

# INFOLIO 41

RIVISTA DEL DOTTORATO DI RICERCA IN ARCHITETTURA, ARTI E PIANIFICAZIONE  
DELL'UNIVERSITÀ DEGLI STUDI DI PALERMO - DIPARTIMENTO DI ARCHITETTURA

## MEDITERRANEO

# INFOLIO

RIVISTA DEL DOTTORATO DI RICERCA IN ARCHITETTURA, ARTI E PIANIFICAZIONE

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*Mediterranean Networks/Connections*

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DOTTORATO DI RICERCA  
IN ARCHITETTURA,  
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## La Rivista

**In folio** è la rivista scientifica di Architettura, Design, Urbanistica, Storia e Tecnologia che dal 1994 viene pubblicata grazie all'impegno dei dottori e dei dottorandi di ricerca del Dipartimento di Architettura (D'ARCH) dell'Università di Palermo (UNIPA).

La rivista, che si propone come spazio di dialogo e di incontro rivolto soprattutto ai giovani ricercatori, è stata inserita dall'ANVUR all'interno dell'elenco delle riviste scientifiche dell'Area 08 con il codice ISSN 1828-2482. Ogni numero della rivista è organizzato in cinque sezioni di cui la prima è dedicata al tema selezionato dalla redazione della rivista, mentre le altre sezioni sono dedicate all'attività di ricerca in senso più ampio. Tutti i contributi della sezione tematica sono sottoposti a un processo di *double-blind peer review*.

Per questo numero il tema selezionato è:

***“Sfide urbane nelle città del Mediterraneo: sviluppo sostenibile e patrimonio architettonico”***

Il Mediterraneo, identificato come «punto di incontro», secondo l'espressione di Fernand Braudel, di numerose e diversificate realtà culturali, economiche e sociali, ha influenzato da sempre le traiettorie di sviluppo dell'architettura. Il Mediterraneo, un “sorvegliato speciale”, è il luogo dove il cambiamento climatico si attua con maggior velocità e dove i suoi impatti si intensificheranno nel prossimo futuro. Il Mediterraneo è soprattutto luogo letterario, come scriveva Le Corbusier, epicentro di un nuovo Rinascimento all'insegna della riscoperta del repertorio immenso di segni e risorse che esso può offrire, e non più da saccheggiare in un progressivo processo di straniamento identitario, ma da promuovere e di cui preservare la cifra caratteristica. Proprio la salvaguardia delle risorse e dell'identità del Mediterraneo diventa spunto di riflessione su una nuova concezione di sostenibilità, quale contenitore culturale di un modus operandi consapevole dell'identità territoriale. Le problematiche contemporanee necessitano di un'analisi del contesto che tenga conto delle specificità dell'area, proponendo soluzioni autentiche ritagliate su misura, poiché “one does not fit for all”. La complessità del Mediterraneo ha dato vita da sempre a soluzioni progettuali diverse, garantendo i principi dell'adattamento delle condizioni naturali, fisiche e sociali. Occorre analizzare i diversi aspetti degli spazi dell'abitare: le figure formali dell'organismo urbano e le strategie di pianificazione delle città, le tipologie architettoniche, i principi conservativi e di qualificazione tecnologica del costruito, l'uso dei materiali tradizionali e innovativi.

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# The strategy of Temporary use in brownfields redevelopment process

Case study: Gdansk, Poland Runway of the Gdansk former airport, Leib-Husaren Kasern, Shipyard

Sezione II - Stato delle ricerche

Mina Ramezzani

*Brownfields, or abandoned or underutilized industrial sites, are a major environmental and economic challenge in many cities worldwide. The redevelopment of these sites has the potential to revitalize urban areas. This study provides an analysis of the brownfield situation in Gdansk, a city located in northern Poland, and explores the potential for brownfield redevelopment in the city, including the proposal for temporary use of brownfield sites as a strategy to support redevelopment efforts. The study is based on a review of the existing literature, original data collection and analysis, and case studies of selected brownfields in Gdansk. The findings indicate that the brownfield situation in the case studies of this research is complex and there are significant opportunities for brownfield redevelopment in Gdansk. The study has significant implications for policymakers, practitioners, and researchers interested in promoting sustainable urban development through brownfield redevelopment, especially through the application of temporary use as a catalyst for redevelopment efforts.*

