

INTRODUCTION | COMMON RESOURCES

The Lichtsingel bridge in Rotterdam and the NDSM project in an abandoned warehouse in Amsterdam North offer precedent cases in defining what resources under the theme of communing may be. Core themes such as financing, community and multiple stakeholder collaboration, the recycling of materials, powerful spatial gestures and the ability of space to enable action offer guidance in redefining the notion of resource. Here we emphasise on common space and its ability to enable various social and material flows within a context. In approaching the complex case of Valparaiso, the need to find clarity on both notions of communing and resources is critical in approaching a thorough and in-depth body of knowledge.

The theme of resources through the lens of the commons draws into field an alternative understanding that sees resources as being simultaneously material as well as a cultural. The topic is thus focused on specific circumstances - rather the particular and unique than the general and normative - of place/s. In understanding what this may mean in Valparaiso, the city of focus, an initial study of issues, history, systems and typologies draws forward four areas of focus under the topic of common resources - namely Environmental, Material, Spatial and Social resources of Valparaiso. The four topics of focus enable the elaboration of the material cultural flow of resources in the region. A key insight being that there are notable overlaps throughout the topics that reiterate the presence of communing.

Environmental resources are concerned with qualities that define the region, seeing regional attributes as being a shared resource. These qualities range in focus from topographical qualities to natural systems within the city.

Material resources are concerned with the various flows of production and waste in the city. The primary subjects being the impact of the port on these systems as well as the threat of dumping.

Spatial resources are concerned with the act of inhabitation. Ranging in scale the research presents various core principles and elements within the city that enable various forms of inhabitation and appropriation.

Social resources are concerned with cultural modes of collaboration. Being a touristic centre, cultural production is drawn into question. The research also introduces a praxis of collaborative development and management.

The methodology of conducting this research took several stages - an initial search of issues; the compilation of a preliminary report forming an extensive documentation of core themes; and finally the review and finalisation of the report through a verification and observation stage of fieldwork. The iterative process enabled a thorough questioning of the body of knowledge compiled.



Valparaiso, looking into the Cabrada by Michael de Beer

ENVIRONMENTAL RESOURCES

The 1984 Brandtland Report, *Our Common Future*, by the UN ushered in global awareness and cooperation, seeing our environment as being intrinsically linked to human occupation of the world. The landmark event acknowledged that the world as a complex interlinked system, where climate, habitats and living things are interdependent. With this common vision the report advocated for a need to change our practices. Today, the built environment remains the largest contributor to emissions and continues to threaten environmental systems. The Report defines sustainability as “development, which meets the needs of current generations without compromising the ability of future generations to meet their own needs” (Brandtland, 1984). Although great strides have been made, our future remains uncertain as the world is faced with climate change, a threat to all life on this planet.

In this context, environment as the commons, is situated as primary resources. Environmental factors, characteristics and systems can be regarded as a common - water, biodiversity zones (flora and fauna), the earth itself, the rain and the sun. These elements are no ones property, they belong to all as common resource and everyone is responsible for taking care of the fragile ecosystem, which they are part of. The depletion of these resources or the change in climatic patterns has a severe effect on the city and its inhabitants. This chapter aims to examine some of these environmental resources and briefly show how they are forming Valparaiso.

In this framework, four main environmental resources are discussed. Water is introduced as the element that formed the city’s distinctive geography most profoundly. In turn the geography has given rise to diverse spatial qualities. The following section introduces the notion of protective biodiversity and considers the role of nature in mitigating urban catastrophes that recurrently afflict Valparaiso. Thereafter geomorphology and soil qualities are reviewed as elements that may enable or adversely affect possibilities of urban farming, building construction and which may augment the threat of landslides. Finally, the last section briefly examines the climate characteristics of the city in light of the growing threat of droughts in the region.

This chapter primarily stems from the review of academic articles and data sets. The site visit following the initial research served as the possibility to review information by ways of observing the city mainly through sketches and site writings.

Sun, Moon, Simultaneous 2, Robert Delaunay, 1913



WATER AS ORIGIN

The bay of Valparaiso embraces the ocean and it is this body of water unites the fragmented hills and ravines of the city. In the XIXth Century Valparaiso gained its identity from the ocean as the city formed and never forgetting it, the view over the water is the immaterial inheritance of all its inhabitants. Albeit hidden, another type of water also forms the identity of Valparaiso - as if in a silent dialogue, the streams running in the deepest part of the ravines fragment the whole and accentuate the realities of the hills and ravines.

The ravines were the first areas to be occupied by buildings. The deep valleys maintain an intimate connection to the natural landscape, enabling inhabitants to stay close to their water resource. The inhabitants of the ravine, the "quebradeno", lives an essentially rural lifestyle whereas the "lomero", the inhabitant of the hill top, is the urban citizen. He traded the intimacy of connection to nature and water for more modern infrastructural connections towards the city.

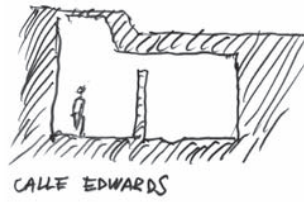
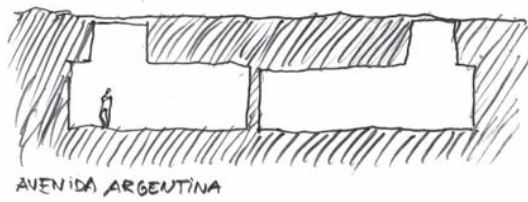
As the city developed, the streams were channelled and vaulted tunnels were built to protect them. These hidden vaulted channels running underneath the city reveal another identity defined by the topography. Where the channels were built, the water as natural resource was separated from daily reality, the intimate relationship with the earth was lost and a much more urban identity emerged.

The Camino Cintura (the old Waist Road) is where the free flowing streams of the ravines are tamed and filtered from sand and waste. The system of sand filter gates form the mouth of the hidden vaulted gorges. These filters were

constructed in the beginning of the XIXth Century when in the framework of hygienist approaches large epidemics began to be regarded as social phenomena. Although channelled now, the free flowing streams of the hills defined the urban form. The Camino Cintura creates a porous boundary that separates the rural mindset of living in close connection to nature and its resources from the urban mindset of using modern infrastructure as access to these resources.

In this way a double understanding of urban and rural identities emerge in Valparaiso. The urban ascending on the top of the hills and the rural descending at the bottom of the ravines, as well as the urban of the foundational hills and the rural of the ravines above the Camino Cintura, are intertwined and create porous boundaries where rural and urban forms of life gradually transform into one another.

In Valparaiso, the urban form and the connection to water are so intimately connected, one could say that the flow of water and the infinite body of the ocean defines a sense of place and situatedness. It contains the essence of Valparaiso's identity.



The underground vaulted channels
Las aguas ocultas de Valparaíso, Marcelo Araya



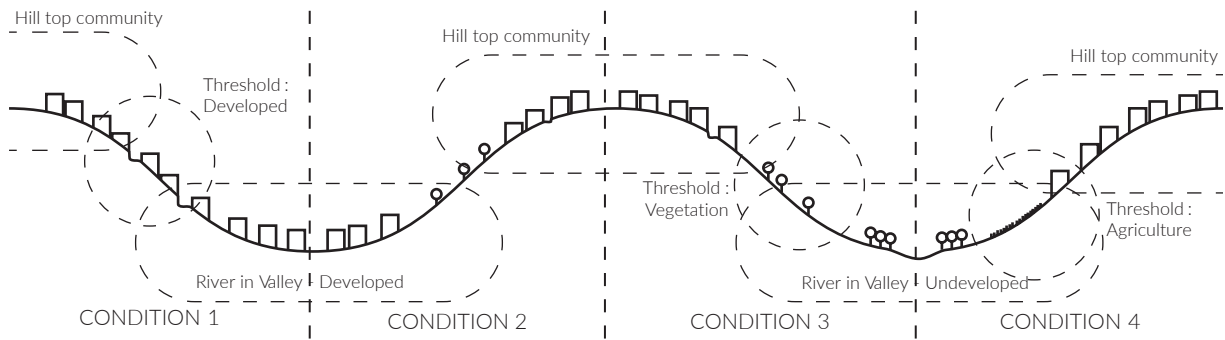
The intertwined nature of rural and urban forms of life
Las aguas ocultas de Valparaíso, Marcelo Araya

The topography of Valparaiso beyond fundamentally underpinning the growth and identity of the city also shaped specific communities that are related to the different hills and valleys. These undulations in the landscape create amalgamations of communities that are dissimilar, each unique with different practices imbedded in the lives of its residents. In turn, the localised spatial communities together with the unique topography of Valparaiso engender changing spatial qualities that radically alter the sense of place as one experiences the city.

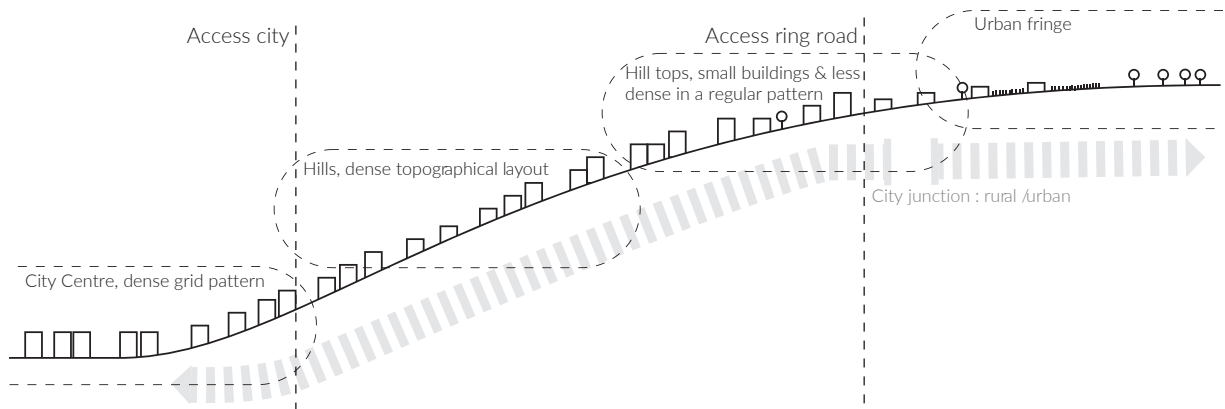
As highlighted before there is a strong rural urban divide as one moves up the hills. For the different hill communities, the primary access points are either at the city centre or along the ring road, camino Polvóra, which runs near the urban rural fringe of the city. The longitudinal hill section illustrates various qualities depended on its elevation and distance from the city centre. Moving from a rigid grid system in the inner city; to a network of small streets and squares climbing the steep slopes; as one moves further from the city the typologies and activities change. Along with these changes the spatial quality shifts from being a well organized, easily readable metropolitan space to being a space of seeming disorder where one feels more compressed by the narrow winding streets and staircases. On the cross section, the valleys and hills show a different dynamic which highlights how the topography has shaped these communities due to limited

access across the threshold points between hill and valley. The spatial quality, the vast difference between the hills and the valleys lies in their orientation. The valley embraces its inhabitants but it also limits their view whereas the hill top opens up and offers a full panorama across the bay. The four conditions presented on the longitudinal and cross sections illustrate normative examples of different cases that can be found as one moves up the valley system.

These distinct conditions have enabled the unique growth of the communities which are deeply rooted in practices that occur both on a citywide and local scale to varying degrees – an example being the purchasing of goods at the market in the city during the week and on weekends in the hilltops.



