

Reusing urban elevated infrastructures in European cities

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Abstract. The widespread use of automobiles in the past century led to the creation of barrier-like structures within cities worldwide such as elevated infrastructures. Fortunately, in recent years, there has been significant change in recognizing the potential of underdeveloped land beneath these structures. These spaces, often unused, can be transformed into valuable assets through tactical urbanism initiatives and urban regeneration plans. A group of young architects in Italy, led by Renzo Piano, aimed to repurpose the space beneath a viaduct in Rome into a social hub. Similarly, in the Netherlands, a vacant highway area was transformed into a vibrant mix of commercial, leisure, and sports activities. In London, a bold project created a symbolic connection between the elevated infrastructure and an imaginary house trapped beneath it. In all cases, there was a need to restore the connections and to piece back the remnants of former neighborhoods and communities. These projects can serve as inspiration for both abandoned and active highways. This article aims to examine the impact of this kind of infrastructure projects on their urban context. Another objective is to study the architectural and urban design practices used and to learn what worked and what didn't meet expectations.

Key words: overpass, reutilization plans, temporary use, strategies

1. Introduction

The background of this study is based on the examination of urban overpasses from around the world, some of which have been considered in recent urban interventions and proposals. They present numerous advantages and opportunities, but also downsides and risks, which I found to be beneficial to explore when discussing the topic of re-using and integrating urban infrastructure in urban areas.

In cities, elevated road infrastructures such as overpasses or flyovers, have for many years been the subject of debate in the fields of urban planning and architecture because of their disruptive nature. Most definitions regard an overpass (or flyover) to be a bridge-like structure that carries a road over another road, railway, or water. Such a structure is an important mobility corridor, facilitating traffic and the flow of goods in and out of urban areas. Unfortunately, many such infrastructures have caused disruption from the start, with poverty, criminality and abandonment issues appearing immediately in the direct area underneath the structure and in the vicinity. While they can be torn and demolished, which is a difficult and expensive method, in many cases preserving them is the more advantageous option. In this study, the intention is to explore the solutions which tried to work with existing and challenging infrastructures.

Acting as physical and social barriers¹, elevated infrastructures traversing dense urban areas have prompted the appearance of „residual spaces“², „gapspace“³, or „urban voids“⁴. They are leftover spaces underneath and next to the overpasses and they are in dire need of attention when it comes to reclaiming land through urban intervention. Sometimes, they

¹ Biesecker 2015

² Galdini, 2020

³ Hormigo and Morita 2004

⁴ Secchi 2007; Katkar 2021;

present a valuable space resource which can capture the attention of urban specialists and the public administration. As a result, landscape and architectural proposals coupled with new and diverse economic activities could help the surrounding communities connect once more. For this reason, proposals have opted for different implementation approaches with various budgets, resources, or time limits.

2. Two types of interventions

The methods used in the revitalization of such residual spaces of elevated infrastructures can be broadly classified into two categories: temporary and strategic use. While strategic implementation involves the execution of long-term plans, objectives and defining a clear vision, temporary use actions are short term and offer a more flexible and experimental dimension to architectural and urban design projects. They both play pivotal roles in shaping a project, providing dynamic solutions that respond to evolving societal demands and trends. Both methods have their own advantages and drawbacks and in addition, they offer lessons to be learned from when trying to rehabilitate such a space.

An important component of many temporary use projects is tactical urbanism which has become a valuable tool for activating vacant or underutilized spaces. Tactical urbanism is used as an instrument in the regeneration of many challenging areas⁵ with quick, flexible, and low-cost approaches. It involves repurposing spaces for a specific activity, involving the local community and working to improve a space through experimentation and temporary solutions. By applying tactical urbanism concepts, temporary use projects can be built quickly, allowing communities to test ideas, get feedback, and show the potential of a place without the long-term commitment and expense associated with traditional planning methods. Its focus on direct actions and community involvement can lead to visible changes in the environment and can improve and even help start a regeneration of a desired area.