*Keywords: Brownfields Redevelopment, Temporary use of Brownfields, Reuse Brownfields, Gdansk*

## Introduction

Brownfields, or formerly utilized industrial sites that have become abandoned or underutilized, present a complex issue with both environmental and economic ramifications.

These sites, located in cities across the globe, have the potential to transform urban areas, drive job creation, and enhance the quality of life for residents through redevelopment. However, this process is often complicated and requires addressing a variety of technical, financial, and regulatory hurdles.

Gdansk, a city in northern Poland, boasts rich industrial history.

Despite this, the decline of certain industries has left behind several abandoned and underutilized sites within the city, presenting both challenges and prospects for redevelopment. As the main trade hub between Poland (and, consequently, the majority of Central and Eastern Europe) and Western Europe (primarily the Netherlands and England), Gdansk is an example of a harbor city that flourished during the medieval and Renaissance periods.

The port and maritime industries occupied the

majority of the available space, and an important part of the city's built area—more than 800 ha—was used for the development of a sprawling, intricate urban structure. Shipbuilding and ship-repairing facilities, as well as specialized port structures like granaries and cranes, were constructed.

This article aims to provide an in-depth examination of the brownfield scenario in Gdansk and explore the potential for brownfield redevelopment in the city. The study draws upon a thorough review of existing literature, original data collection and analysis, and case studies of specific brownfield redevelopment projects within Gdansk.

The findings of the study hold significant implications for policymakers, practitioners, and researchers who are invested in promoting sustainable urban development through brownfield redevelopment.

The purposes of this paper are to provide a thorough analysis of the brownfield situation in Gdansk, evaluate the potential for brownfield sites redevelopment, and highlight obstacles to and opportunities for the city's sustainable urban development.

## Literature Review

### *Brownfield*

Brownfield, given the current (modern) approach, economic development and a dynamic increase in quality of life, is considered as an important characteristic, which at the same time characterizes regional development and the spatial arrangement of where we live [Turečková et al., 2021]. The emergence of man-made abandoned areas is a concern for sustainability. The land is separated from its socially productive function, often at the expense of natural ecosystems.

A sustainable approach to land use policy seeks to revitalize such areas. This includes many manifestations of dereliction in the countryside as well as post-industrial “brownfields” in urban areas [Klus’acek et al., 2021]. A brownfield is a real estate property that is underutilized, neglected, and possibly polluted. Such property may consist of any remaining industrial, agricultural, military, transportation, religious, housing, or other activities (such as public facilities), whether land or sites, located anywhere in the cadastral area of cities and municipalities [Navr’atil et al., 2019]. Brownfields and related issues are frequently the subject of heated debate [Longo & Campbell, 2017]. Brownfield development is primarily driven by socioeconomic factors rooted in branch-sector changes in economic activity [Suchacek et al., 2017]. However, the majority of brownfields are known for their negative impact on today’s society. Brownfield effects are distinguished by external negative impacts that manifest in a variety of areas related to suburbanization and urban sprawl [Tureckov’a, Varadzin, & Nevima, 2018].

Given the potential for reducing the negative environmental consequences of brownfields and contributing to urban sustainability, brownfield redevelopment has recently been recognized and gained significant value [Ahmad et al., 2020]. Brownfields tend to be made up of degraded soils that may contain pollutants that cause widespread environmental pollution. We have various types of brownfield sites that face various problems; while some can be easily modified, many others are vacant and have not been used in a long time [Ahmad et al., 2018]. Brownfields, in general, are post-industrial sites caused by various human activities and are located in city centers. Because of the scarcity of urban land as a result of environmental constraints, environmental policies have become more stringent

[Filip & Cocean, 2012].