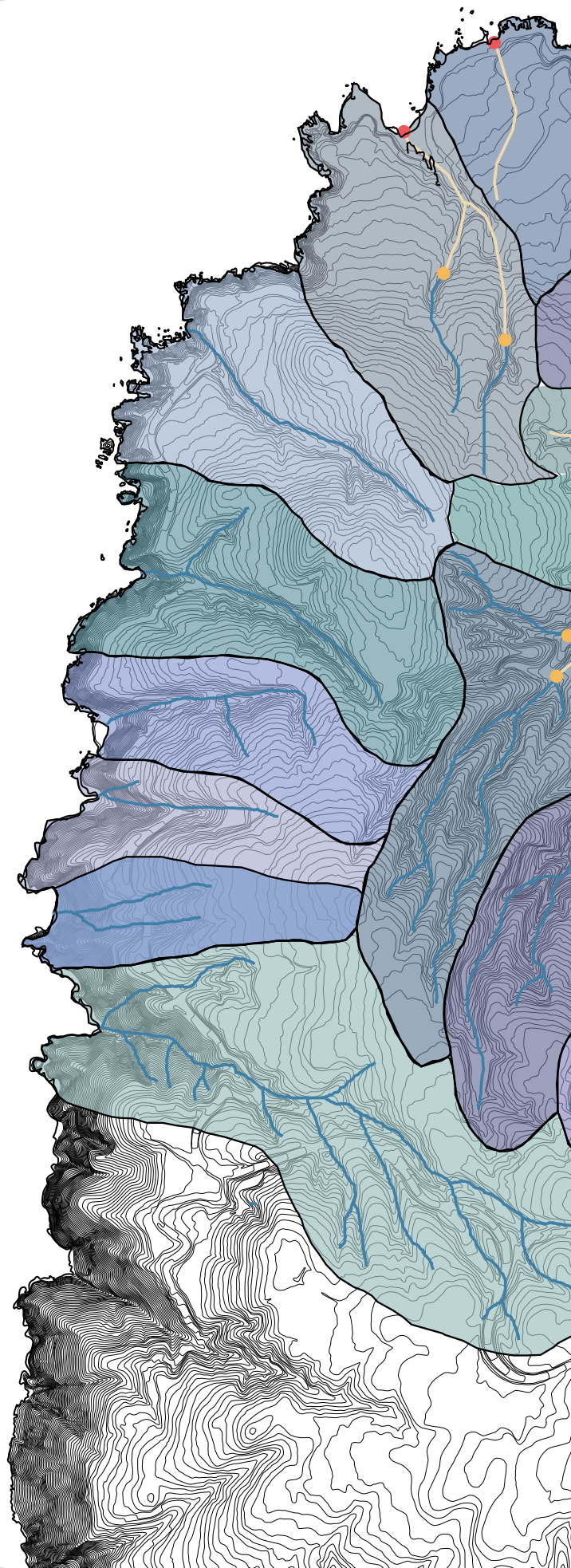
Short Section through hills and valleys

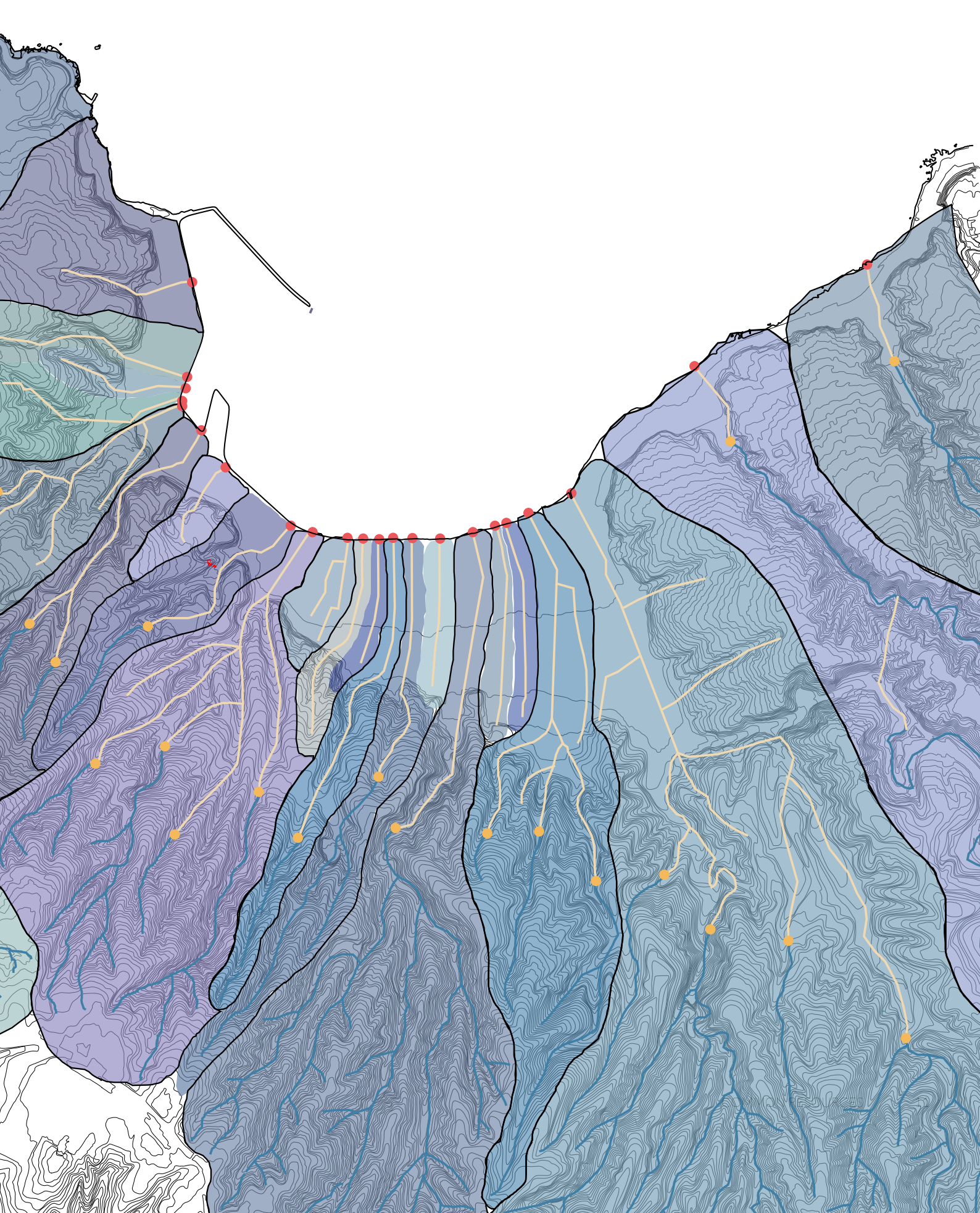


Longitudinal Section through hills and valleys

The coloured regions on the map show the main water collection basins in Valparaiso. The orange dots, indicating the place where the natural streams are converted into the vaulted gorges, also indicate the transient border of more urbanized and more rural forms of habitat. The red dots, the discharge places of the vaulted gorges, were often places where public squares emerged due to the intense infill works that the construction of vaulted gorges required.

- Mouth of vaulted gorges
- Discharge of vaulted gorges
- Vaulted gorges
- Natural water streams





WATER SUPPLY AND SANITATION

The permanent fresh water supply of three foundational quebradas (Juan Gómez, San Francisco, and Elías) of Valparaíso established one of the most essential conditions for settling in the bay: the resource of drinking water. Throughout the XIXth century the natural streams at the bottom of the quebradas provided the fresh water supply of the city, however as the city expanded the streams became contaminated and in the dry summer period fresh water became scarce.

In the second half of the XIXth century the unprotected natural streams were considered to be of inadequate hygiene and an alternative fresh water supply was sought. Large hydraulic projects were initiated to ensure fresh water supply such as the reservoir of Las Cenizas and the dam Peñuelas. Due to the quebradas no longer being a water resource, urban expansion extended towards the top of the hills. A change in mind set occurred, as the city expanded the fresh water of the ravines began to be regarded as important resource. Vaulted gorges were constructed to protect the quebradas with a system of sand filters in order to clean the water from residues and urban waste. The channelling and protecting of natural water

streams did not proceed as one large project but was the result of a gradual development and continuous construction of a series of vaulted gorges that in the end created a hidden labyrinth running underneath the city.

Water remains a critical issue as the city continues to expand and summer rainfall continues to drop. In the XXIth Century the water supply of the quebradas is complemented by the Aconcagua river and the Los Aromos reservoir built in 1972 and used since the 2000's. However, it is reaching the limits of its capacity due to severe droughts that have hit Valparaíso in the summer of the past decades. These droughts also have affected the valleys due to scarce and intermittent availability of water in the natural streams of the ravines. The circumstances are compounded by the mountainous topography - as one moves up the hills the lower the water pressure drops. This becomes especially problematic when combating large urban fires, such as that of the year 2014. When firefighters attach more and more hoses to the system the pressure drops.



1917 vault channel of Bellavista Street, hidden today under street



1901 drinking water project for Valparaíso showing the location of the reservoir and vicinity to Valparaíso

PROTECTIVE BIODIVERSITY

The watercourses running at the bottom of the valleys combined with rainy winters and dry summers created the necessary Mediterranean conditions for the native sclerophyll (hard-leaved) forest to flourish in the hills of Valparaiso. The forest created a humid zone in the valleys, helped to regulate water run-off, increased the water retention capacity and mitigated the drought effect of the dry summer period. Valparaiso, the valley of paradise, might have been born at the sight of such lush nature crowning the hills.

As Valparaiso expanded the native sclerophyll forests have gradually been replaced with urbanized zones as well as with the monofunctional forestation of non-native species such as *Pinus radiata* and *Eucalyptus globulus*. These two species are favoured for timber production and are now threatening to overtake native vegetation in Chile.





Apart from altering the microclimate of the bay of Valparaiso and expelling natural habitat from the region, the degradation of sclerophyll forests amplifies the destructive force of urban fires. When the native sclerophyll forests still covered most of Valparaiso's territory they acted as natural firewalls due to their humid nature. The fire could not easily spread from one hilltop to another. However, the currently dominating pine and eucalyptus species are drier and speed up the fuel the spreading of fires.

As the naturally dense vegetation is replaced by a more airy forest or shrub structure the inhabitants increasingly use the quebradas as informal dumpsites for domestic waste full of combustible materials. Thus, the native biodiversity transformed from being a protection zone for water resources and a natural barrier against the spreading of fire into a monofunctional dry zone that magnifies natural catastrophes.

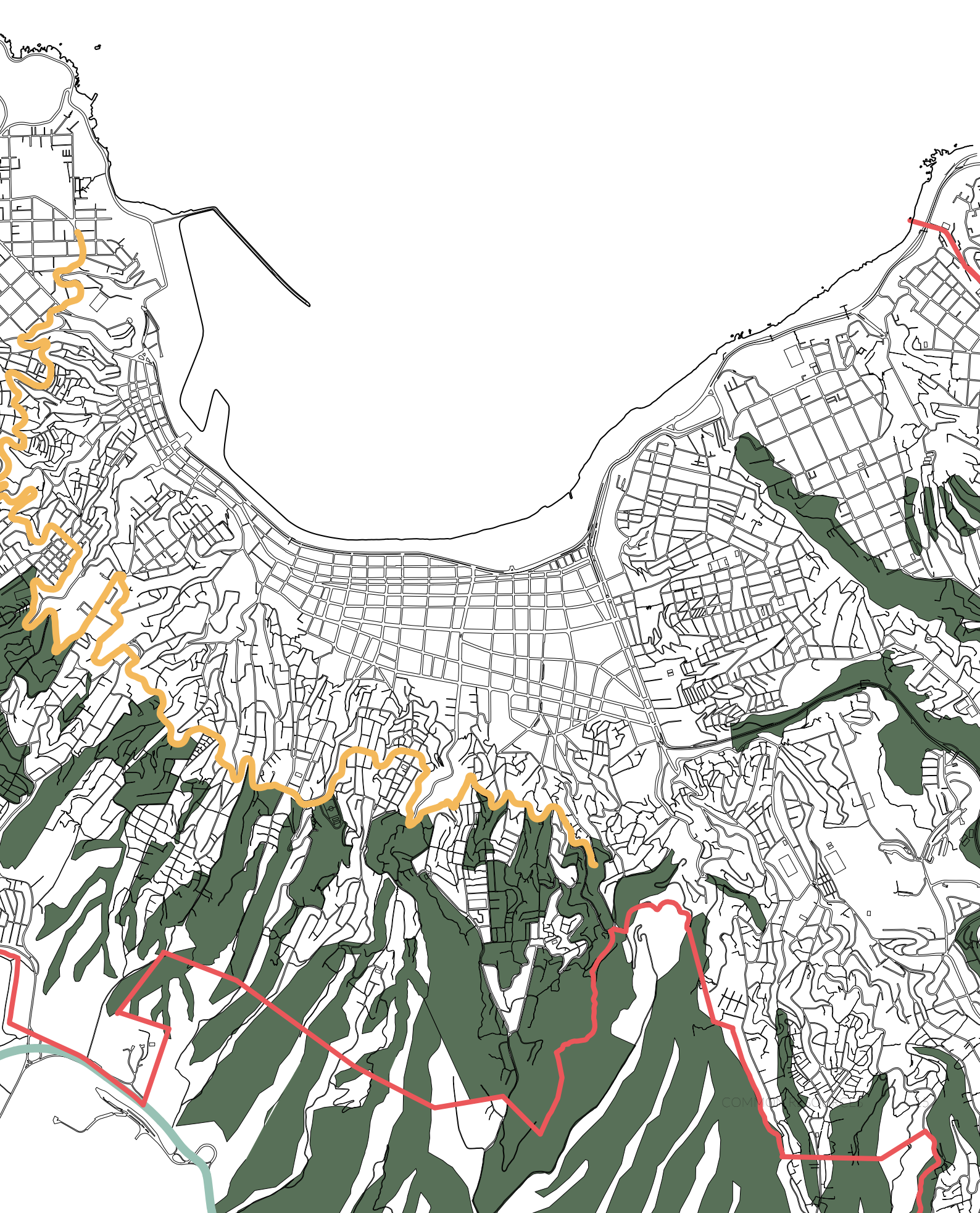


Even though the ravines and not the hill tops were the initial areas to be populated when the first inhabitants settled in Valparaiso, the more urban and well-off inhabitants gradually moved towards the hill tops. As a result, the ravines began to be considered working class areas. Currently, the socio-economically most underdeveloped zones are the ravines located beyond the Alemania Avenue.

The border between rural and urban forms of life and spatial typologies is transitory; it is gradually shifting upwards following the expanding city. Since these shifting, non-consolidated, semi-rural semi-urban areas are the ones most affected by disastrous urban fires a few urban projects have suggested to connect these places to the Polvóra road for better water supply and access to public infrastructure. In the light of such proposals the question emerges how the unregulated expansion of urbanization would affect the identity of these rural fringe spaces. From another perspective, considering ecological aspects, the rate of urbanisation in Valparaiso brings along challenges because it replaces the last green valleys that are still inhabited by native flora and fauna.

-  Non-consolidated ravines
-  Urban Limit
-  Camino La Polvóra
-  Camino Cintura





- 1 Hawthorn tree/ *Crataegus*
- 2 Chilca/ *Baccharis racemosa*
- 3 Chagual/ *Puya chilensis*
- 4 Quisco/ *Echinopsis chiloensis*
- 5 White sage/ *Salvia apiana*
- 6 Tevo/ *Trevoa trinervis*
- 7 Litre/ *Lithraea caustica*
- 8 Eucalyptus globulus
- 9 Informal dump site
- 10 Evergreen tree/ *Crinodendron patagua*
- 11 Borbones
- 12 Belloto/ *Beilschmiedia berteroa*
- 13 Boldo/ *Peumus boldus*
- 14 Parilla Blanca/ *Proustia pyrifolia*
- 15 Pine tree/ *Pinus radiata*
- 16 Peppercorn tree/ *Schinus molle*
- 17 Chilen palm
- 18 Litre/ *Lithraea caustica*
- 19 Peumo/ *Cryptocarya alba*
- 20 Soap bark tree/ *Quillaja saponaria*

- Native sclerophyllous flora
- Non-native flora & informal landfill





SOIL CHARACTERISTIQUES

The region of Valparaiso is an agriculturally fertile part of the country; the dominating soil types are all arable. Mollisols are highly arable soils (suitable for farming) with a rich humus upper layer that are formed under native grasslands and are very suitable for grain and cereal farming. Alfisols are arable soils with relatively high native fertility and clay content that are formed under deciduous forests and are mostly suitable for corn, wheat and vine agriculture. Inceptisols, forming in various conditions such as upland forests and river deltas are arable provided their erosion and drainage is adequately treated.

The different soils types in the hills of Valparaiso provide valuable information for of urban farming and suitable foundation types. Maicillo soil, a hard and rocky soil dominates areas such as Recreo, Placeres and Vina del Mar. It is the product of the weathering of granitic rocks of the coastal batholith and is one of the most common and residual soils in Chile. The plateau area of Valparaiso and Vina del Mar consist of sedimentary, sandy or granular soils. Due to their natural compaction they form a firm ground. The soil in the ravines of Valparaiso is soft and poor quality, requiring costly foundations. In some areas newer sediments are found and are of the poorest quality requiring more costly solutions for foundation or agricultural activity.

Initiatives such as Guerilla Verde, a small group of people aiming to recover abandoned, littered spaces, serve as an example of groups planting in the ravines and hills. Their main aim is not about planting agricultural plants but rather improving the liveability of the city by replacing informal dumps with flowerbeds.



Mollisol

Alfisol

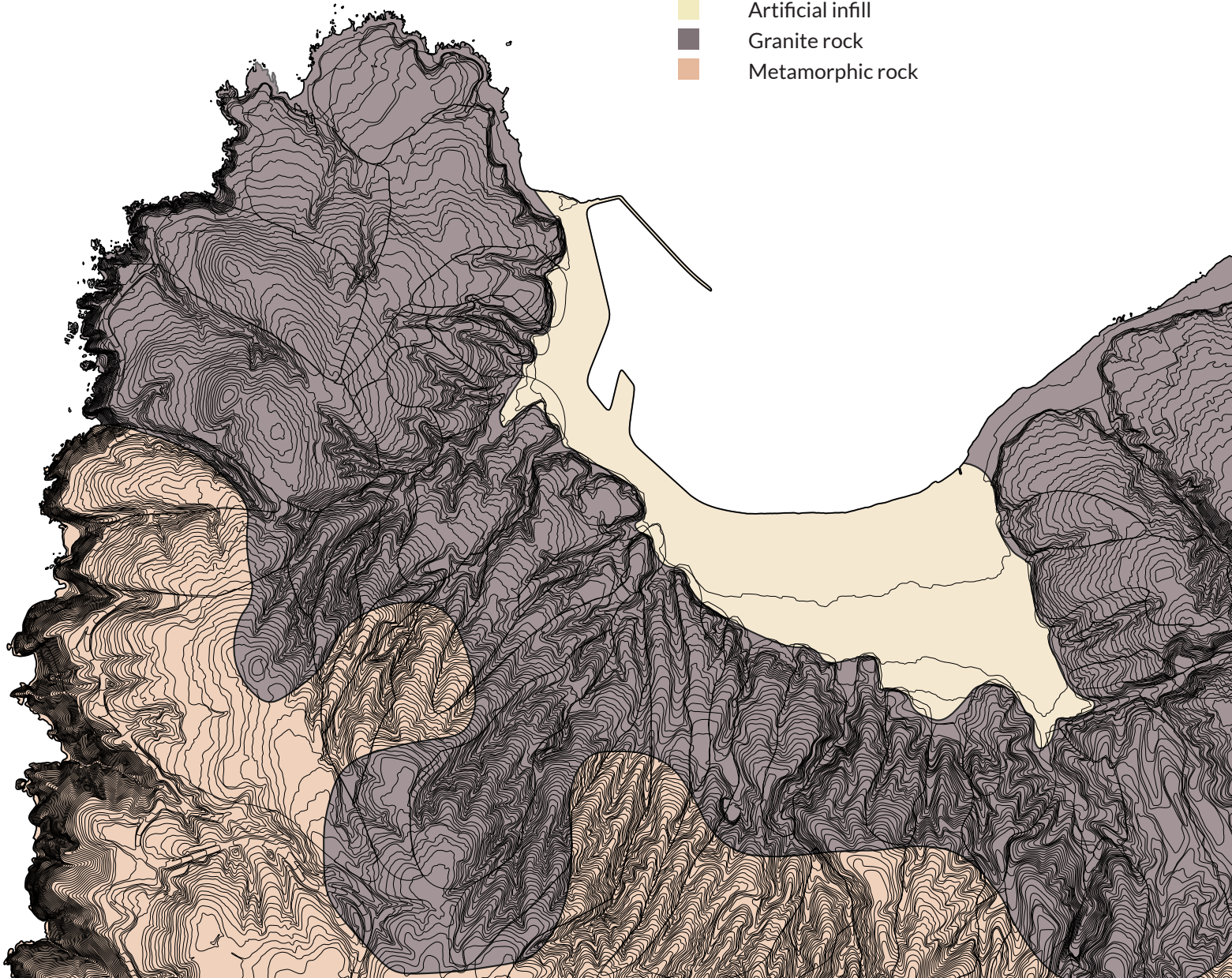
Inceptisol

GEOMORPHOLOGY

Chile is positioned at the border of two tectonic plates, the Nazca and the South American plate, making it an incredibly earth quake prone area as well as volcanic. This has given rise to the types of rocks in Valparaiso. The plateau area of Valparaiso is formed as an artificial infill due to human activity and is dominated by sedimentary

rocks. The lower hill region is composed of granite and the upper mountainous region is of metamorphic origin. Granite and metamorphic rocks are often mined because they are valuable as building materials.