It is noteworthy that these design approaches provide a more intricate perspective for a project and that there are instances in which the distinction between architecture and urban design becomes hazy. When talking about elevated infrastructures, we inevitably involve the space underneath, which can be built or left open and redesigned. As a result, both components – architecture and urban design – are heavily used in transforming such a space, making the project a complex one.

The focus of this study is to understand the means that the space underneath the elevated infrastructures has been reactivated in urban regeneration projects. Examining how architecture and urban design were applied to the execution of these projects is necessary in order to address this. The effects of these regeneration methods can offer a broad view of what went well and what could be improved for future similar projects. The solutions depend, of course, on the local circumstances and context. The purpose of this approach was intended to reveal how the design tools function, if they were successful or whether they could have been used differently.

The scope of the research includes the main elements of architecture and urban design that are integrated in complex projects concerning the re-use of urban overpasses.

⁵ Cariello *et al* 2021

The method of this study consists in the study of several examples, from which three were selected to better illustrate and compare their differences in the implementation approaches (strategic versus temporary), along with their involvement in integrated urban developments. Analyzing these three projects permitted a stronger understanding of the way overpasses are used in major urban developments. These are: the A8erna project in Koog aan de Zaan, The Netherlands, Under the Viaduct or Viadotto Dei Presidenti project in Rome, Italy, and Folly for a flyover in London, UK.

3. Three types of projects

The overpasses chosen for this study had different urban regeneration methods. A strategic implementation was used for the A8erna project in The Netherlands, while temporary use was chosen for both Under the viaduct and Folly for a Flyover.

The A8erna project in the small town of Koog aan de Zaan, north of Amsterdam, involves the transformation of the space underneath a portion of the A8 highway which traversed the dense urban area and divided it into two different parts⁶. The connection between the former city hall to the north of the highway and the church square to the south was lost inevitably by the creation of the monumental structure in the 1970s. In 2003, the local authorities made the decision to change things for the better with the assistance of NL Architects and with the participation of the community and local businesses⁷.

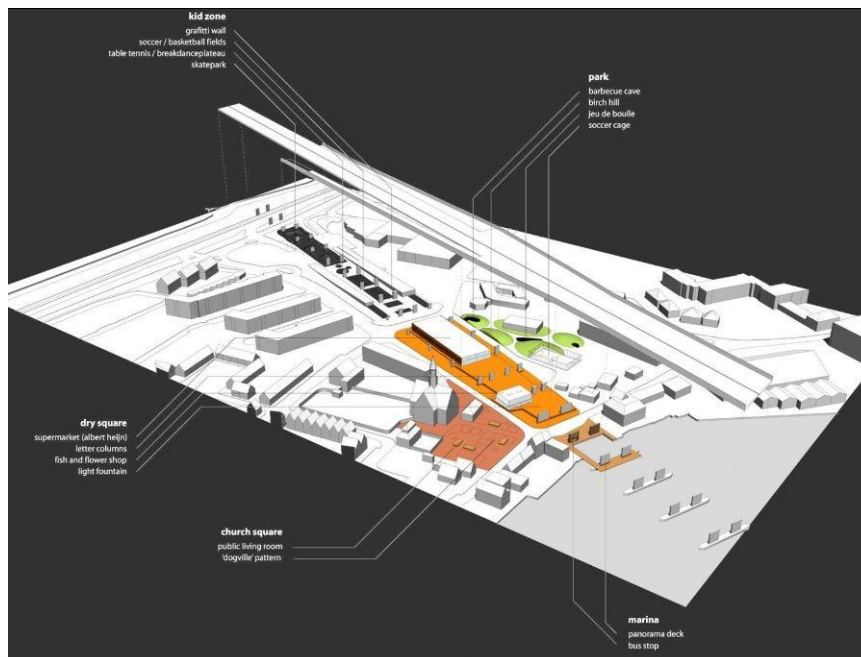


Fig. 1. The five main design areas of the A8erna project: Kid zone, Dry square and Marina directly underneath the overpass, with the Church Square and the Park in the direct vicinity of the infrastructure⁸.

