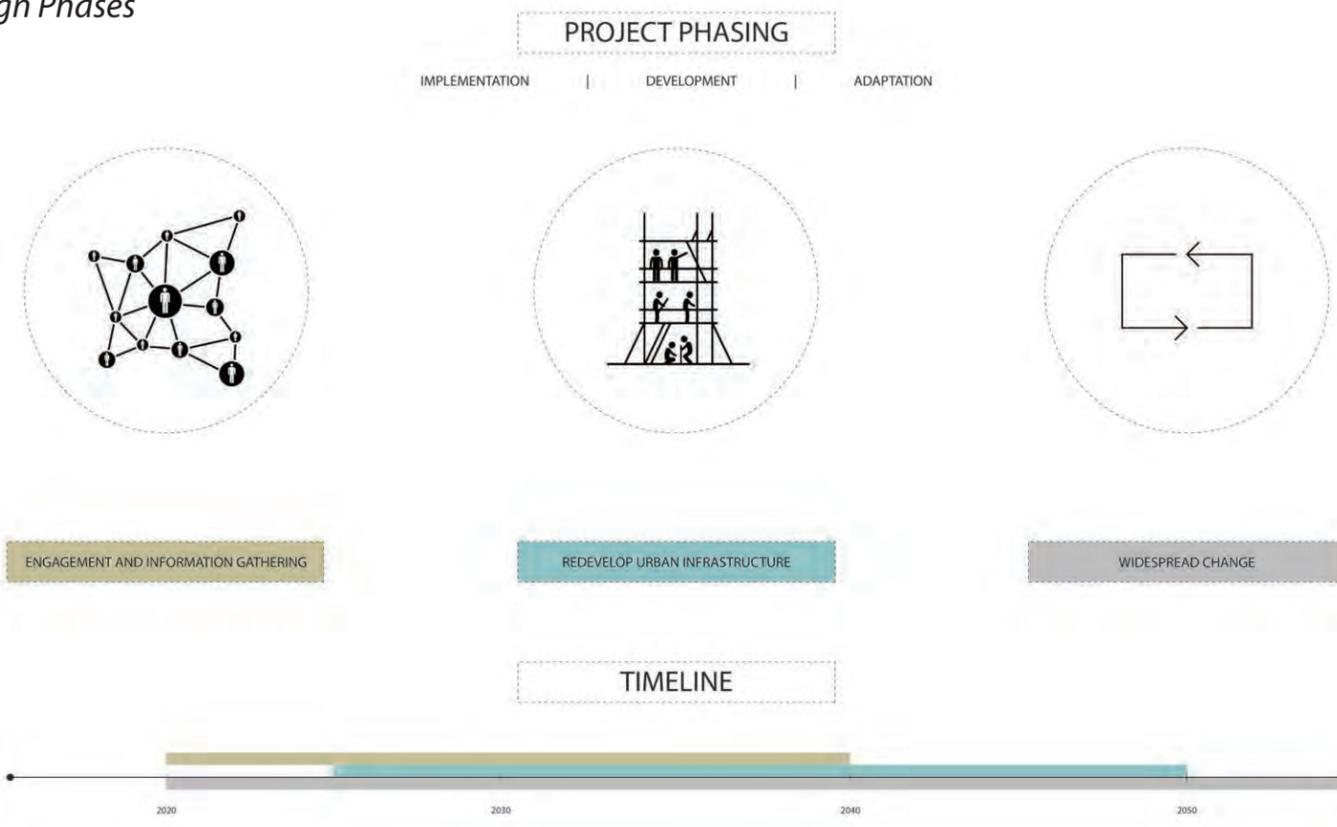
In the new thresholds, there are very few hard edges between the textures, increased native biodiversity, improved water management, pedestrian-friendly infrastructure, and increased sustainable sources of energy. As these complex and unsolved places continue growing, the landscape of tomorrow needs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

To conclude, the 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.

