

WASTE DYNAMICS: Rethinking public space as an agent of change in the Reconquista River informal settlements. Buenos Aires, Argentina.

The modern city is in a crisis of inequality. Almost a third of the world's urban population in developing countries resides in informal settlements and this proportion continues to increase. In Buenos Aires, Argentina, the number of informal settlements almost tripled during the last 15 years. The intention of this thesis is to expand the programmatic possibilities of public space as an agent of change to face this reality. Public space has the capacity to upgrade the living conditions of informal settlements by building ecological, socio-political and economic networks of connections with the surrounding context. To define the nature of these connections, particularly in undocumented sites, the design should be informed by an on-ground mapping of local spaces and narratives, uncovering the unseen needs of the territory.

The case study is the informal settlements of San Martín, Buenos Aires, located on the edges of the highly polluted Reconquista River and surrounded by landfills. Answers can't be generalised. Therefore, a mapping of two selected sites -'Villa 8 de Mayo' and 'Barrio Independencia'- was undertaken, responding to distinct stories and specific levels of vulnerability. The notion of recreational public space has been pushed to respond to the local urgent needs: whilst the first site is susceptible to flooding, the second presents pollution problems. Mapping the areas comprised the reinterpretation of provided diagnosis research developed on site. By assembling the formal and informal grids, the networks of daily routes and jobs, the local processes of gathering, the fluctuations in water bodies through time, the distribution of needs, the political voices, fresh insights arose enabling actions to be taken. Waste in this context is not inert; it means new land surface to settle and a source of employment to communities in need. Consequently, public space design responds to its dynamics, improving the relationship between housing, waste and flooding in the first site whilst legitimising the waste sorting as a formal job in the second site. Public space provides the tools for the settlements upgrade contributing to the river revitalisation. Its expansion is transferred to locals, as they are their users, owners and managers.

The project reacts to three narratives resulting from the mapping process:

Connection between people and the environment: WASTE SORTING LEGITIMATION

Life revolves around the waste. Residents established a new occupation as a result of the lack of job opportunities: waste collection and recycling, and they are currently fighting for their recognition. Every day, thousands of residents cross the river to collect waste from the largest landfill of the country. The controlled access allows residents to stay for only 40 minutes, being forced to carry the waste to their neighbourhood -particularly 'Barrio Independencia'- for sorting it out. Consequently, waste is piled up in the settlement and leftovers are abandoned in the streets and water bodies, due to a deficient municipality waste collection.

Therefore, public space will legitimise waste selection as a formal job, providing it with a proper quality space. Opportunities of waste will be extended to other fields such as compost for soil production. These practises are jobs but also tools for the settlements own environmental upgrading process. Compost can be used for planting over contaminated soils and piles of waste will be joined in accessible areas, facilitating its collection, instead of being spread across the settlement. Economic benefits from public space usage will facilitate the residents' participation and the emergence of a community-led management.

Ecological benefit: WATER RECLAMATION

The site's waterbodies have been informally transformed and polluted due to lack of sewerage supply. What is more, in 'Villa 8 de Mayo', the nearby lagoon has been filled with waste for increasing the surface of vacant land for informal housing settlement, intensifying flooding events. In 'Barrio Independencia', water systems have been modified to give space to a landfill.

Public space will reclaim the existing water bodies by exposing new possibilities of water usage for the settlements benefit through decentralised water and sewerage supplies in communal spaces. As a result of the implementation of diverse water collection systems and water recycling, inhabitants will be more conscious of the possibilities of water, which hopefully will make them reconsider filling watercourses with waste. This includes: rainwater tanks in dwellings and communal water tanks of recycled black water resulted of an anaerobic buffer reactor (an improved septic tank) for irrigation, toilets, and laundry purposes. In 'Villa 8 de Mayo', the public space is designed as an elevated deck, a new platform in a context of muddy roads and flooding.