Their strategy involved building in phases, community involvement and a private-public partnership. Firstly, an entire document was developed, expressing the needs of the residents. They later found a place in a physical proposal which was laid out in three phases, spanning a period of three years. Thus, the local authorities ensured that the project was

⁶ van't Hoff 2016

⁷ Elewa 2019

⁸ NL Architects 2006

carried out accordingly, in terms of budgets and time constraints. This led to the conversion of a monotonous parking lot and dead space into a redeveloped place with diverse public uses (Fig. 1). These changes brought back connections, accessibility, and increased the economic development of the area⁹. Though minor changes to the original project still happened afterwards, with the transformation of the green space to the north of the overpass into a parking lot, the main vision of the project still remains, which led to the creation of the „civic arcade”¹⁰.

Folly for a Flyover was a temporary use project which still has some ramifications today, in the form of a skatepark and leisure area underneath the A12 flyover in East London. It was intended as a temporary architectural installation whose goal was to transform the space underneath the flyover into a cultural venue. For a period of six weeks, Assemble, the team behind the project, led the revitalization of the neglected area by constructing an entire stage area with seating and a house which acted as a symbol and sculpture (Fig. 2). The highlight of this project was the community driven initiative to transform an overlooked area underneath an infrastructure into a vibrant hub of activity, using volunteers and residents.

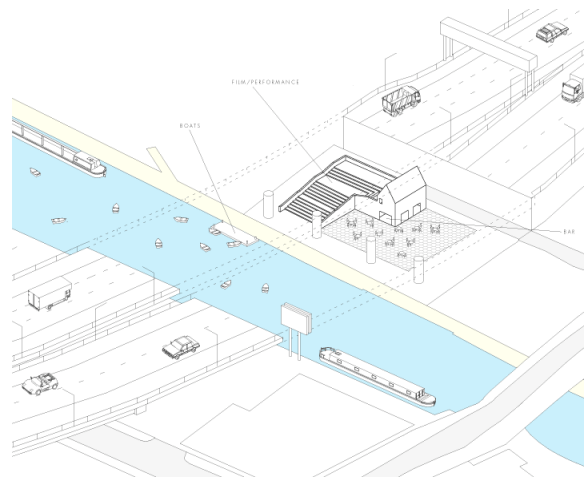


Fig. 2. The proposed ensemble of the house and amphitheater of the Under the folly project in London¹¹.

Another temporary use project was Under the viaduct, which was developed in Rome, in 2014. The project was part of an EU-funded planning tool – TUTUR (The Temporary Use as a Tool for Urban Regeneration) which called for the introduction of temporary uses in vulnerable areas, such as the underside of an overpass. The idea behind the project was to transform the space underneath the abandoned parts of the overpass into a public space which could lead in the future to the regeneration of the neighborhood split by the elevated infrastructure (Fig. 3). The idea of revitalizing the abandoned infrastructure of the *Viadotto dei Presidenti* was part of the objective of using temporary use in order to help foster a regeneration process in the area¹². This implied using minimalist intervention tools which could be dismantled effortlessly at the end of the period trial.

Like both Folly and A8erna, Under the Viaduct employed a participatory process that led to the creation of local support groups which held workshops for ideas and helped shape the

⁹ Cho 2021

¹⁰ Ministry of the Environment, Conservation and Parks (2014)

¹¹ Frearson 2011

¹² Patti and Levente 2017: 231-48; Galdini 2020

design of the new place. With a focus on increasing public amenities in the guise of playgrounds and gathering places and creating new pedestrian and bike paths, Under the viaduct managed to transform the space for a while but ceased to exist at the end of the project, unlike Folly.