Analytical Section of the Site



Design Phases



**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**  
EDUCATION PROGRAMS FOR THE COMMUNITY, WITH A FOCUS ON ENVIRONMENTAL INTERVENTIONS  
VOLUNTEER OPPORTUNITIES  
WORKSHOPS AND INFORMATION SESSIONS FOR ENVIRONMENTAL FRIENDLY PROJECTS

**INCENTIVES**  
RELOCATION OF COMPANIES IN THE INDUSTRIAL SITE  
IMPLEMENTATION OF INCENTIVES FOR BUSINESSES AND HOME OWNERS TO IMPLEMENT GREEN PROJECTS  
BEGIN FOSTERING AND ADVOCATING FOR SMALL INTERVENTIONS IN EXISTING PUBLIC LOCATIONS

**ENVIRONMENTAL HEALTH**  
TOXICITY REPORTS AND TESTING OF VACANT INDUSTRIAL LAND  
TRANSPARENCY OF TESTING RESULTS AND POSSIBLE HEALTH ISSUES  
PROTECTION OF EXISTING GREEN SPACES

2020 2030 2040 2050

**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.

**REMEDICATION**  
DEMOLISHING SELECTED INDUSTRIAL BUILDINGS  
CLEAN UP PROCESSES FOR VACANT INDUSTRIAL LAND BEGINS  
SAVING, RESTORING, AND RE-PURPOSING SELECTED BUILDINGS AND FOUNDATIONS

**SMALL PROJECT CONSTRUCTION**  
SMALL SCALE PROJECTS ALONG THE CITY BEGIN  
SMALL INTERVENTIONS IN EXISTING PUBLIC LOCATIONS BEGIN CONSTRUCTION  
RESULTS OF INCENTIVES BECOME VISIBLE AS AN INCREASE IN GREEN PROJECTS BEGIN TO POP UP

**LARGE PROJECT DEVELOPMENT**  
CONSTRUCTION OF RETENTION PONDS IN THE FORMER INDUSTRIAL SITE BEGINS WITH DEVELOPMENT OF A NEW PUBLIC AND COMMERCIAL OPPORTUNITIES  
PERMEABLE PAVEMENT REPLACEMENT BEGINS IN THE CITY  
INTERVENTIONS ALONG THE AGRICULTURAL AREA BEGIN

2020 2030 2040 2050

**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**  
CONTINUED COMMUNITY INVOLVEMENT THROUGH VOLUNTEER AND EDUCATION PROGRAMS  
ROTATING PUBLIC ART INSTALLATION TO BOLSTER COMMUNITY IDENTITY AND UNITY  
LONG-LASTING CONNECTIVITY BETWEEN THE COMMUNITY THROUGH INTERVENTIONS IN THE CITY

**PROTECTION AND PREVENTION**  
PROTECTION OF NATIVE FLORA AND FAUNA THROUGH INCENTIVES AND THE CREATION OF POLICIES.  
PREVENTION OF WATER DAMAGE THROUGH THE BUILT GREEN INFRASTRUCTURE AND RETENTION PONDS  
CONTINUED LAND MAINTENANCE AND STEWARDSHIP TO PREVENT FUTURE PROBLEMS.

**HISTORICAL REMEMBRANCE**  
THE REVITALIZATION OF THE RIERA DE LA SALUT THROUGH THE INTERVENTIONS ALONG THE STREAM  
A CONTINUED CELEBRATION OF THE SPACE AS IT IS REDEVELOPED WITH THE STREAM IN MIND  
COMPLETION OF MAJOR PROJECTS LEAVES ROOM FOR MORE INNOVATIVE PROJECTS IN THE AREA

2020 2030 2040 2050

# 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



TRANSITION BETWEEN DRY AND WET SEASONS



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.



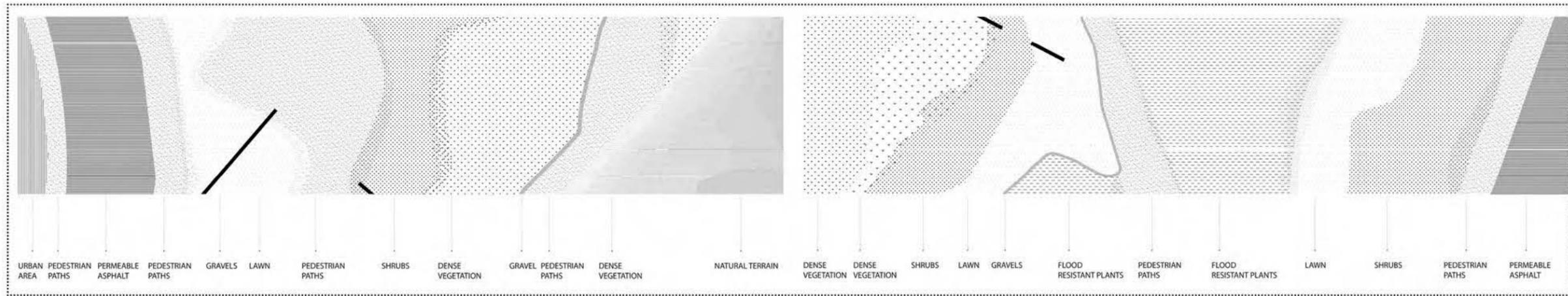
WORKING WITH NATIVE FLORA TO RENATURALISE THE FABRIC