- Artificial infill
- Granite rock
- Metamorphic rock



CLIMATE CHANGE IN VALPARAISO

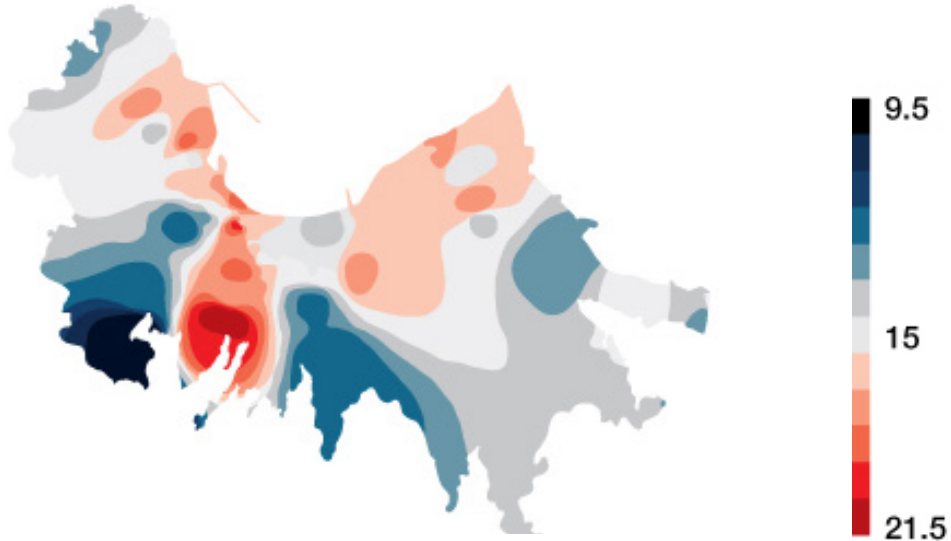
Valparaiso region is one of the most affected areas by climate change in Chile. As glaciers continue to melt the precipitation pattern in Latin America is expected to alter. More intense precipitation periods will be followed by longer droughts, while issues such as desertification and changing habitats are increasing. In the case of Valparaiso, both extremes lead to serious problems. Too intense precipitation creates local floods in the ravines and result in landslides on the steep slopes. Long drought periods may lead to, or drastically magnify the effects of urban fires that are common in the city as well. The most severe forest fire in Valparaiso, that occurred in 2014, was preceded by five years of severe drought. Experts say the extent of drought in the region of Valparaiso will only worsen as summer temperatures continue to rise and water resources are already over-exploited.



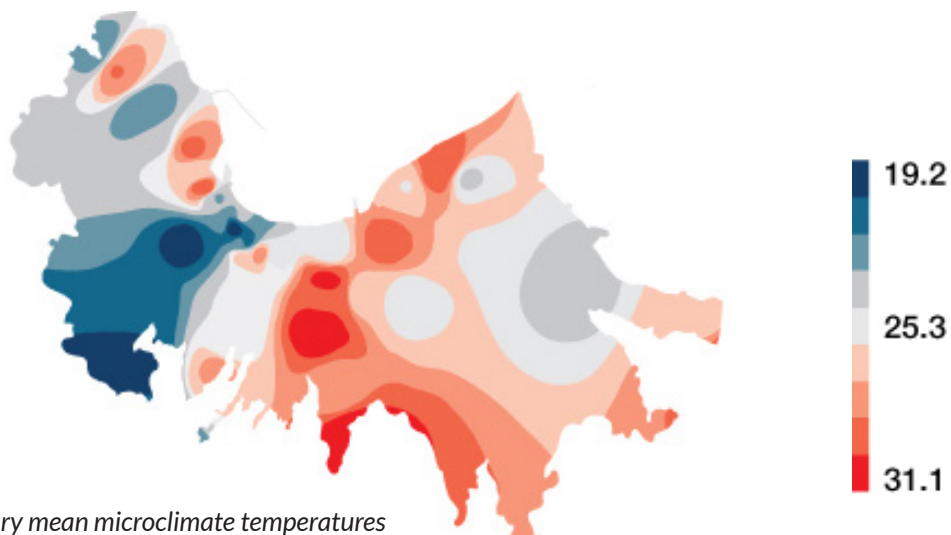
Landslide in Valparaiso, www.biobiochile.cl/



Fire in Valparaiso, www.ideal.es



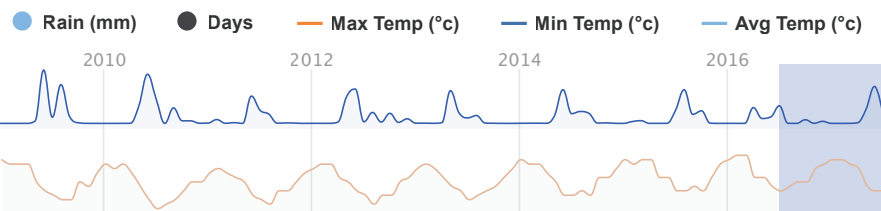
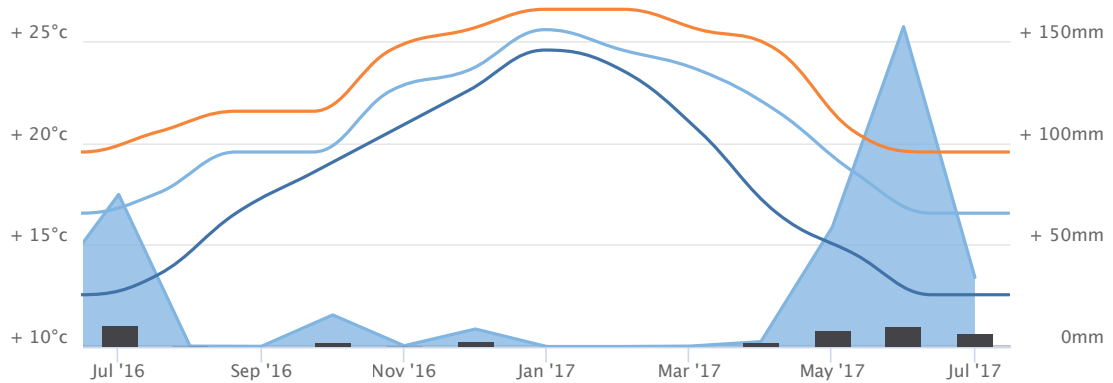
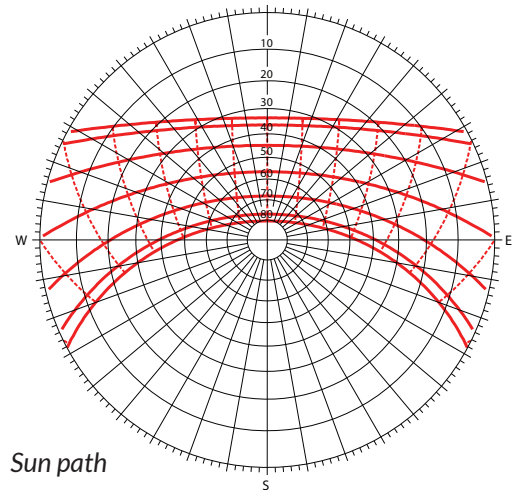
July mean microclimate temperatures



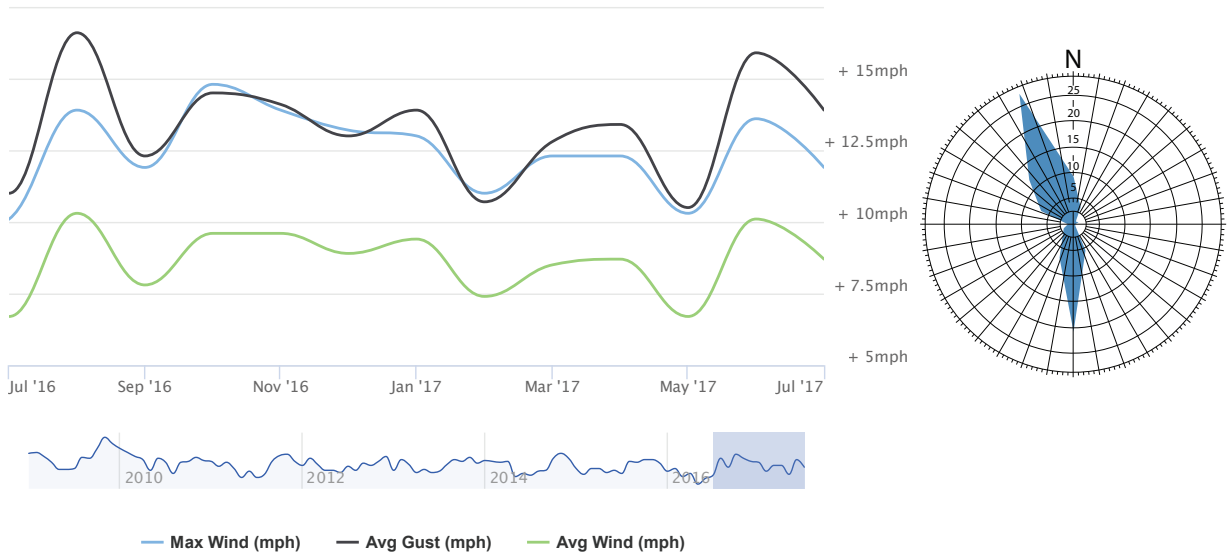
January mean microclimate temperatures

The densely urbanized nature of Valparaiso together with the amphitheatre topography creates localized variations in temperatures and precipitation that can be characterized as local microclimates.

The climate of Valparaiso is temperate Mediterranean. The summers are mild and dry whereas the winters bring most of the yearly precipitation. The Pacific Ocean and the Humboldt current both influence the climate patterns of the area. The prevailing winds, predominantly from the direction of the ocean, carry humid air with them. This tendency results in a high humidity levels. The Humboldt current being a cold current creates microclimates of lower temperatures in coastal areas. Higher up in the region of Valparaiso the influence of the ocean and the Humboldt current decreases which results in higher temperatures and prolonged dry periods.

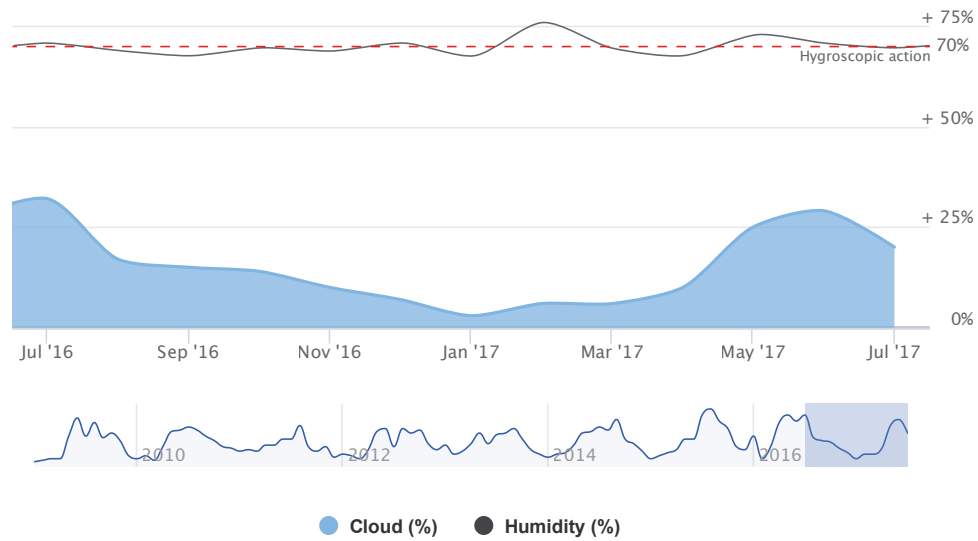


Max, Min and Average Temperature (°c) as well as rainfall and rainy days



Average and Max Wind Speed and Gust (mph)

Prevailing wind



Average Cloud and Humidity (%)

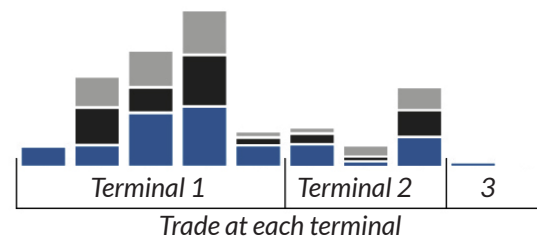
MATERIAL RESOURCES

Imbedded in all urban areas are flows of goods, which are seen as one of the fundamental building blocks of cities. These materials have conventionally not been seen as being part of the commons due to being locked into capital flow systems. However, positioned by William Lloyd in 1833, and then further developed by Garret Hardin in 1968, “the tragedy of the commons is an economic theory of a situation within a shared-resource system where individual users acting independently according to their own self-interest behave contrary to the common good of all users by depleting or spoiling that resource through their collective action.” It is in this understanding that the research approach’s material resources as being common resources- existing in a shared system. In the context of Valparaiso, key identified elements are those of the port and the way in which materials pass through the city and are discarded. In documenting these qualities the research aims to build a knowledge base from which further research interests and projects could stem from.