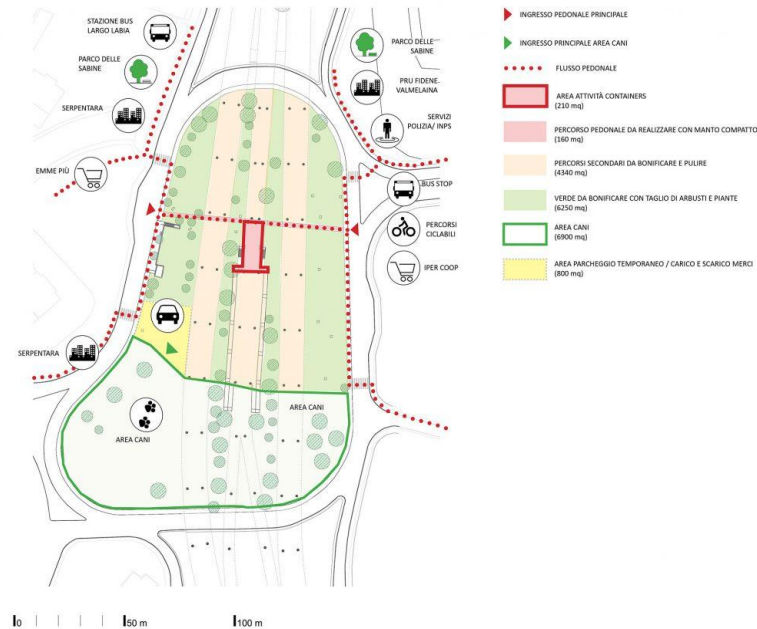


Fig. 3. The site area of the Under the viaduct project in Rome¹³.

Tactical urbanism was applied in both temporary use projects, involving the community and volunteers in workshops, seminars and the execution of the construction plans in both Rome and London. Volunteers helped draft ideas and construct pieces of urban furniture, using recycled and donated materials.

All three projects are complex, with architecture and urban design working together in different measures. In all three cases, architecture played a distinct part in shaping the space, by becoming either the face of the project such as in the case of A8erna or becoming a support to cultural and leisure activities which Folly for a Flyover and Under the Viaduct both succeeded in introducing under the respective overpasses. Urban design was used to generate a better public space, influencing the public image of the areas. Public space was perhaps the most important component to be considered when talking about a derelict space in need of rehabilitation, but it also served as a link to connect separated neighborhoods and communities. The synergy between the two components can optimize an integrated design, creating a harmonious balance between the micro-scale architectural aspects and the macro-scale urban context or landscape¹⁴.

4. Architecture and urban design

4.1. Components

For each site, architectural and urban design interventions played a different role, with a distinct design strategy. Their synergy transformed them into complex, integrated projects.

¹³ G124 2014

¹⁴ Shannon and Smets 2010

Therefore, several predominant components were identified, which are more or less encountered in all three projects, on a different scale, depending on the uses, urban context, or concept (Table 1).

These features can be summarized in three ways:

- Functional component – as support for the main economic activities such as retail or culture
- Aesthetic & landscape component – for enhancing the visual appeal of the built environment and of the surrounding area
- Symbolic component – representation of resistance against a massive motorway

Table 1. Types of dimensions present in the three complex projects.

	Project	Dimensions of the complex projects
1	A8erna	Functional: (commercial buildings): supermarket, flower shop, pet shop Aesthetic & landscape: glass and metal cladding façade creating a modern and sleek image in the concrete environment of the overpass; orange paint and wooden deck creating a more vibrant landscape.
2	Folly for a flyover	Symbolic: the house represents an imaginary resistance piece. Functional: (cultural venue) amphitheater designed for cinema viewings and theatre shows
3	Under the viaduct	Functional: commercial and socio-cultural containers for activities such as bike rentals, seminars, and workshops Aesthetic & landscape: focus placed on creating an attractive place using temporary urban furniture and cleaning the structure of the overpasses.