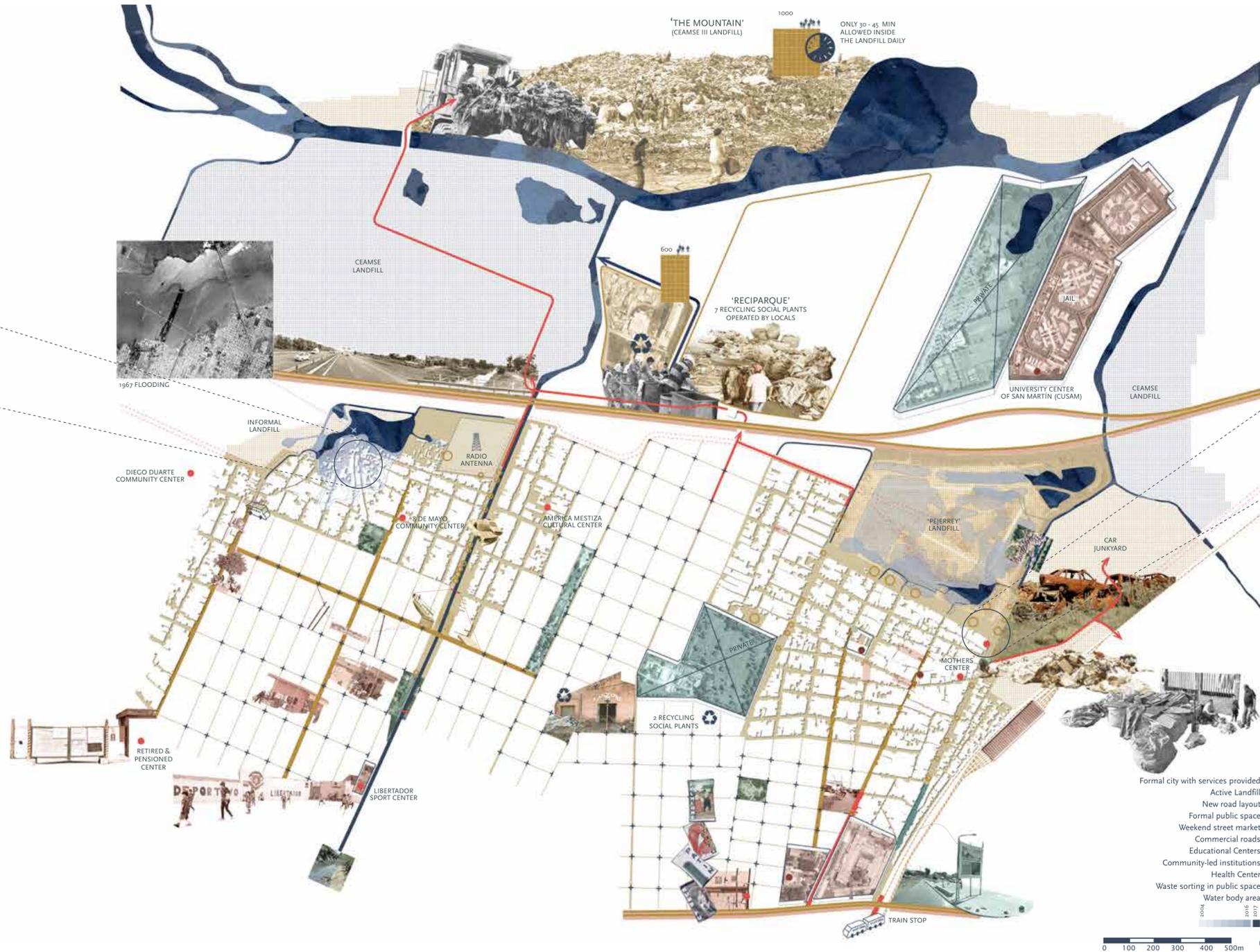
Socio-political benefit: COMMUNAL VOICES AND IDENTITY

The recreational public spaces across the area are fragmented and reduced to a very few humble playgrounds, whilst the largest green areas are private and fenced. Within the informal settlements, the streets are the public space and educational or community-led centers function as magnet zones, attracting residents through an extended offer of indoor activities. These institutions also have a leading role in channelling community demands to different entities.

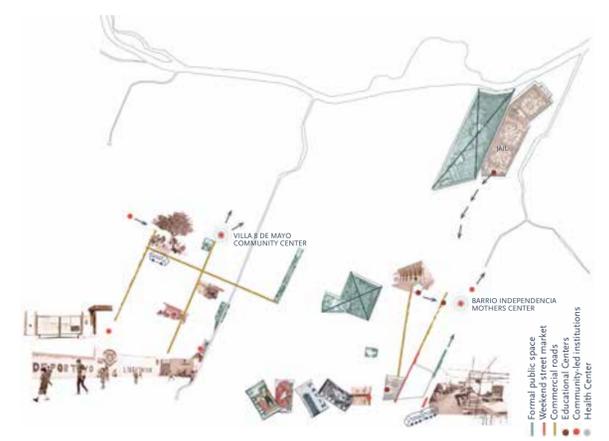
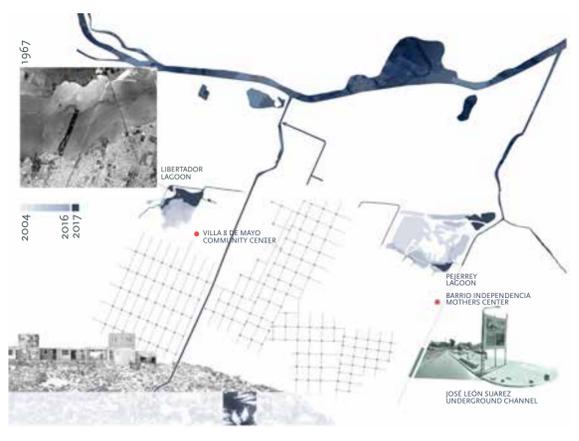
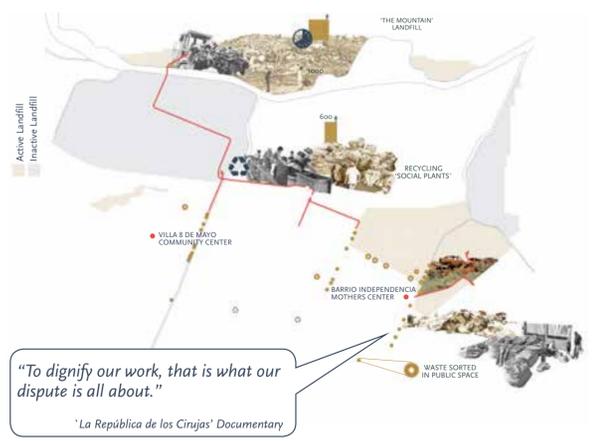
Projects expand the private/public space by breaking there boundaries, opening the road to the few private green spaces of the area (Villa 8 de Mayo), or extending the movement of the streets to available wastelands (Barrio Independencia). To stimulate the public space activation, safety, and to ensure a political voice, programs are associated to a nearby guardian within the informal settlement (if it exists). Their particular programs and activities will be protracted from the building to the outside. The services supply and the waste sorting will overlap existing uses and potential practises of the site, inviting reutilisation and transformation of the same space in multiple ways to shape a local identity.