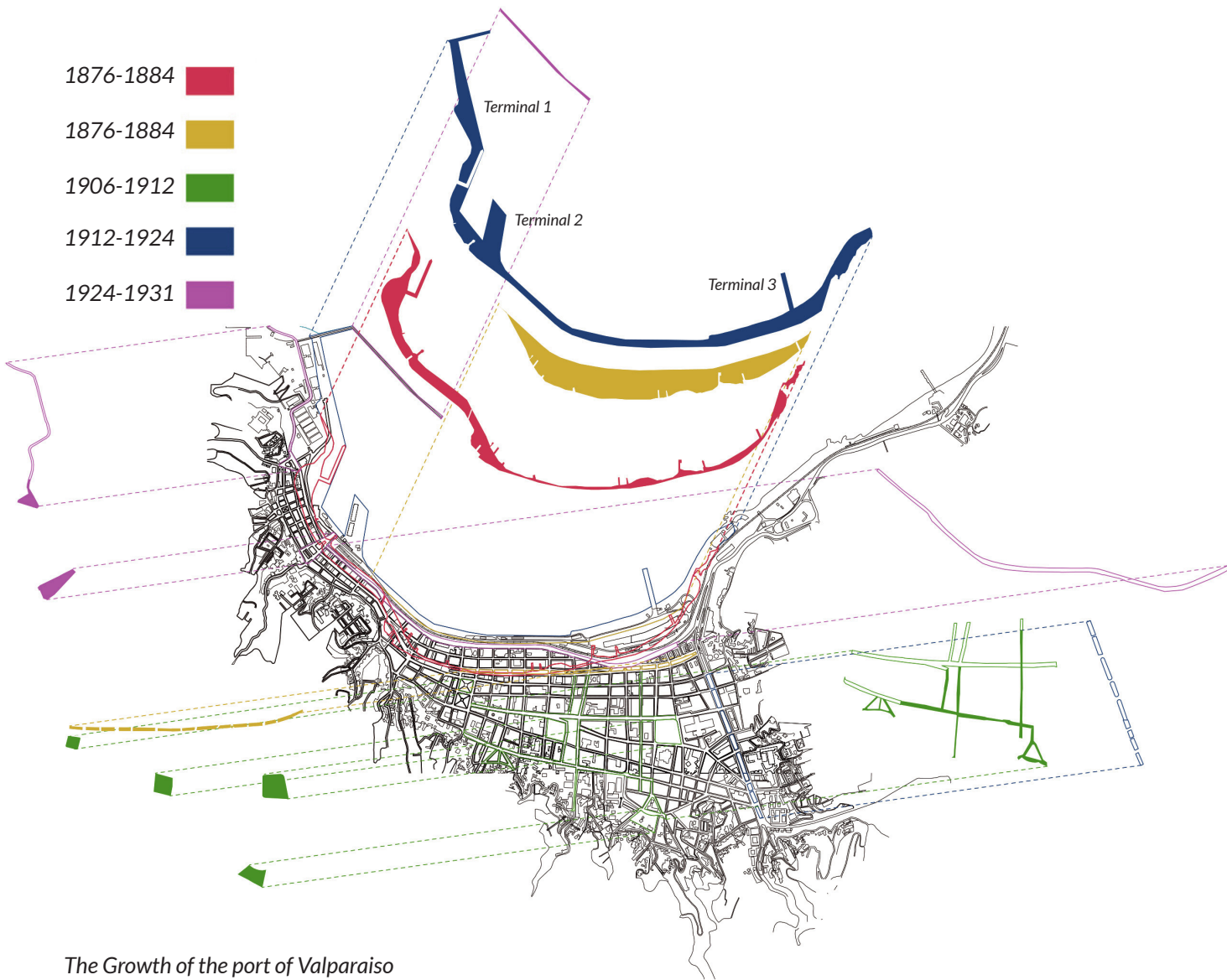
The port being the beginning of the city, as we know it today has developed over many stages to its modern industrial port form. This development has transformed peoples relationship with the ocean as much of the coastline has become industrialised – refer to the image to right which documents the transformation of the coastline and the city. The role of the port has changed as it has been increasingly mechanised and thus from being a centre for culture exchange and local trade the port today exists as a introverted and isolated system, with the exception of naval officers and cruise liners that bring activity to its periphery. The transformation and the future of the port are

critical in positioning the material flow scape of Valparaiso.

Overseas shipping had played a large role in Valparaiso’s economy from its inception as it served as the primary route around the Americas - a natural stopover point for ships rounding cape horn through the strait of Magellan . During this period the port was integrated with the city. Historic buildings hold large basement areas accessible to the street that was used for the storage of goods. This integration into the typology of buildings from this period indicates how material flows were very much part of the everyday life of the city. The city itself was a gateway between the world and Southern America. This junction and integration into the city created a unique environment that allowed for the city to flourish as foreign merchants settled and Chileans became wealthy entrepreneurs. However two primary changes would see the port transform and with it, the intimate relationship with the city altered.



- 1876-1884
- 1876-1884
- 1906-1912
- 1912-1924
- 1924-1931



The Growth of the port of Valparaiso

With the opening of the Panama Canal in 1914 shipping channels changed, positioning Valparaiso outside of the primary trade routes. The change had a massive impact on the local economy, as the port no longer was positioned as a critical gateway to the continent. The situation gave rise to some of the largest ports forming to the north of the continent and in Brazil. In turn Chile was faced with a conundrum in repositioning its maritime investment. In doing so private companies role in the ports were encouraged. By 1950 a second radical shift occurred, the introduction of containers and container ships as the default for international shipping. Although several transformations of the port would take place to accommodate this second shift, the transformation gave rise San Antonia's port to grow substantially- now being the primary port in Chile. The radical shifts of the last century, not only had positioned Valparaiso's port as being less significant in the trade of goods but has given rise to an industrial port which is separated from the city. The relationship between trade and the population had been severed as private ownership by large corporations (domestic and international) had drawn port operations and trade out of the city.

The Zeal, Logistic Support Extension Zone, serves as the extension of the harbour. Situated 14km away, outside the city centres it is the area for the inspection of cargo by the State agencies and offers a series of services to the cargos transferred by the port of Valparaiso. This is linked to the Curauma as another logistic service area that is 18 kilometres from the port and serves as a distribution point for cargo moving through the port. These two operations have proved



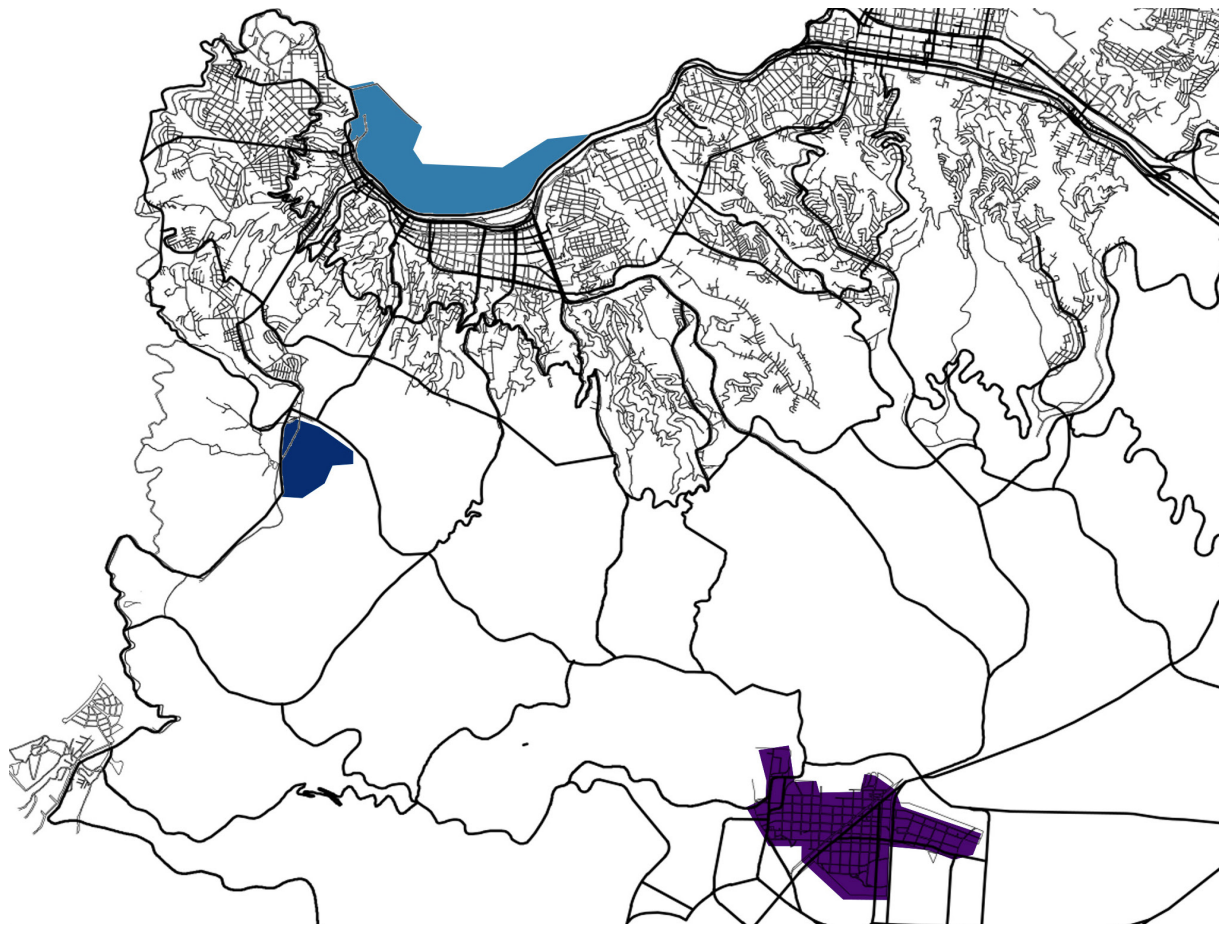
Above: Marine route at the middle of 19 century

Below: Marine route at the middle of 20 century

Terminal 1: Berth 1 to 5. The terminal is currently used for a variety of cargoes, principally containers and general cargo. However, it is expected that the concessionaire will focus on the container operations. Incoming cargo from inland currently arrives through the main entrance at the east end of the port terminal at the western end.

Terminal 2: Berth 6 to 8. Principally used for the transfer of general cargo, although containers are also handled, expected to be granted as a concession in the future.

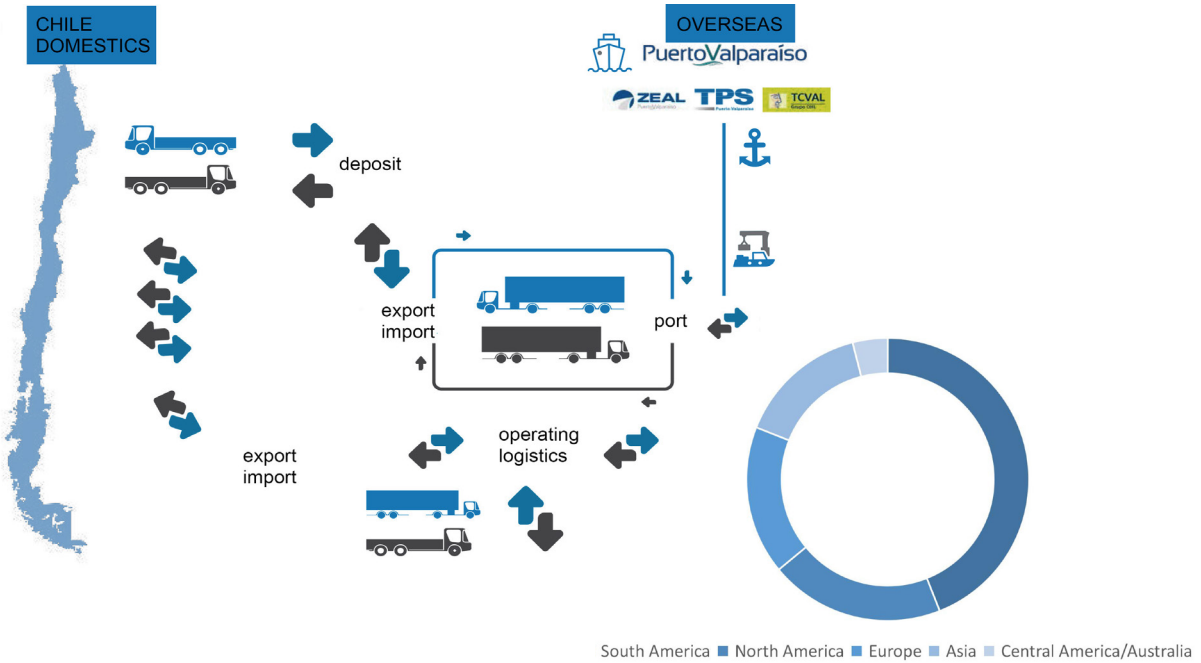
Terminal 3: Berth 9 to 10. Not generally used, unless required during the peak fruit season.



- Port
- Zeal Sociedad Concesionaria S.A.
- Logistic Area Curauma

ZEAL Sociedad Concesionaria S.A. The Logistic Support Extension Zone is operated by ZEAL Sociedad Concesionaria S. A. in a concession contract with the Valparaíso Port Company for a period of 30 years starting in 2008.

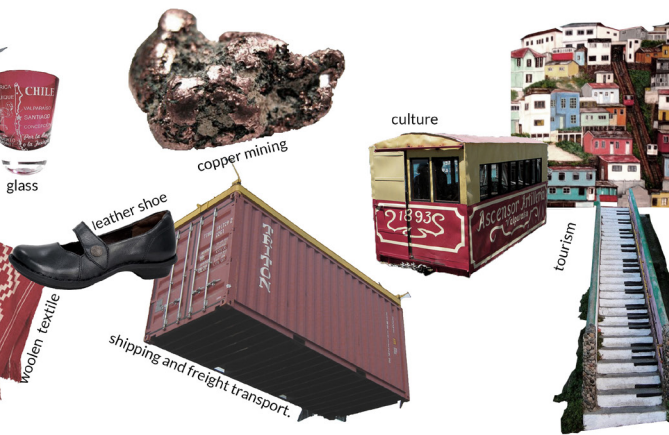
ZEAL is located 14 kilometers from the port of Valparaiso, high in the city, and has a total area of 45 hectares. As a reference, the port as a whole has a total area of 21 hectares dedicated to the movement of cargo.



TRADITON



CONTEMPORARY



fundamental for the continuation of modern port operations, yet their displacement raises serious questions about the port's roll in the city as material flows have been discontented from the city entirely.

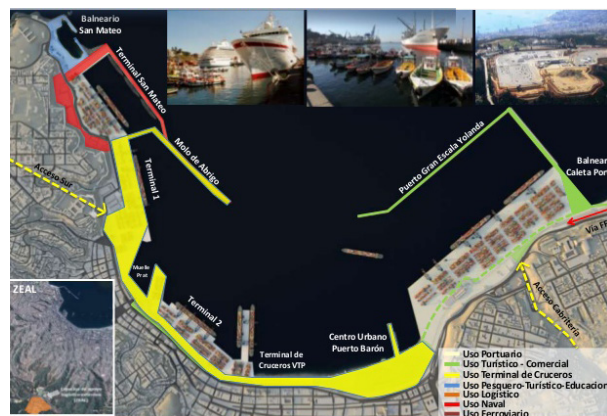
The situation today has led to speculation as to the future of the port and its relationship to the city. Two arguments have dominated the discussion – either the port be extended to a larger framework that would see the city become a primary area for port operations in Chile; and the second being that the port should reengage the city and give rise to a new a role where citizens and their relationship with the water will be integrated.

The first option, envisions the entire coastline being used for port operations. Although the proposal yields benefit for the macro scale of Chile, the increasing separation of life in the city and the processing of materials through the port is seen to be further disconnected. This extension draws forward a question as to whether the port should be extended at Valparaíso at all or whether alternative solutions elsewhere may be more favourable.

The second solution, presents its own problems, as without an extensive revamp of the port the area will become obsolete in modern shipping. However, the envisioned plan aims to find a new relationship that may give rise to citizens being able to access the ocean as a commodity, as it once was before. Furthermore the proposal is people scentric and aims to bring the public into connection with ocean once more.



Valparaíso proposal by Pontifical Catholic University of Valparaíso (PUCV). Archdaily.com



Presentation on latin ports by Harold Jeagar. <https://es.slideshare.net/latinports/presentacion-harald-jaegar-latinports-2012-vers-3>

INDUSTRIAL WASTE

Waste materials or “trash” are the most depreciated by society, They represent filth, which nobody likes, the unwanted, and they should be hidden. The existence of these discarded products are a reflection of our way of living and, at the same time, they show our way of thinking, What probably better describes habits and occupations of a society is not only the art it creates or the music it listen to, but also the things it discards.

Industry waste mainly includes hospital, mining, construction, and sylvo-agricultural livestock waste, in 2009 they represented 61.5 % of the total national waste, current information about Valparaiso’s industry waste is incomplete or broadly estimated. Most industrial waste follows a due process and is dumped in allocated sites, however it is those small enterprises that do not conform to general practice that have contributed to waste dumping in the city of Valparaiso. This is seen largely as construction waste and rumble.