The disused space underneath the A8 highway in Koog aan de Zaan was transformed into a dynamic space with a variety of uses. The A8erna project focused on functionality, with retail, leisure and sports predominantly featuring under the overpass. Architecture functioned as a support for the proposed commercial activities, helping materialize them under the overpass. A supermarket was built to host the retail chain, Albert Heijn, along with a flower shop and a pet shop. The introduction of various economic activities acted as a catalyst to the rejuvenation of the space, considering the needs and demands of both the communities involved and the various private and public actors¹⁵.

But, after functionality, the focus was placed on creating the new image of the project, which led to the introduction of glass and metal cladding facades. This brought transparency and a sense of openness under the overpass, where natural light was scarce and which the glass material helped enhance.

In London, on the other hand, architecture was used to serve a different purpose. A brick house was constructed as a tenacious symbol of embedded structure, adamant in the way of the expressway¹⁶. Glued together with the house, an amphitheater was built for cultural activities such as cinema viewings or theatre shows. The entire space was meant as an arts venue, dedicated to bringing people together in a disused space.

While these two projects clearly focused mostly on the functional and symbolic aspects of architecture, Under the viaduct concentrated on enhancing through landscape a neglected

¹⁵ Phitakraxanti 2016

¹⁶ Assemble 2011

area in northern Rome by applying a simpler approach. The team focused on cleaning the area, building urban furniture using recycled materials and using two already built containers for meetings and workshops.

4.2. Architectural design strategies

A short classification of several architectural design strategies was built on studying each project, from the point of view of both the existing infrastructure design and of the new architectural infills. This was meant as a way to observe the changes made to the built structure, whether low or high effort was put on the infrastructure itself, or how the new infills were integrated under the overpass (Table 2).

Table 2. Architectural characteristics and tools of the three proposals.

	Project elements	A8erna	Folly for a flyover	Under the viaduct
Infrastructure design	Construction elements	Concrete acts as background for art (graffiti) Cladding of the pillars with steel sheets and wooden panels	No intervention	Some columns/beams painted
	Ground	Surface paint for pedestrian and parking use Orange platform raised over the ground	No intervention	Wooden pallet platform Gravel path
Architectural infills	Structure type	Metal structure – columns and beams	Scaffolding	Prefabricated container
	Building materials and finishes	Glass & translucent panels offer transparency and visual connection to the outside. Warm materials humanize space. White corrugated metal sheets can act as barriers or psychological walls	Bricks Recycled and donated materials (metal and wood)	Metal for shipping containers, wood for platforms, tires for urban furniture
	Aesthetic	Focus on lightning, both natural and artificial Transparency lining up the voids, while opaque walls delimitate the borders/facades and guide the viewer to the central space	The house as an imaginary resistance, part of the neighborhood	Architecture is purely utilitarian and functional
	Program type	Retail, commerce: supermarket, flower shop, pet shop	Monumental: sculpture (house), Culture: amphitheater for viewings	Social (container for meetings) Workshop (bike repair shop in container)

Solutions for the actual structures of the overpass ranged from concentrating on the construction elements, such as painting, cladding, or refurbishing the pillars, walls, beams, and platforms. New additions were placed either independent of the structure or used it as structural support. The additions were either inserted between the vertical elements or adjacent to them.

The elevated infrastructure of a motorway has fewer elements which might give the structure a more conventional architectural appearance. Many railway viaducts had been built with a certain architectural unity of their arches and had their vaulted space

underneath be appropriated from the beginning for secondary purposes¹⁷. For overpasses, columns, slabs, and beams were regarded largely from a purely practical and engineering perspective and little attention was given to other appearances or to the potential for other uses¹⁸. Fortunately, during the past few decades, these issues have started to be addressed more by concerned specialists and other urban actors. In the discussion of rehabilitating such structures, popular ways to solve these concerns have included using paint to cover their concrete appearance or adorning pillars in climbing vegetation¹⁹.

A more thorough approach has been in urban regeneration projects, in which retaining walls and columns are integrated into the design through the use of cladding, finishes, or serving as the framework for newly constructed extensions.