# 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.



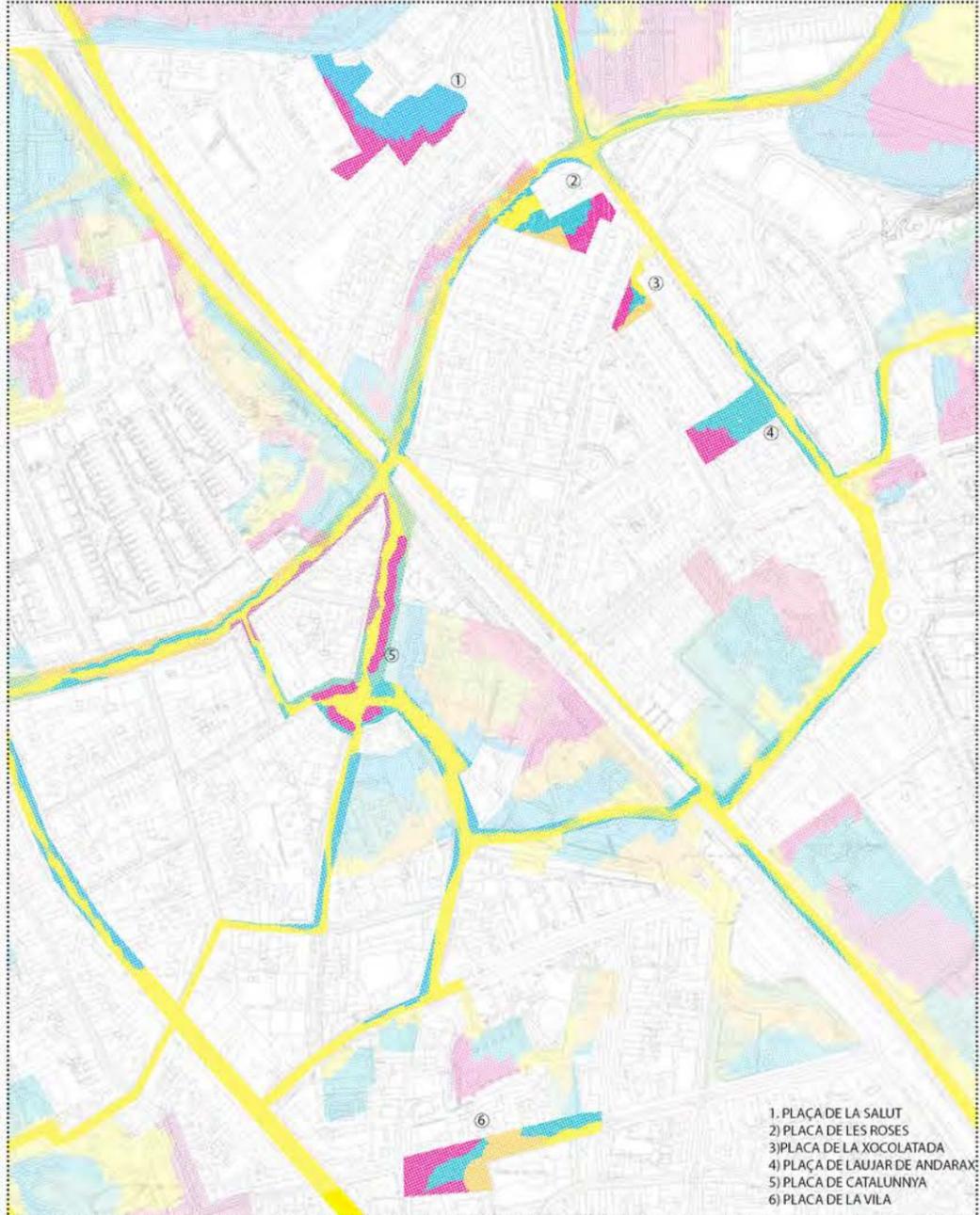
MITIGATING THE TRESHOLDS AT A SMALLER SCALE: NO BOUNDARIES BETWEEN TEXTURES



TRANSITIONAL SPACE WORKS AS A BUFFER AND A CONNECTOR WITH THE NATURAL PARK

# 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.