In understanding waste however one must look at flows of waste, which in Valparaiso occur informally. Due to the large amount of informal structures and small industries in the area, the repurposing of these building products serves as a primary means for many to construct housing and make a living.



DOMESTIC WASTE

Informal dumpsites used to be an integral part of the city scape of Valparaiso. Trash bags by the edges of the pavement, thrown away bottles, cans, papers, not needed furniture laid everywhere in the city until the residents, waiting in vain for municipal concern, step by step began to act themselves. Naturally, the transformation is rather slow, even though the smaller accumulations of garbage in the urbanized city areas began to disappear, still more than 150 informal dumpsites are formed in the ravines and on the verges of the urban boundary. The issue is complex; dubious and corrupt management, cultural customs and the topography of the city all play their role in the escalation of the problem.

The municipality, despite all the honorable titles that Valparaiso has been given – heritage for humanity, the cultural capital of Chile, the seat of the National Congress – has to operate on half of the budget as, for example, Vina de Mar. Their budget is not enough to repeatedly clean the streets and to wash them from dog poo, that is still very much present albeit less so in touristic districts. Many areas that lay higher in the hills are difficult to reach by trash camions which creates areas where trash collection isn't carried out at all. In addition, the management of waste collection is regarded as a lucrative business and is operated by private companies with dubious management and unclear contracts. Workers in the sanitary industry are often exploited to work under health threatening conditions with low wages. Another debated aspect of Valparaiso's municipal waste management is the concession system they established for the cleaning of the city centre. Placilla, Curauma and the hills of Alegre and Concepción are cleaned by another

private company than the rest of the city and are supported by the government. However, their operation was not the result of an open market competition. They were invited as selected company and therefore some argue they operate on corrupt grounds.

The issue of trash is not solely a health and safety matter, it is also a cultural problem. It paints the city as a filthy and unruly ground and further exaggerates the image of Valparaiso as the bohemian and chaotic city where everything goes and no one is called responsible; a city outside the law. In 2014 the municipality purchased graffiti artists to paint artworks on 16 camions to “wash away” the stigma of bad smell and filthiness associated with the collector trucks. Since then, these camions became part of the must-snap shots of tourists and are part of the sanitary company's corporate image. Some argue that these camions are yet another lucrative way of promoting private companies. However, from another point of view, they do change the stigma of the camions and might trigger another kind of thinking about trash collection: the collection of recyclable raw materials that are convertible into valuable objects.

The inhabitants of Valparaiso were not innocent in the informal dumpsite issue either. A few years ago one might have thought that not only their trash but also their self-esteem was abandoned. They became accustomed to putting out their trash by the side of the street any time of any day. Although, in their defence, the location of these informal dumpsites was often not arbitrary. They disposed their trash where a container used to be but not anymore. They assumed that that is the location where the trash was supposed to be disposed.

Another, one could say, communication problem was that the residents didn't know when the trash collector would pass by their street. In their name, sometimes the trash collector never came so their wait would have been in vain. There are still numerous areas of the city which the collector camions simply cannot access, and thus the residents decide to dispose of their garbage in the ravines. These informal dumpsites at the bottom of the valleys are of the most dangerous type. Due to their highly combustible nature they are ticking time bombs that feed the devastating fires of Valparaiso.

As the issue of the informal dumps remained unsolved for years, more and more smaller initiatives formed that aimed at changing the way the citizens of Valparaiso think about waste. In 2013, within the framework of the Festival of Arts in Valparaiso, a recycling square was created with the involvement of inhabitants from the hills of Polanco and Panteón and with the funding of many smaller organizations. Recyclable materials were collected from identified informal dumpsites and with the addition of recyclable pallet donations public spaces were realized from waste materials. Another private initiation was the Acción Basura! which operated through a few volunteers who



Above: Participants of the recycling square project Plaza del Reciclaje, Fundación Ciudad Emergente

decided to clean the Bellavista square. Their vision was to awaken citizen's love and care for Valparaiso.

Apart from these more organized initiatives the truly remarkable transformation that most likely positively influenced the largest portion of the city was the citizen's own care that began to manifest itself in forms of signs and self built trash holders. In many parts of the city the neighbours began to ask each other through handwritten sign posts to not to simply through the trashbags on the street. Some signs even inform of the circulation times of trash collectors. The trash holders prove to be

rather effective as well. They are lifted of the ground and therefore they protect thrashbags from being dissected by the stray dogs of Valparaiso.

These small personal initiations have began to positively change the image of the city. Unfortunately, the more dangerous issue of dumpsites in the bottom of the valleys is still present. Nevertheless the well constituted and urbnized areas of the city are going through a remarkable transformation that is induced by the inhabitants themselves.

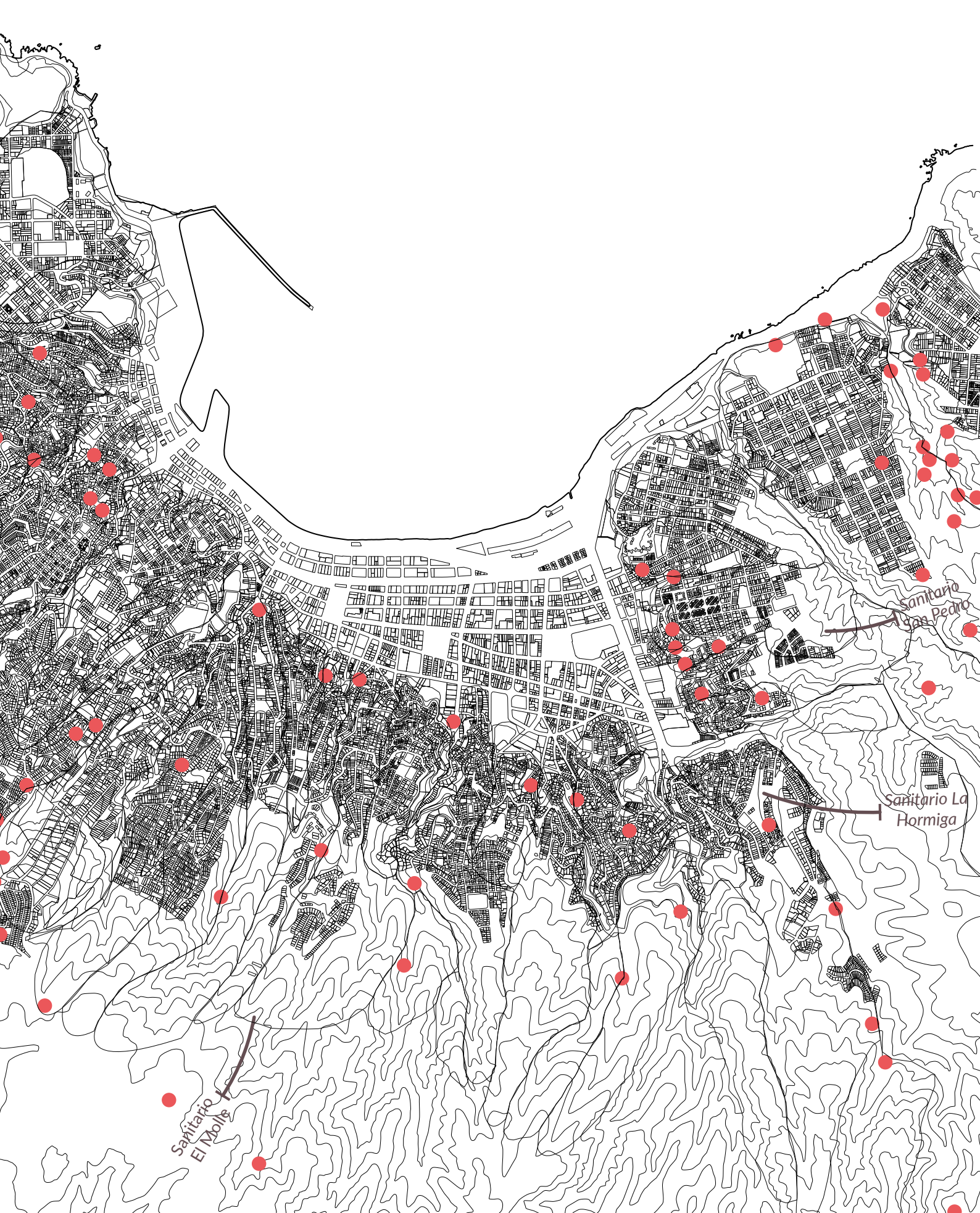


LANDFILLS AND DUMPSITES

There are more than 150 informal dumpsites located in the city of Valparaiso. The closest official landfills to the city are Sanitario El Molle, Sanitario La Homiga and Sanitario San Pedro. Even though these lanfills are officially approved the way they manage waste and their environmental compensation requirements are often not met in the lack of supervision. One of the reasons is that these landfills are managed through private companies who aim for profit and operate through unclear contracts. La Homiga landfill, for example, is destined for closure as it didn't compensate the landfill area through reforestation and through its operation it has threatened endangered native plant and animal species.

- Informal dumpsites in Valparaiso
- Official landfills in Valparaiso Region





Sanitario El Molle

Sanitario La Hormiga

Sanitario Bas Pedro

REUSE - CLOSING MATERIAL FLOWS

REUSE THE UNUSED

Given the waste recycling problem, multiple initiatives have been developed and exist today, whose objective is to reveal the situation and make an opportunity out of it, raise awareness by means of new regulations, change the direction of consumerism by fostering the use of new objects made of old ones hence avoiding the world to become a huge dumping site.

Pioneer architects, as well as common people, are trying to recycle the waste material by building sustainable houses. Architects, usually leading a NGO, are practicing building houses by using local natural material such adobes, tiles, straws, clay, sand, cactus, horse shit, wickers, and also daily living waste, such as milk packages, glass bottles, cans, abundant bicycles, CDs, as well as demolition materials, like rubble, plastic, pallets, because of the regeneration of old houses and the hill fire which destroyed lots of houses several years ago.

Architectural NGOs like Minga Valpo NGO and Ciudad Emergente NGO built sustainable houses with the support of local communities, common locals, and volunteers from different countries overseas.

For some people who live on the top of the hill, the environment of which is more rural and lowly-organized, this recycling action is more spontaneously. People use demolished corrugated metal board to cover the facade, roof or build the fence of their courtyard. And lots of houses are prefabricated, some are even reformed from containers. And on the hill what you can figure out easily is that certain part of a house is “added to” the other part directly.

PROYECTO MINGA. Author: Minga Valpo NGO . Location: Valparaiso, Valparaiso Region. Year: 2015 Recycled material: Plastic and glass bottles, cans, pallets

OKUPLAZA ANTOFAGASTA . Author: Ciudad Emergente NGO . Location: Antofagasta, Antofagasta Region Year: 2014 . Recycled material: Tires



SPATIAL RESOURCES

INTERTWINED BOUNDARIES

The city of Valparaiso, as discussed before, owes its birth to the ocean. It was the opportunity of the natural bay that drew the first inhabitants to the area and until the construction of the Panama Canal in 1914 Valparaiso was the most important port city on the Latin American coast. After 1914, the city's port activity gradually decreased and although it continues to operate today, Valparaiso faces the challenge of competing with port cities that are more capable of spatial expansion.

2003 marked a turning point in the development of Valparaiso, the nomination for the UNESCO World Heritage site indicated a change in thinking about the city and shifted the understanding of Valparaiso as port city, dominated by industrial activity to the understanding of Valparaiso as heritage site, dominated by tourism.

Valparaiso is commonly regarded as being composed of three essential parts: the coastal edge, the plan and the hills. These three areas can be understood as strongly individual identities which are tied together by the spatial composition of the amphitheatre that creates a sense of unity.

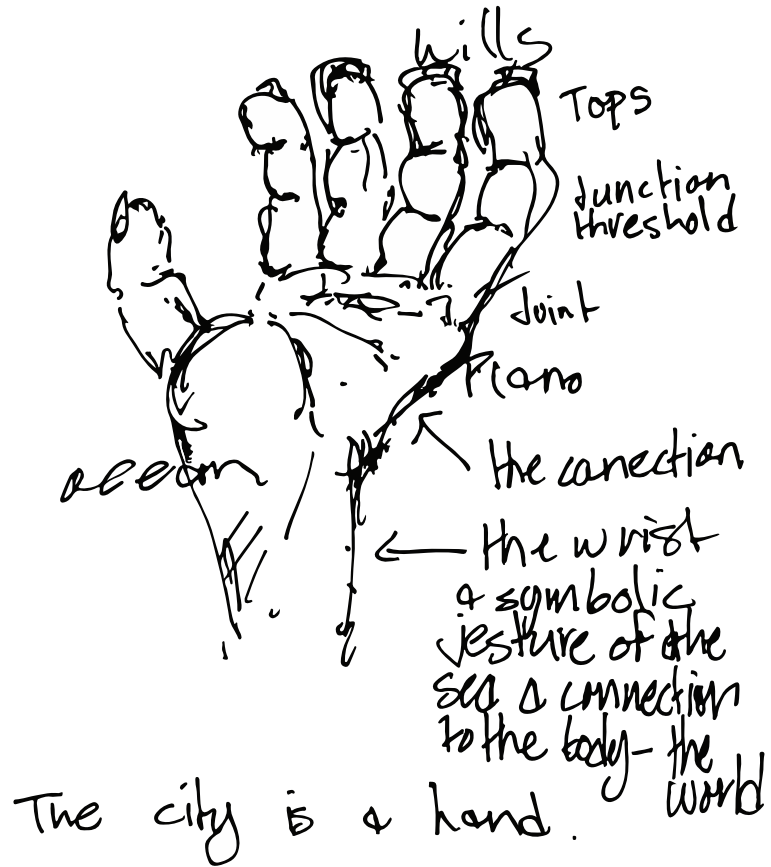
Approaching Valparaiso from the ocean a few

distinct yet permeable boundaries appear. The first is the coastal edge, the only one that inherits the water in its material form. Along this area many historically important and often abandoned infrastructural buildings are located. Amid the struggle of redefining the port of Valparaiso the coastal edge is increasingly threatened by municipal development plans that would erase the coast as public space. These plans could mean a spatial disaster to the city by permitting an iron wall of shipping containers to essentially sever the city from the ocean.

The coastal edge is separated from the plan area by the highway Errázuriz that creates a rather rigid boundary. In the plan the colonial past and heritage of the city is most distinguishable because the flat topography enabled the colonizers to impose the ordered grid on the city. The plan is the area where most of the city's infrastructure is located. Much like the coastal edge, the plan may be regarded as a vast spatial resource of abandoned 19th century infrastructure that awaits to be given a new function.