The degree of architectural intervention was different in all selected cases. We can consider the most amount of architectural insertion in the Dutch example, whilst the Italian one had perhaps the least, by using purely functional containers to serve as shelter for meetings and workshops. In both examples, architecture had a functional and utilitarian element, but differences lie mostly in the duration of the project (long term versus temporary use) and architectural concept.

The A8erna project in Netherlands integrates a newly built form under the concrete platform of the infrastructure in a natural way. The emptiness and void of the undercroft was filled by using walls with finishes of corrugated metal sheets lining the perimeter of the area on three facades. Seen from the street, these blank walls can appear monotonous, but at the same time they are useful as the wavy panels are meant to discourage graffiti.

For the main façade which marks the entry and delimitates the newly formed public square, glass is the main material, while the four concrete pillars in front of it were clad in shiny metal cladding which reflects the surroundings (Fig. 4). Compared to the supermarket, the flower shop vis-à-vis is smaller but has more transparency because of the extensive coverage of glass and translucent panels for all its facades. Both of the buildings have a simple and straightforward design, with a focus on functionality and discreet signage marking the supermarket chain logo.

It is interesting to note that the project kept a balance between the built and unbuilt space, permitting ease of access between the two buildings and visual relations between the two fronts of the overpass. Such a balance was similarly met in the other two projects, with the degree of open space depending on the intended uses.

Compared to the Dutch project, the other two focused more on urban design or on treating architecture in a more sculptural manner. In Hackney Wick, London, Under the folly focused on creating a temporary house which represented both familiarity (the neighborhood) and adversity in the face of monumentality (the highway). The house, which is more like a sculpture, was built with interwoven bricks on a metal scaffolding assembled by volunteers. The choice of material reflects the surrounding residential vicinity²⁰. Hence, the house looks

¹⁷ Froy and Davis 2018: 180-200

¹⁸ Tatom 2006: 179-95

¹⁹ Chohan 2014

²⁰ Hall and Smith 2012

part of the urban tissue but is „trapped” by the elevated infrastructure which molds around it (Fig. 5).



Fig. 4 . The new public space underneath the highway with the main transparent façade of the supermarket²¹.



Fig. 5. The assembly of the house and amphitheater of the Folly for a Flyover project in London²².

Thought as a more practical matter than Folly, Under the viaduct employed prefabricated architecture in the form of two shipping containers. One container hosted meetings and gatherings for the local support groups and participants in the project, while the other one accommodated a bike repair shop. The latter acted in connection with the proposed bike pathway. Guided by budget restraints and donations from sponsors, the team chose modular architecture which was donated and quick to assemble rather than building something from scratch²³. For the reinforced concrete structure of the overpass, the intervention consisted in applying a fresh coat of light colored paint which visually brightened the space underneath the highway.

4.3. Urban design

Proposed walkaways, bike paths, public squares, urban furniture, lightning, and green spaces were all elements which shaped the image of these public spaces. In all of the projects,

²¹ NL Architects 2006

²² Assemble 2011

²³ G124 2014

emphasis was placed on making these spaces friendly for pedestrian use and transforming them into social places where people could easily meet and socialize²⁴. The reason behind these interventions was the intention of improving connectivity and accessibility by providing a welcoming space for the residents of the nearby communities to join together. For this, leisure and recreational areas were configured based on communities' needs, through a participatory process which all three of the projects had²⁵.

In Rome, connecting communities from a social housing neighborhood led to participatory planning, EU funding and involvement from architect Renzo Piano. As urban sociologist, Galdini, mentions, the „final goal of the project was to foster urban regeneration processes in these peripheral areas of the city”²⁶. The space underneath the abandoned viaduct was meant to bring together people and to repair the damage that abandoned viaduct had done in the urban area.



Fig. 6. The proposed bike and pedestrian path with the two containers in Under the viaduct project in Rome²⁷.

The main protagonist of the project was the space itself with the development of a public area in which meetings, gatherings, cultural events could be held, along with a playground. A new pedestrian and bike path connected the two roads parallel to the overpasses and consequently the two fragmented areas (Fig. 6). This proposal increased accessibility, but more connections are needed in order for the place to become more attractive and welcoming to nearby communities.