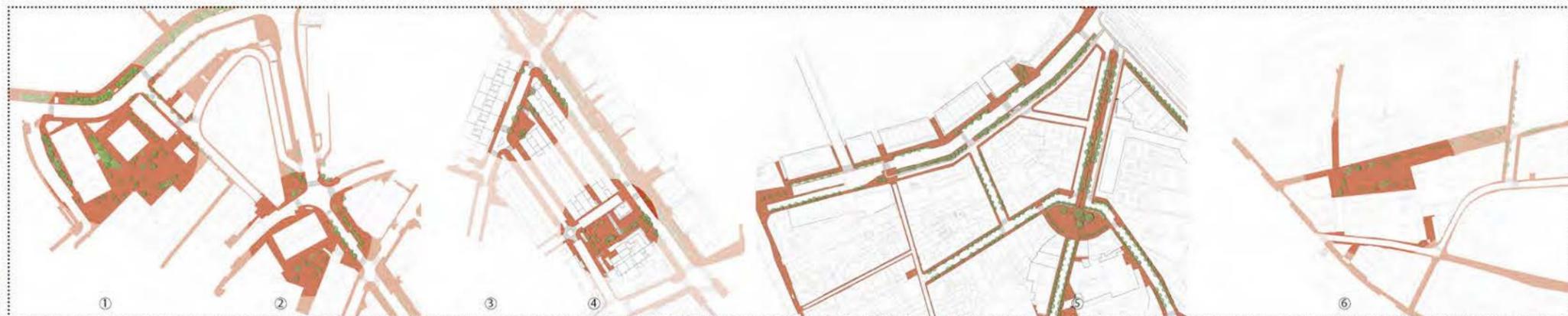


- 1. PLAÇA DE LA SALUT
- 2. PLAÇA DE LES ROSES
- 3. PLAÇA DE LA XOCOLATADA
- 4. PLAÇA DE LAUJAR DE ANDARAXA
- 5. PLAÇA DE CATALUNYA
- 6. PLAÇA DE LA VILA

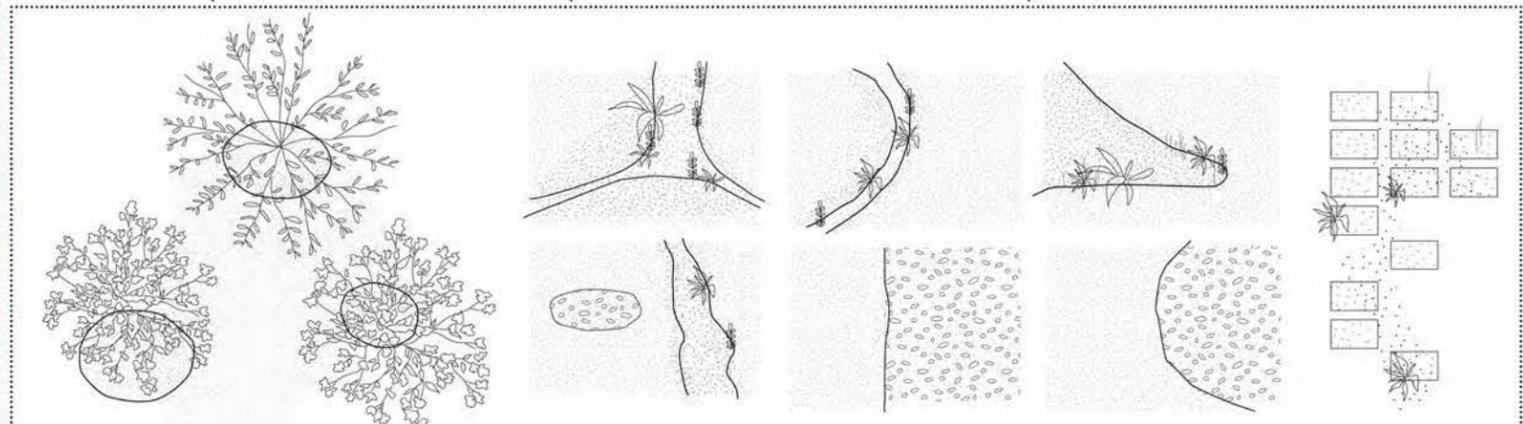


A CLOSER LOOK AT THE SECOND PROPOSED AREAS OF INTERVENTION.