Rather than consolidating public space solutions, the project aims to generate flexible responses that adapt to different uses based on the opportunities and limitations that can arise through its development. What is more, the project provides a vision of better quality open spaces in vulnerable areas that have normally been excluded from public investment. This new aesthetic also contributes to breaking the feeling of danger and boundaries between the formal and the informal city.

MAPPING OF UNSEEN MOVEMENTS



UNCOVERING THE SITE'S NARRATIVES



TYPOLOGIES

SITE1: JOBS

SERVICES

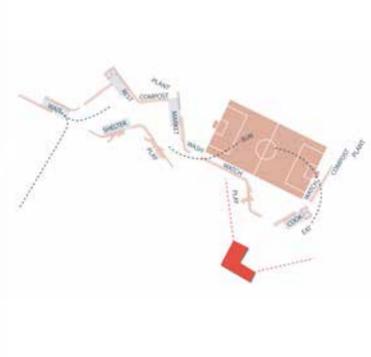
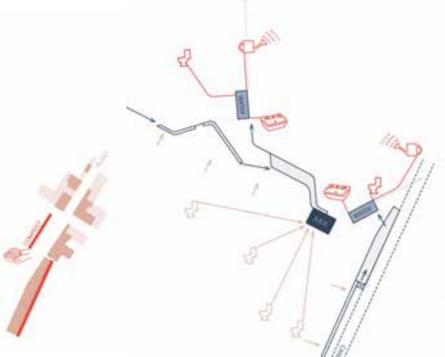
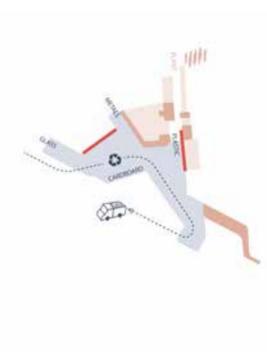
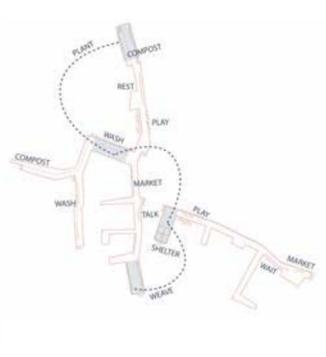
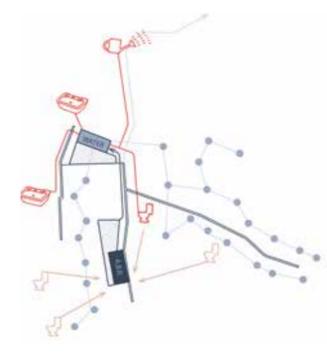
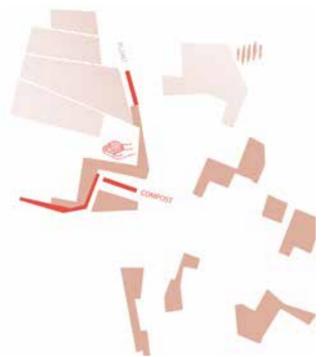
RECREATION

SITE2: JOBS

SERVICES

RECREATION

TYPOLOGIES



TWO SITES, TWO LOCAL RESPONSES
JOBS + SERVICES + RECREATION



VILLA 8 DE MAYO
RESPONSE TO CONTAMINATED & FLOOD-PRONE SOILS



BARRIO INDEPENDENCIA
RESPONSE TO WASTE SORTING



MULTIPLE USES + SEWERAGE & WATER TANKS