Initially, the goal was to transform the upper part of the viaduct into a fully functional bike path, using the temporary use project to test waters if the idea proved beneficial²⁸. Unfortunately, many obstacles led to a lack of enthusiasm and difficulties during the implementation progress and afterwards. Results took the form of a map of the city's urban voids and a handbook, while the area remained abandoned²⁹.

On the other hand, fostering social relationships using a more strategic approach with long term planning and process had more success in the case of the Dutch project. Residents benefited from the variety of public spaces which included a skatepark, soccer and basketball fields, panoramic deck, and a light fountain. The proposed design of the space

²⁴ NL Architects 2006

²⁵ Roushan 2013; Zanzottera 2018; Courage 2013

²⁶ Galdini 2020

²⁷ G124 2014

²⁸ Patti and Levente 2017: 231-48

²⁹ Galdini 2020

underneath the expressway was extended towards both sides of the infrastructure, taking into account the church square by creating a „public living room” and the former town hall, where a small park was created³⁰. As a result, the project was not only intended to remedy the space directly underneath the expressway, but to further encourage the unity of the entire area which was broken apart by the intrusion of the elevated infrastructure. The project was well received by both locals and business owners, with a focus on lighting, public amenities, accessibility, and connections being made. Almost twenty years later though, some changes in the design were made and the initial park with a soccer cage and green spaces was replaced with a parking lot.

In Hackney Wick, the idea of creating an urban attraction went hand in hand with the ongoing process of regenerating a former industrial area by re-using such space for creative and cultural amenities. A mix of uses focused on socio-cultural amenities, with an amphitheater taking stage underneath the infrastructure, while the space around it was used for social events and commercial purposes such as a café. The area was left mostly open, with no changes being made to the physical design of the space. The juxtaposition of the house and the gap between the two elevated roads created a unique image which the architects appreciated: „the most striking and attractive feature of the site was the strip of light that fell through the gap in the road onto the ground below”³¹. During the period that the project was held under the overpass, the area was transformed into a vibrant place, where people could socialize, enjoy a coffee, or watch a movie.

The fact that it was under a grand infrastructure didn’t seem to matter in the face of the cultural and social events proposed. Unfortunately, with the dismantling of the amphitheater and only a small sports area left, the area didn’t regain its popularity. In terms of connectivity and accessibility, the place is still lacking attractive facilities and is used mostly for transit.

5. The complex project

The variety of design practices is a result of the diverse needs of urban actors, financial constraints, and site limitations. Multifunctionality worked well for the A8erna project, whose focus on retail and leisure answered the needs of its residents and managed to connect two separated areas. While the project encountered several obstacles, its long-term strategy proved vital for its success. Unfortunately, this cannot be said for the Italian project, Under the viaduct, whose ambition was similar in terms of re-using a deserted area and improving its connectivity and desirability. While the project was part of a bigger city-wide initiative regarding the urban regeneration of neglected areas in Rome, it was not enough for it to succeed³². Many bureaucratic problems arose and although the team of architects managed to create a lively temporary site, its success was hindered by the lack of a more permanent solution.

On a similar note, the Assemble curator team in London managed to transform the space underneath the A12 motorway into an attractive place for all sorts of users. In contrast to the Italian project, the English one managed to obtain a long-term outlook. As a result, „the

³⁰ Phitakraxanti 2016

³¹ Hall and Smith 2012

³² Patti and Levente 2017: 231-48

London Legacy Development Corporation invested in permanent infrastructure which has allowed the site to continue as a public space"³³. This sparked the creation of a skatepark and of a small table tennis area underneath the motorway, moving the project from the boundaries of temporary use to permanent use, but the area still has a lot of room for improvement. This can range from actions such as creating better access to the site, improving lighting, urban furniture, and overall better maintenance. The site area is currently included in the planning map for the Queen Elizabeth Olympic Park and surrounding area. Time will tell if the area improves more in the future.