The rising topography creates the next transitory border between the plan and the so-called foundational hills. This first terrace of hills





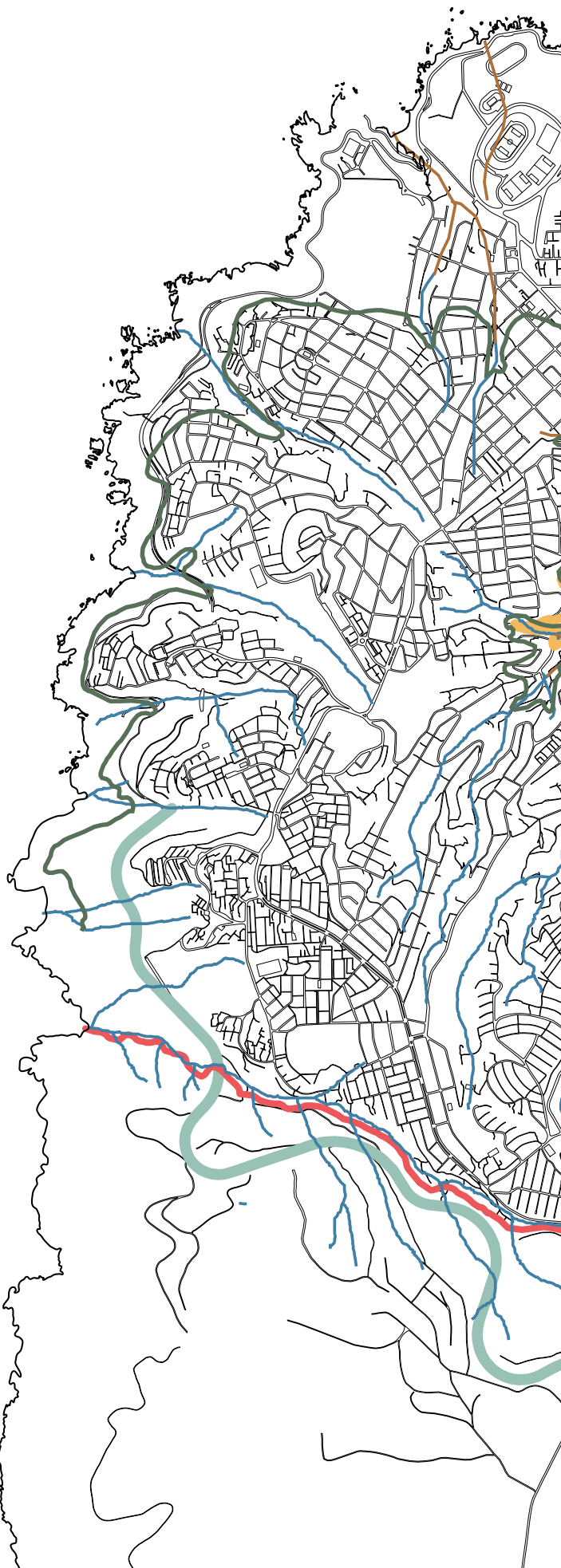
Understanding the city - drawing by Michael de Beer

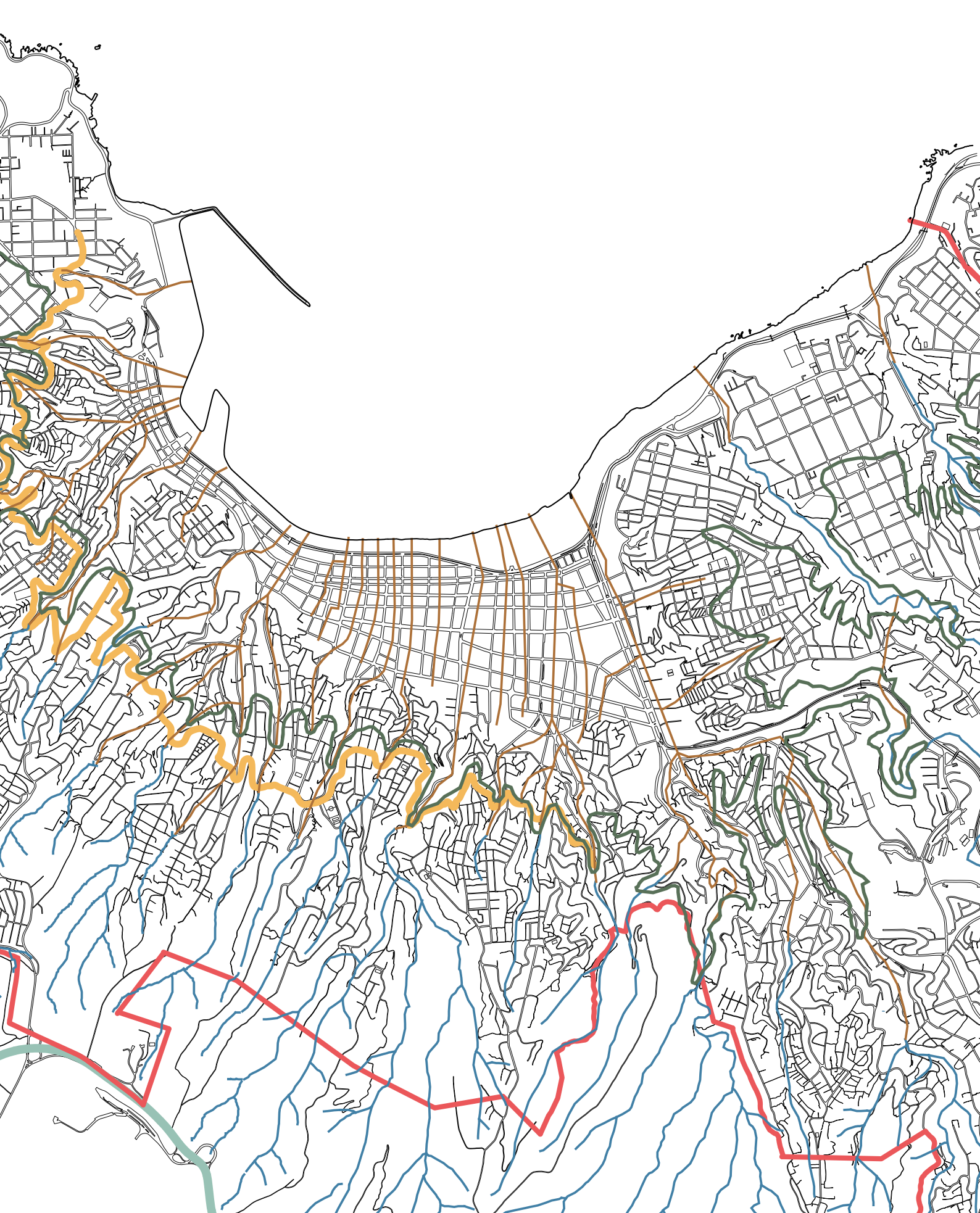


extends to approximately 70m height and can be considered as the more urbanized zone compared to the hills laying above. The border between these hills and the following terrace is marked by the Camino Cintura that also correlates to where the natural streams of the ravines are channelled into vaulted gorges that continue as hidden tunnels underneath the city. In this way the hills below Camino Cintura invite a more urban form of inhabitation whereas the hills above can be considered more rural.

Similar to other globalizing metropolises, Valparaiso experiences rapid growth that manifests in the expanding territory of precarious settlements above the Camino Cintura. As these informal habitats ascend ever higher they become rather distant from the original focal point that is the ocean. Reaching the Camino Polvóra the orientation of Valparaiso flips from being defined by the presence of the ocean to being defined by its connection to the interior. Therefore, the last transitory boundary is the Camino Polvóra that connects Valparaiso to the country's interior and opens the seemingly enclosed spatial unit of the amphitheatre to growth.

-  Urban Limit
-  Camino La Polvóra
-  Camino Cintura
-  Crossing hill ridges
-  Natural Water streams
-  Vaulted channels





VACANT & SIGNIFICANT

Historian Archibaldo Peralto, highlights that the designation of the world heritage site is the variety and diversity of historic and cultural entities within the city. The mapping shows this clearly with highest density of the sites in a band near the coast line- the oldest segment of the city. These buildings are of high significance and important in defining the cities cultural make up. Yet they are under threat.

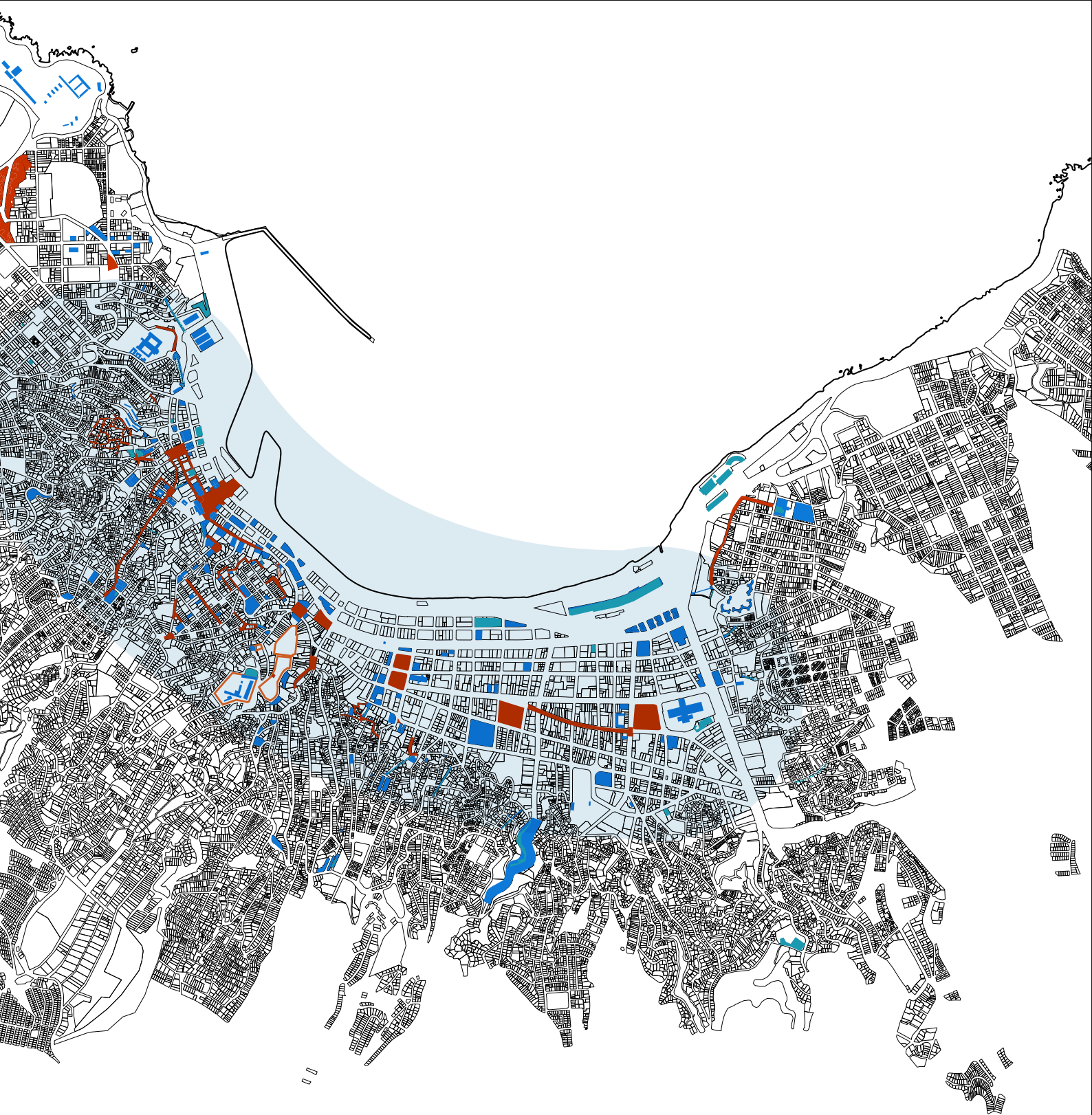
A large amount of buildings that are historically significant are vacant and falling into disrepair. The dynamic is problematic as the city is facing an affordable housing shortage while the hills continue to grow informally. The high cost of renovation of these sites as well as the bureaucratic processes involved, have rendered them inaccessible to the low income and affordable market as well as often to high risk for developers to intervene in. In lieu of this situation Valparaiso has seen a rising tradition by development partings to intervene in the sights in destructive ways (such as causing fires) to render these buildings unsalvageable and thus motivating for them to be knocked down. The process raises some questions about the impact of retaining heritage and its significance in the face of socio-economic issues. In this sense the longevity of these sites going forward remain uncertain unless careful and active steps are to be taken.

In addition to this there are also a large range of infrastructural sites that remain underutilised and falling into disrepair. These sites, ranging from large warehouses to significant structures such as churches, are not only part of the cultural heritage of the city but are often large in scale, having both local and city wide relevance. A key



Legend

- High density of historic sites
- Historical Buildings
- Historical Public Space
- Underutilised or vacant infrastructure



APROPRIATION

Appropriation, the act of claiming space, is commonplace in Valparaiso and takes numerous forms. In understanding this unique dynamic of the city, one could translate the culture of appropriation as a form of custodianship. Appropriation is an act that is concerned with the commons as in its various forms has direct relationship with either acting as a collective or as being part of the public realm.

Graffiti is the first and most apparent form, as it is represented throughout the city extent. From extensive artworks to small and poignant gestures it becomes a dialogue of the city and residents. The spatial manifestation of graffiti occurs in two primary ways: namely it is to be seen and thus in the intricate folding of the hills, opportunities for view lines are boundless and talk of a the visual connections in the city as the commons; while the second dynamic forms a sort of mapping whereby graffiti is a denotation of the public realm as the artist is only able to paint as far as they may be able to reach .

Other forms of appropriation such as those of habitation and occupation are performed as a collective act. Whether it be the occupation of the pavement by informal traders or the act of informally making space in the hilltops for housing and public space, there is constant sense of mediation and acting as collective.



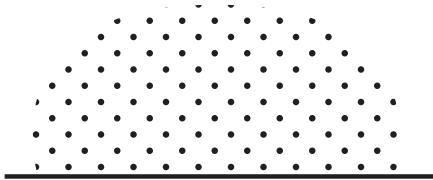
Top: Graffiti becomes as mechanism of apropiation, claiming reachable spaces and forming a dialogue in the city.

Bottom: Musicians perform by a closed door, from threshold to stage

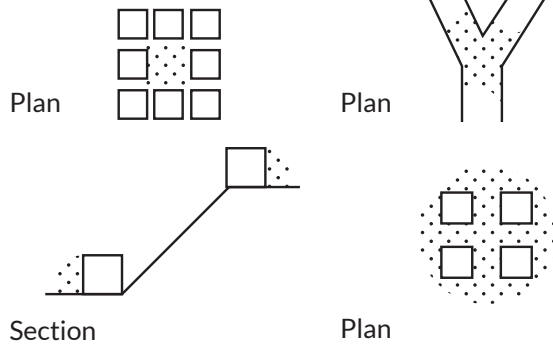
ENABLING ELEMENTS OF SPATIAL APROPRIATION

Enabling elements of spatial appropriation are normative spatial elements that enable action. Closely linked to theme of appropriation and the notion of occupying the commons the elements are seen as spatial enabling resources that provide a frame for events to take place. These identified frames are non-programmatic, or otherwise stated as being flexible providing for varied occupation and interaction.

Six key spatial resource conditions were identified namely; junction, niche, edge, void, delineated field and break. These spatial conditions exist in a variety of forms and often may overlap. The identification of these spatial resources came from observations of inhabitation of the city, understanding the varied techniques used by individuals to access spatial opportunities. In this sense the analysis remained cognisant of the underlying theme of the commons and in doing so aimed to find types that are engrained in Valparaiso’s culture milieu of spatial appropriation, mediation and collaboration.