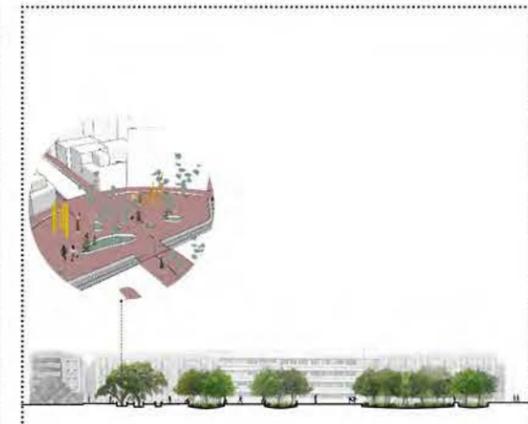
WATER BEING A VITAL ELEMENT OF THE CITY, WE REALIZED IT IS VERY IMPORTANT TO WORK WITH THE MATERIALS IN THE CITY, AND GENERATE THRESHOLDS NOT ONLY IN SPATIAL ESSENCE, BUT ALSO IN TERMS OF THE PAVEMENTS.



PUBLIC SPACES | GENERATING MOVEMENTS | BLENDING WITH THE BOUNDARIES | GENERATING TRANSITIONS



GROUND SURFACE PERFORATED WITH POCKETS OF DRAINING STONES AS CLUSTERS OF DROPS THAT CAPTURE WATER, RETAIN IT AND BRING THE EXCESS TO STRIP GARDENS. MAKING VISIBLE THE RELATION BETWEEN SURFACE LANDSCAPE AND SUBSTRATE, CREATING A TRANSECT OF MATERIALS.



THE SECTION IN PLAÇA DE CATALUNYA DEPICT THE TRANSITION BETWEEN THE LAYERS IN THE URBAN AREA.

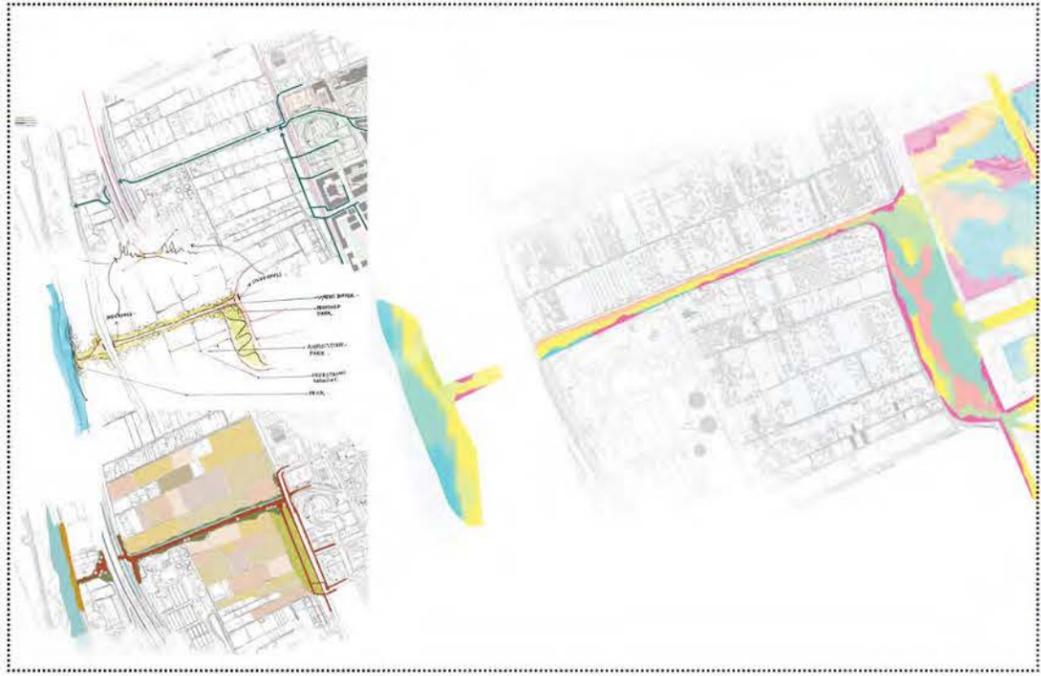


ENTRY TO THE PLAZA WITH SLIGHT INTERVENTIONS IN TERMS OF MATERIALITY IN THE TEXTURES AND MAKING THE PUBLIC SPACE MORE VIBRANT

# 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.