Both temporary projects prompted discussions about the long-term use and development of such areas. As in the Italian case, temporary use can lead to a higher degree of uncertainty and bureaucracy which can limit funding, urban actors, or general involvement. It is imperative that in the process of reactivating a place underneath an elevated infrastructure, long term thinking is a target goal. Including such spaces into masterplans or urban strategies can increase the likelihood of success when it comes to urban regeneration. The A8erna case proved that long term thinking leads to a significant improvement for a neglected residual space and can transform it into an profitable spot, where retail and leisure attract a variety of users.

Using retail ensured the success of the developed area around the A8 highway in Koog aan de Zaan. The various zoning areas of the project are brought together by the infrastructure, but one can't deny the main piece of intervention which is the construction of the supermarket. Choosing to occupy the space with a building – and a supermarket nonetheless – ensures public activity throughout the day with users of all ages, genres, and types. This leads to an increase in safety for the residents and makes the place livelier than the adjacent skatepark which is visited mostly by children and younger people and not during the entire day.

While the Dutch created a permanent structure, Under the folly had the house, along with the amphitheater dismantled brick by brick. The rest of the materials were recycled and used creatively as planters for a school, creating a sustainable process.

This ensemble piece created an interesting and provocative image and brought activity to a deserted area. It generated interest and attracted lots of users who came either for cultural events and socialization in a new and intriguing place.

Increasing connectivity, creating ease of access, or ensuring a greater degree of desirability were all intended goals for all the projects. Urban design played an important role in ensuring that the potential of the deserted piece of land can be achieved through temporary methods or by using more permanent measures.

In Rome and the UK, the teams of both projects used common practices of tactical urbanism such as involving the community and volunteers, using recycled materials and temporary structures. Proper care of the built environment should be continued by ensuring that the urban furniture and public space are kept in good condition, by cleaning and periodically renovating. In Rome, they made good use of the large space underneath the overpass and created a bike and pedestrian path which is still in use today. In London, the space has some

³³ Assemble 2011

amenities, which can be further improved by including the area into a bigger revitalization plan.

Sustainability was a factor which was greatly taken into account by both projects. They adopted ecological practices by using recycled materials or temporary structures which could be dismantled quickly at the end of the intervention period³⁴.

It is also worth noting the integration of the youth subculture of skateboarding in A8erna and Folly for a flyover by creating dedicated areas with ramps and amenities. Taking into consideration the various forms of urban life can lead to a more integrated community and at the same time generate a dynamic environment for people to enjoy.

While both the A8erna and Folly for a flyover still have occupied space with urban furniture, the Italian project of Under the viaduct didn't manage in the end to have its space reactivated in the desired way. The goal of fostering urban regeneration process in the area has not yet been achieved, and the area beneath the highway and its surroundings remains unoccupied as a green space.

6. Conclusions

Using architecture to reclaim deserted land can be beneficial when correlated with a useful economic activity which can answer the needs of the residents and businesses alike. Commerce, cultural, sports or leisure can make such an area functional and desirable for a variety of users. Having a permanent structure can help a place become more financially sustainable and can create more opportunities for people to spend time there.

Without a doubt, residual space underneath elevated infrastructures has the potential to reconnect separated neighborhoods, create a vibrant space for socio-cultural events and even support the local economy with the insertion of commercial activities. The difference between a successful place and a neglected one lies in the project's ability to continue after the temporary phase of implementation.

Tackling complex projects such as the three mentioned before requires a seamless integration of architectural techniques with urban design and planning, as the interplay between micro and macro scales becomes a delicate matter. The synergy between these disciplines becomes particularly evident in projects where the finer architectural features are intertwined with the broader urban context. In terms of ensuring this, an extensive urban plan with long-term thinking solutions can lead to a more favorable outcome in which the quality of life for the neighborhoods and its residents can be improved.

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³⁴ Assemble 2011

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