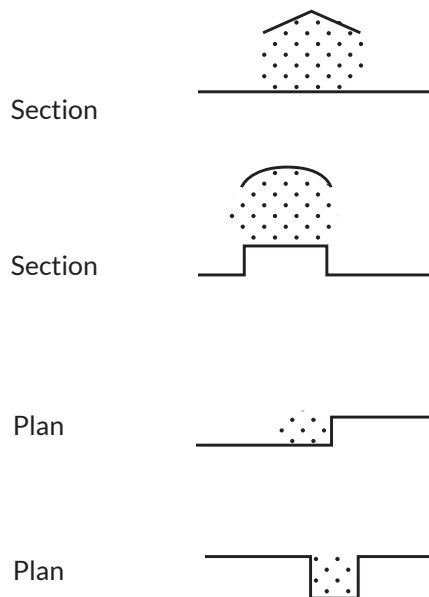


JUNCTION



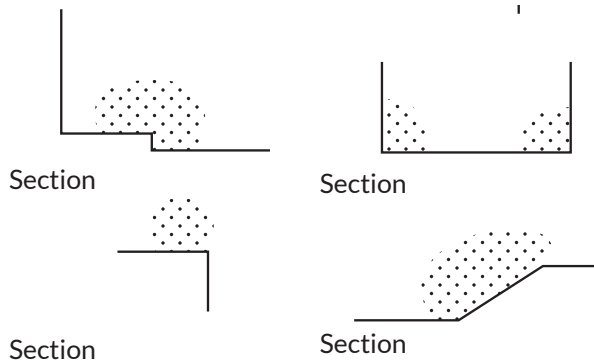
Junctions are a key spatial resource and are numerous in type due to the cities topography, form and activity. A junction, defined as a coming together, is an enabling spatial resource that taps into the qualities of critical mass. Here communing is essential as junctions become spaces of mediation between various parties. As reiterated in the introduction, the spatial resource, junction is concerned with the acts that they enable. The appearance of these spaces are primarily evident in areas of transport interchange, such as where the hills touch the plan or the areas of bus stations, however more temporal instances also occur throughout the day.v

NICHE



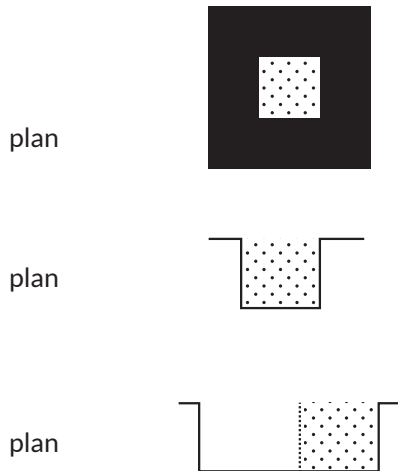
Niche's are unique as they are characterised as small unique and differentiated spaces within the city. They are recognisable as differentiated from there surrounding form. Such as the gazebo's on the hilltops, open sheds in public space, openings between buildings or a space created out of the main movement zone. The inhabitation of these spaces are also varied and unique ranging in activity and formalisation.

EDGE



Edges are the most common of spatial resources and exist in a wide variety of forms. Their condition comes about as being a transitional, and/or interface, and/or framing, and/or in-between elements found within the city. This condition of edges enables places for occupation at various scales and instances. Critically they contribute most significantly to the variety and diversity of the city form.

VOID



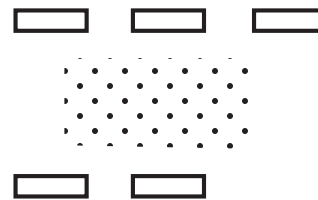
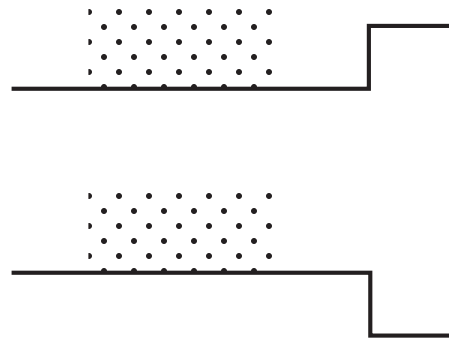
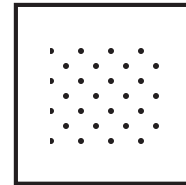
Voids are defined as spaces that are unoccupied, uninhabited and often derelict non-places within the city. With a high proliferation of these spaces they are positioned as being of critical value due to their innate potentiality however it is also seen as a potential threat due to the negative affects which voids may have on the city.

This dual nature of these elements have been recognised by various stakeholders and civic organisations intervening on various scales to yield the potentiality of these sites.

DELINEATED FIELD

The delineated field is a spatial figure born from two complementary qualities that are mutually reinforcing each other. The field is a surface which is large enough to accommodate certain types of commoning in multiple ways, be it a market, a performance or, for example, a protest. The field gains its uniqueness that differentiates it from the rest of the urban fabric by an easily recognizable perimeter that delineates it. The perimeter also accommodates certain types of commoning which are different from the types the field accommodates. These conditions may occur, for instance, on plazas but certainly not on any type of plaza, or may also be observed where level changes and stairs are combined with large enough terraces. Less recognizably, the delineated field may also be simply indicated by change of surface materiality or the way seating is arranged in public space.

The delineated field and the perimeter condition often invite the dual action of the spectator and the spectacle. The spectacle, here, may not mean an actual performance destined to be viewed, but rather the spectacle of everyday life that people observe from the perimeter. They, in their peripheral position, are slightly detached yet are always part of the viewer and viewed duo. In this sense, the delineated field is not only about proactive modes of commoning. These kind of spaces also invite people to silently share a mundane experience.

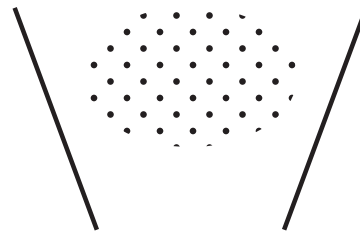
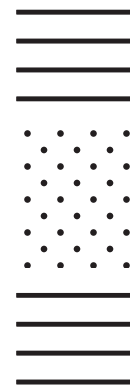
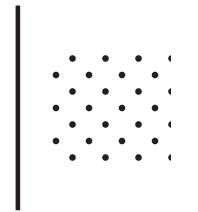


Break

The break appears in the city as the interruption of a recognizable pattern. The pattern, in this context, is not bound to spatial repetitions, it may also refer to a wide range of other elements such as sound or light effects, environmental conditions or alternating vistas. Spaces that in one way or another break a certain pattern may also be regarded as elements that enable a sudden alternation of spatial quality.

For example, a quite literal yet spatial break in Valparaiso is the landing of an exhaustingly long and steep staircase. The particular topography of the city leads to the proliferation of such staircases. Their length invite the users to stop on the landings and this stop extends to longer time period than a simple pause, it may even become a long evening of drinking with some friends.

Another exemplary case is the changing views that the city offers. The narrow, winding streets on the hills create a sense of enclosure which is occasionally interrupted with a space, an urban balcony that opens up to the vista of the bay. This openness, breaking the pattern of enclosures, invites people to stay and appropriate the space.



ENABLING ELEMENTS OF SPATIAL INHABITATION

In the hills of Valparaiso the logic of spatial resources transforms. Instead of being constituted of normative elements of appropriation their nature shifts due to the unique topographic conditions. As a result, spatial resources in the hills are composed of enabling elements of spatial inhabitation. This term in turn emphasized that their primary quality lies in establishing the basic conditions for settlement.

These enabling elements may be understood as the infrastructure of the commons in the sense that they are most often infrastructural elements, such as paths, dirt roads or staircases. They may be referred to as commons in as much as they are not constructed by any authority or institution but are realised by the people themselves. A staircase, in this way, enables a group of families to inhabit the steep side of a valley by each building their homes reachable only by the staircase.

The enormous capacity of people in the hills of Valparaiso to construct their own enabling elements is remarkable because they succeed in creating spatial ensembles that invite the involvement of others. As such, these simple gestures enable not only inhabitation but also the formation of smaller communities which engage in the commoning of these enabling elements. It is also important to note that these enabling elements are clearly taken care of. Often a path or a staircase is more thoroughly cleaned and maintained than the inhabitant's own gardens. This suggests that the users of the common spatial resource take shared responsibility for their enabling elements which further strengthens the sense of community that forms around the infrastructure of the commons.





SOCIAL RESOURCES

CULTURAL PRODUCTION ?

Valparaiso has always been a city closely linked with the ocean. From the first inhabitants, the Chango natives, who depended on the ocean for their survival, to the city as a port city trading with the rest of the world, and now a cultural hub nestled between water and hills. It is a city that for generations has been romanticised by poets and renowned for its varied cultural influences. In this sense Valparaiso owes its position, as the cultural capital of Chile, to the water.

The port played a significant role in positioning the city as key point in South America. As highlighted earlier, the time prior to the opening of the Panama Canal placed Valparaiso as a key port for trade worldwide. As a result the city had a strong European influence and many of its inhabitants were merchants and tradesmen from abroad. The port city facilitating trade from the hinterland became a junction between local and global cultural exchange. Up until the 20th century trade was highly integrated into the city and the public realm, allowing for a diverse and complex growth of a culture that took place in the open. The unique situation also brought with it a revolution of education, entertainment and untimely influencing the aspirations and lifestyles of the cities diverse citizens.

The lasting legacy of this growth has positioned Valparaiso as unique in the landscape of Chile. The city hosts various universities and has become a major tourist attraction. Poignantly this is reflected in its population, as it is the 3rd biggest city in Chile. Although the role of the port has fundamentally changed in the 21st century with regard to its interaction with the city and influence

on culture no longer being so strong, Valparaiso remains a transient city. The reason for this is that the city is still dominated by a temporary population, as tourists and students are estimated to account for 1 040 000 people, while the local population is estimated at just over 300 000. In turn Valparaiso remains a city highly influenced by external factors and thus its culture is one of constant exchange.

Today the city hosts the most festivals in Chile and is regarded as an international capital for graffiti. In 2003 the historic quarter of the city was declared a world heritage site of “mankind”. A leading reason for the declaration was due to the amalgamation of elements constituting the region that set it apart as a notable case for preservation. Yet, from various perspectives these conditions of the modern day Valparaiso have sparked numerous debates. The most critical of which have highlighted an “invention of culture” - a forced incentive that has not been developed locally. The high levels of youth combined with a culture of partying and carnalisation of the city, which seems festive at the surface but lacks substance and is a constant nuisance to the local population, has been met with resistance.

A forced culture and the temporality of the city is positioned as being a leading contributor to the uncertainty of Valparaiso’s culture and social dynamic. The historian Archibaldo Peralto (2016) highlights that what makes the city special is its diversity and difference - the communities of the hills, the commerce of the streets, the people and the daily life that has defined the city. However the carnival city threatens to overshadow these aspects. Resident and artist, Gonzalo Ilabaca,



"The man who does not play has lost the child within him." - Pablo Neruda was a highly influential poet and held political positions as well. He had lived some of his life in Valparaiso and is one of the significant influences of Valparaiso being positioned as a cultural Capital of Chile. lamfe credit : livingthedreamrtw.com

highlights that in principle there is nothing wrong with this carnivalisation culture however if it is to become inclusive it must be underpinned by dignity – to make events for all the residents of the city.

The question being - in a city that faces rapid annual transitions while facing socio-economic issues - how could one develop a more inclusive environment which caters for both the local and the transient in its cultural milieu. As a cultural capital, Valparaiso holds a significant role within Chile. It remains a benchmark and test bed, however with this role comes a great responsibility in nurturing and developing Chilean culture, rather than becoming a theme park for youth and the tourist.

*“Any European who wants to come to Valparaiso and wants to see archaeology. I would say to him – don’t come to Valparaiso, there is no archaeology here. Go to Machu Picchu, go to Tiwanaku, go to Easter Island. He who wants to see marvellous architecture, he can go to Lima, to Quito or the old Havana. We are the international capital of **harmonic disorder**, that we are.” - Historian Archibaldo Peralto*



Los Ambuloparlantes by Gonzalo Ilabaca

2009

Tourism

It is estimated that around 3 million tourists travel through Chillan annually of which most are South American, however in recent years European tourist numbers have been steadily climbing. With its long coast and varied climatic, topography and cultural attributes; Chillan offers travellers the opportunity to gain a varied experience, which has positioned Chillan as a key tourist destination.

Tourism is a major industry in Valparaiso. It accounts for a large segment of revenue for the city and locals. The industry has thus become a primary focus for government investment into cultural amenities and events. From the mapping of Valparaiso it is clear that tourist amenities are primarily focused around the World Heritage Site and surrounding hills, while Airbnbs run predominantly along the coastline. This is particularly important in understanding the dynamic of the city as tourism is a localised industry that takes place in particular areas of the city. The impact is that there are stark differences in the industries and services found in tourist areas and non-tourist focused areas.

This stark difference has sparked debates on gentrification and displacement of local communities while underpinning a sense that the “culture” of Valparaiso is somewhat forced and unauthentic. In addition to this tourism fundamentally impacts the daily life of people, as the temporary meets the permanent. It is this dual dialogue of tourism being both a positive and negative influence on the city that has highlighted a key issue – who is this city for? One of the primary perceptions being that tourism only benefits a minority of individuals.

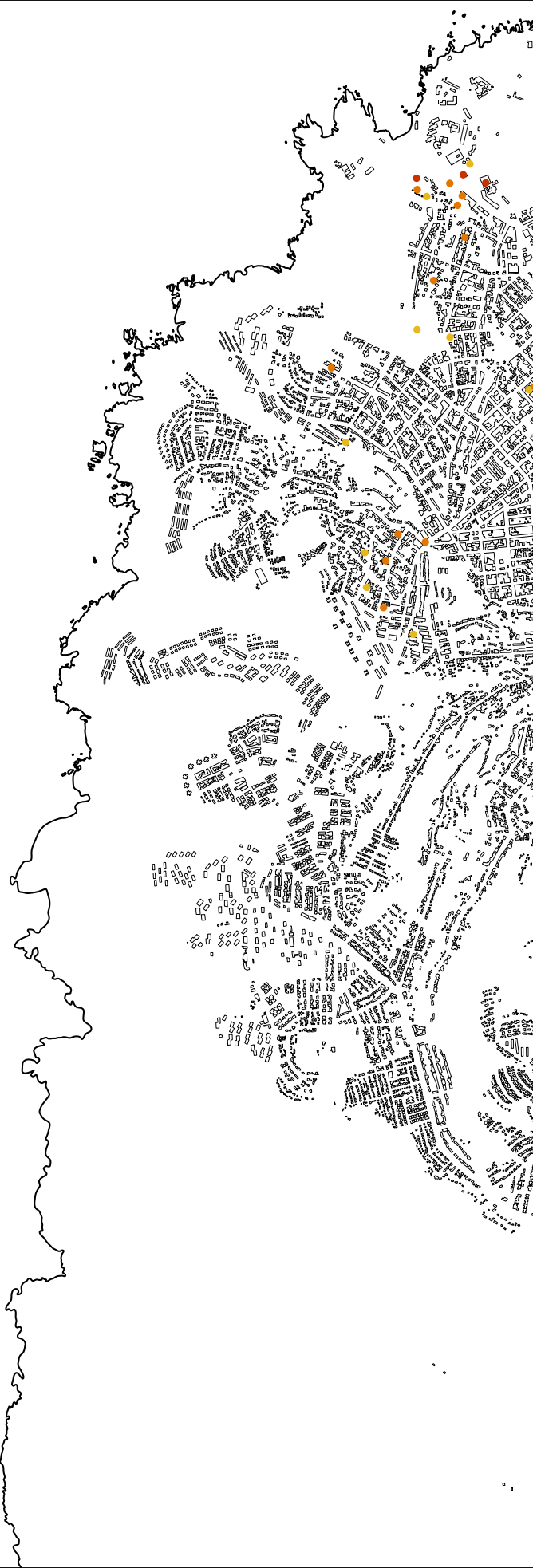


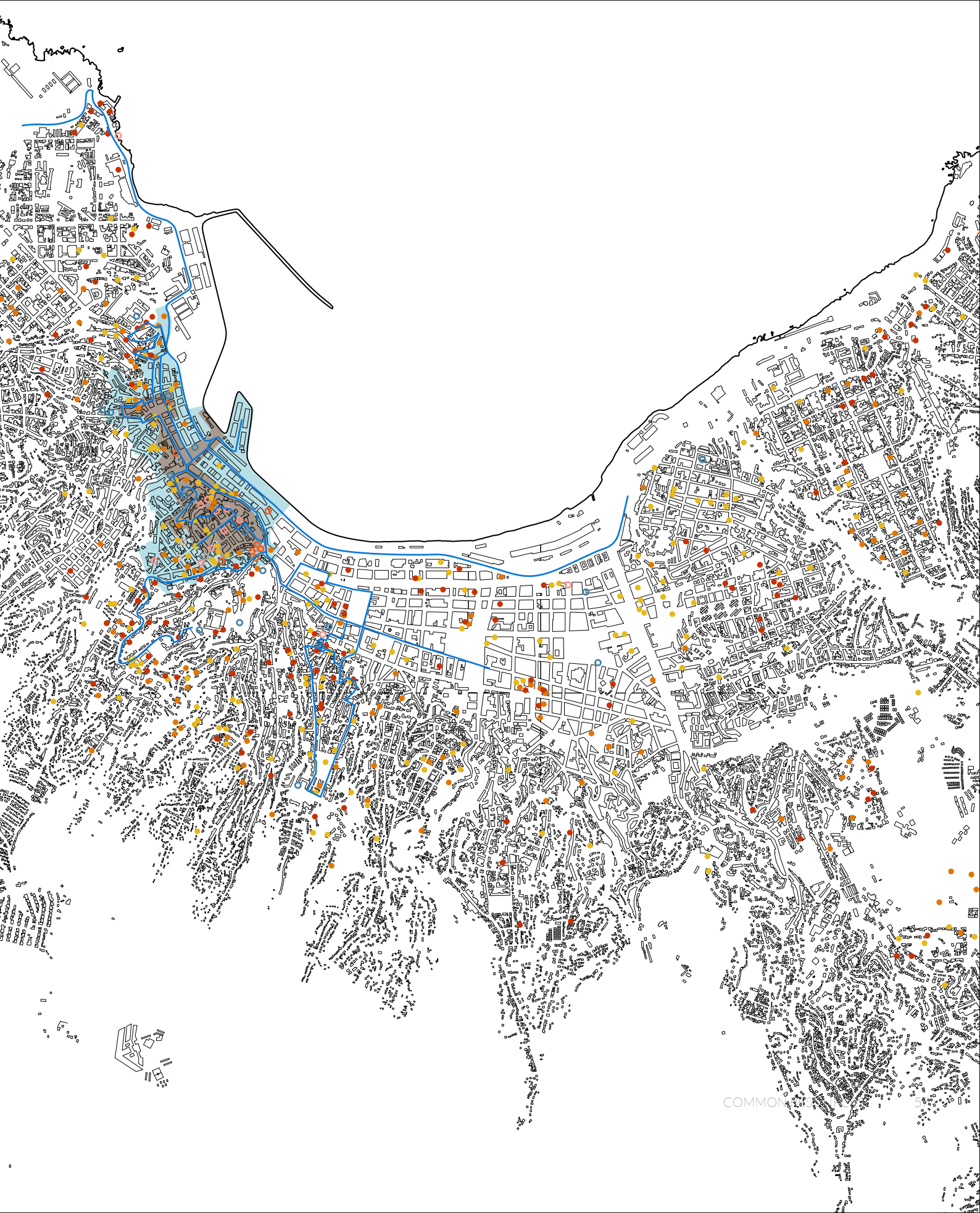
Graphity and child by Michael de Beer

Tourism is a major resource for the city. Its commercial value has underpinned governmental support for the industry, however a second element to tourism is cultural and intellectual exchange. Although a high percentage of visitors are holiday makers, sightseers and “experiential hunters”; others return – creating a second dynamic of - the temporary local. Those who return regularly to be inspired and contribute to the city, who are able to work anywhere and choose Valparaiso. Although their impact remains unquantifiable, these individuals play a significant role in the continued cultural exchange that has defined the city over the centuries. In this sense it these people that have overtime helped develop the city and its unique culture. Tourism as a resource is a very complex topic and needs to be carefully approached when discussing interventions in the city due to its varied positive and negative impacts.

Legend

- Tourist Routes
- Buffer to WHS
- World Heritage site (WHS)
- Sights
- Restaurants
- Restaurants
- Airbnb - Low range
- Activities
- Airbnb - Mid range
- Shopping
- Airbnb - High end










COMMON

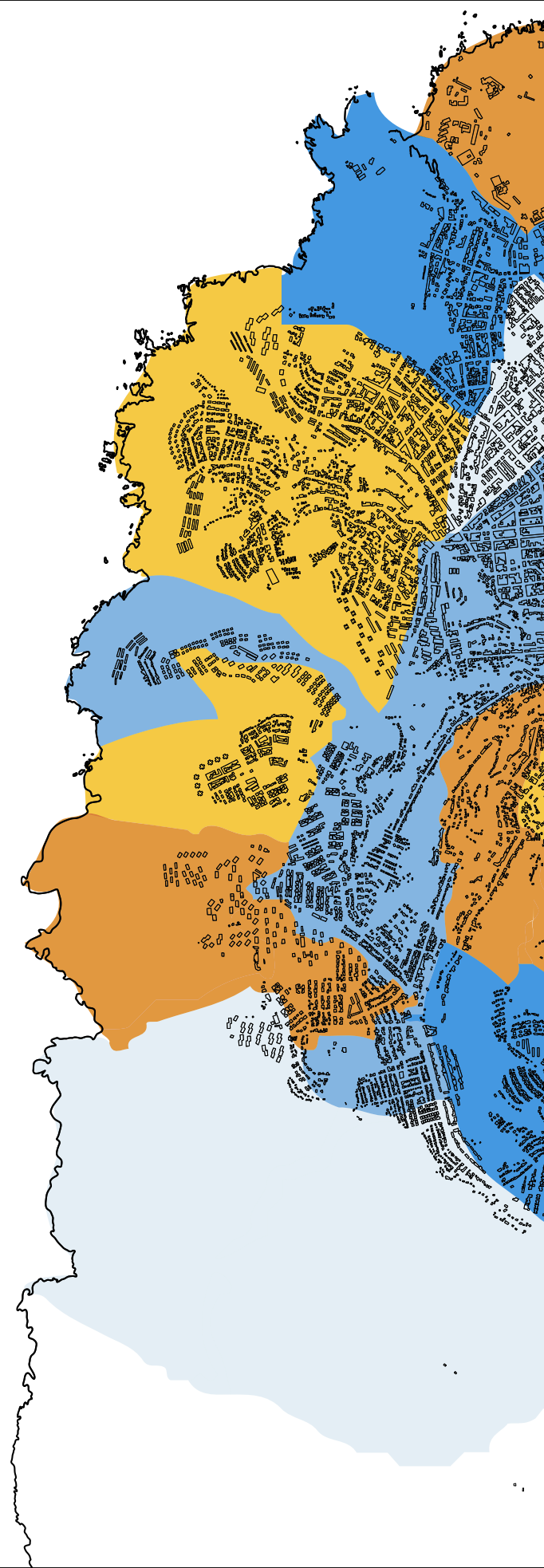
Social Economy Development level

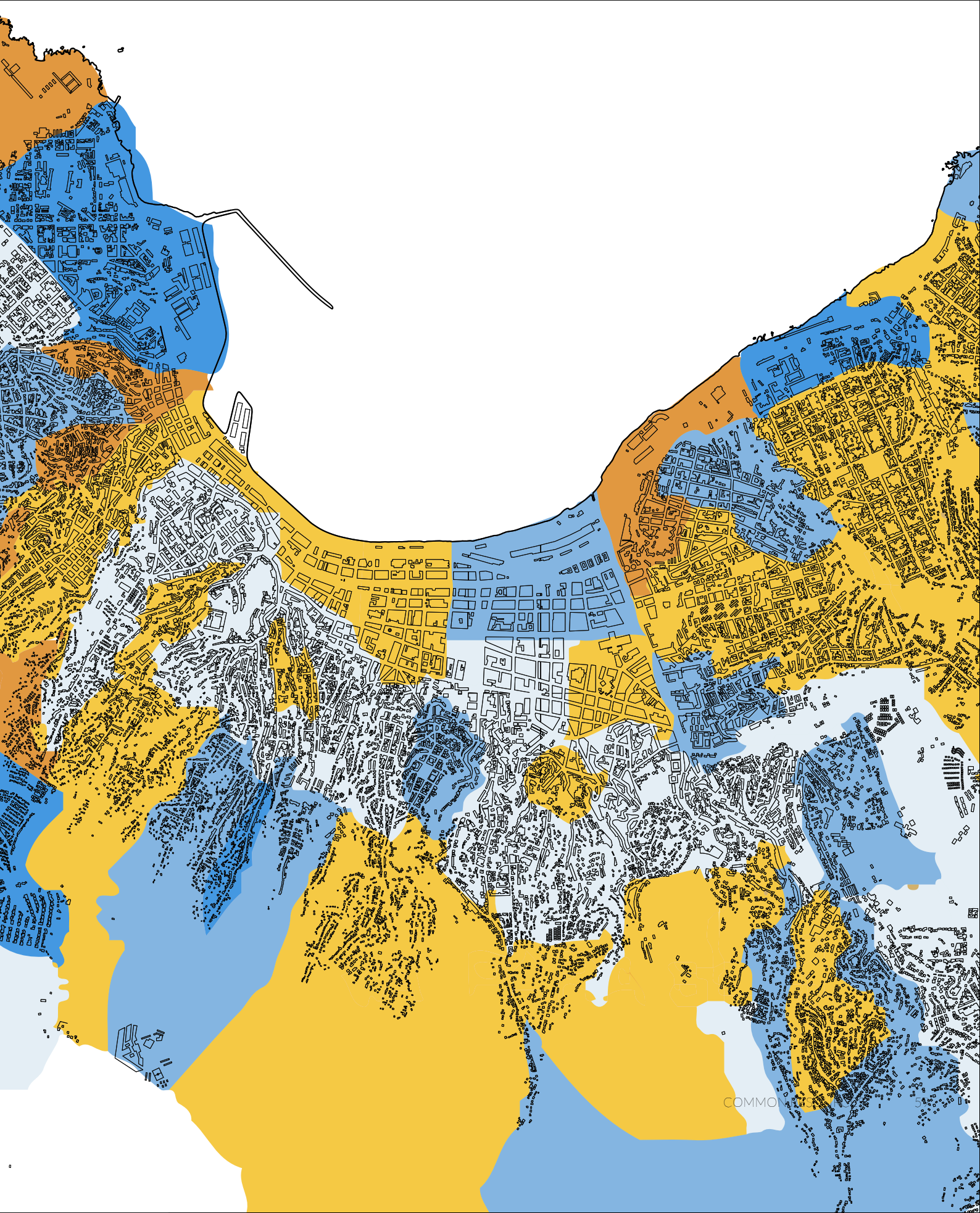
The socio economic development level refers to various aspects related to the quality of the built environment (infrastructure, transport, maintenance, housing, amenities) and its socio dynamics (house hold income, poverty, access to education and other critical needs; employment and quality of life). The mapping, specifically looking at Valparaiso (excluding Vila De Mara) is indicative of differentiated urban environments within the city. Poignantly the mapping has shown dramatic differences that are strongly related to the topography of the city, highlighting a marked difference in the quality of life experienced in various areas due to differentiated situations which are closely linked to the communities which live in these environments.

In understanding the dynamic the following section on spatial communities aims to introduce how communities are located within the city. The research read in conjunction with the socio economic development mapping is telling of strong distinctions between various communities.

Legend : Socio-economic development level

-  Very High
-  High
-  Medium
-  Low
-  Very Low





Socail Agency

The strong communities which are present in the hills have created an environment for civic organisations to form. Many of these organisations have specific focuses and are self initiated by residents within the communities. The activities of these organisations range from education, culture, to maintenance, safety and development.

Cerro Cordillera, one of the oldest hilltop communities, serves as a good case of the diversity of groups which work closely within these community. The area faces a range of issues from those of unemployment to safety and development concerns. The follow community organisations show how members of the community have come together, drawing on social capital, to solve and development the neighbourhood.

Community Action Workshop (TAC)

The organisation was founded by neighbours in 1989, as a means for the community to come together and actively engage in making a better neighbourhood. Their premise is first to create a network of individuals as a collective to draw on the “social capital” of the community. In doing so the workshop has engaged in a range of activities which aim to improve the lives of Cerro Cordillera community.

Gutenberg library TAC

A community library established by the TAC. The community library aims to underpin the work of the TAC and service as a compendium of local knowledge and open space for discussion.

Espacio Santa Ana (Santa Ana Space)

Underpinning the notion of communing, the community centre draws people together to recover abandoned spaces within the neighbourhood. The intentions of this initiative are very broad but essentially the focus on development and occupation issues.

Roto Porteño

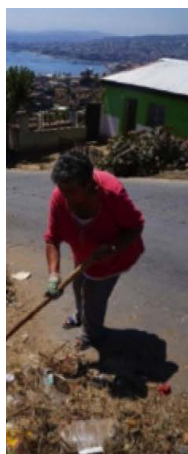
Is an association of social organizations in the Cordillera Hill, that aims to retain the cultural heritage of the area. In so doing they are interested in events and the occupation of the public realm.

Cerro Cordillera / Neighborhood Joins

Active neighbourhood organisations that meet regularly to focus on specific issues in the area. Run as a board of elective residents, the organisations tackle a range of issues and often perform a mediation role for civic action and governmental engagement.

Sports Clubs

Community-based organisations that operate largely in a self-managed manner. These clubs comprise sub-sports areas, integrating all age ranges according to activity and number of participants while advocating for active youth development.



*Images of the various work of the different organisations in the Cerro Cordillera area. Passages Cordilla (2017)
Intervention in Cerro Cordillera. Valparaiso*

SOCIAL AGENCY IN INFORMAL HABITATS

Crossing the Alemania avenue, the nature of urban scape changes. These areas are considered the less consolidated part of the city, where urban infrastructure is only partially present and rural and urban forms of living coexist. The ability to dwell in these spaces, the know-how of constructing informally and on scarce resources, can be considered as valuable building culture and knowledge.

Chile is the most rapidly urbanizing country of Latin America and this rapid growth is most vividly exhibited in fast the growing informal settlements on the fringes of consolidated cities. Although these settlements are highly informal, as the city grows the institutional urban boundary is gradually extended and these settlements become officially recognized. Therefore, the logic of self-urbanization at some stage meets the urban planning of the municipality and becomes a foundational ground for further development.

One of the reasons Chilean families prefer building on essentially occupied land as opposed to renting official housing is that the “dream of home ownership”. This dream is one of the most important values these families thrive for. It follows that, for the families who inhabit informal settlements, their houses behold not only material but cultural and psychological value. Their lives are deeply invested in making the most of their land and throughout several years they keep adding extensions to their homes. In many aspects the informally constructing inhabitants become the masters of building on the extremely steep topography offered by Valparaiso. They always regard their current home as a fragment of the house they would like to achieve and therefore their mastery is also found in the specific way of

thinking and planning: they can anticipate that which is yet to come in the unknown future.

One of the more problematic aspects of self-construction is associated with the numerous fires and earthquakes that Valparaiso has and most likely will experience. The construction materials used in informal settlements are mostly highly flammable and their way of structure construction is not strong enough to withstand earthquakes. Naturally, building with scarce materials also means that the quality of these is rather low and therefore no matter their knowledge on earthquakes and fires they hardly find alternative solutions.

In 2014, after the worst fire in the history of Valparaiso, more than 3000 families were left without a home. This is when a young group architects formed Minga to help some of these families rebuild their homes. The value of Minga’s work lies in their choice of materials and in their ways of operation. The materials they use are non-expensive, locally sourced, often recycled materials that are more durable in the event of a fire. These materials include, for example, earth, straw, wood, glass bottles and tetra packs. Moreover, their technique of constructing with the logic of a main wooden frame and infill panels makes the construction much more durable against earthquakes. Regarding Minga’s way of doing, they are not simply rebuilding the home for the families. They are inviting the whole community to take part in the reconstruction and thereby learn it themselves. In short, their work builds on the value of the self-construction ability and the culture of learning by doing that informal settlements behold.



The fragmented, multi-level homes as a result of informal construction, http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0718-83582013000200004



The Minga group and the community celebrating, <http://www.plataformaarquitectura.cl/cl/626029/minga-valpo-arquitectos-y-la-reconstruccion-sustentable-de-valparaiso>