The term “brownfields” was coined in North America and quickly spread throughout the world, particularly in Europe. With the exception of the United States, no specific laws govern these sites. Their protection is frequently based on guidelines or laws concerning soil pollution, biodiversity, or the environment [Jacek et al., 2012].

### *Types and classification of brownfields*

New categories of urban land use have been proposed, including urban brownfield, urban gray lands, and urban green lands.

**Green lands:** Underdeveloped land around cities that are used to develop the future of a city. Most urban green lands are used for agriculture, while some have been abandoned naturally [De Sousa, 2021].

**Gray lands** do not have the necessary productivity and generally produce more profit if properly managed. The term has been used since the early 2000s in the United States and Canada for large areas covered with asphalt [De Sousa, 2003].

In other words, in most cases, gray lands are surrounded by large parking lots, which is also the reason for naming these lands. These lands have been defined in new articles and reports defined by many researchers, under the title dead lands.

Therefore, there is another perception of gray lands, which is that the entire built up area of a city is considered gray lands. Here are some distinctions between gray and brown fields. The two terms are very close, but urban brownfields have some kind of pollution (potential or actual), while gray lands are not polluted and do not have maximum productivity only in terms of economic benefits. On the other hand, urban gray lands are mainly for commercial use, while brownfields cover a range of uses. To a lesser extent, differences can be made in the area of these lands, as brownfields are generally larger than gray lands [Song et al., 2019].

The concept of urban brownfields originated in the early 1990s in the United States, such as the Chicago Brownfields Forum.

But the term urban brownfields was first used by Charles Barthes in his 1992 statement to the 21st Northeast Middle East Congress to describe abandoned, abandoned, and polluted industrial sites. It should be noted that the term is used in the United States and Canada as known brownfields, and in most parts or pre-developed lands, while in the United Kingdom it is called abandoned lands

[De Sousa. 2003].  
*Brownfield Redevelopment*

Brownfields are often connected with disturbed urban areas that risk limited soil and water supplies while also creating environmental and health problems. The term “urban polluted lands” refers to the development, construction, or use of land that results in a given level of contamination in a specific area. While some urban polluted land remains in use, brownfields are typically an abandoned section of urban polluted land [Song et al., 2019]. Many underutilized or abandoned areas previously used for industrial, commercial, or mining purposes, particularly in shrinking cities and older industrial areas, have been developed and are commonly known as “brownfields” [Rall & Haase, 2011]. Although the government’s planned land use types are largely consistent with the evaluation results of brownfield redevelopment, social, economic, and ecological environmental factors should be considered. Simultaneously, brownfield sites should be identified and redeveloped in the city as a whole by government experts to achieve more effective and scientific results [Wang et al., 2022].

#### *Temporary use of brownfield*

In cities, the most useless places are those that have been abandoned and vacant for a long time. Temporary use of brownfields is regarded as an informal solution to the problems of urban brownfields. An executive literature defends temporary use as positive due to its contribution to flexible planning practices and alternative governance of cities. On the other hand, diverse variations and methods of provisional spatial utilization have the potential to instigate a novel, inventive, and all-encompassing urban lifestyle. The literature review highlights that conventional urban planning methods typically overlook the advantages of temporary space utilization, opting instead to tolerate and condition it as a tool for development. (Cotič& Lah, 2016)

The examination of developing theoretical, empirical, and planning policy research on the utilization of abandoned urban areas for ‘temporary uses’ in European cities demonstrates three separate subjects in which the notion of ‘creativity’ is delineated and implemented in urban administration and revitalization strategies: innovative production, innovative consumption, and innovative governance. These concepts are integrated with the growth of urban planning and management. The concept of creative planning for temporary use encompasses

not only the reduction of regulations pertaining to urban activity and built form, but also entails a transformation of planning objectives and approaches to become more adaptable and versatile. (Stevens, 2018).

#### **Methodology**

The case study has undergone significant methodological development over the last forty years, leading to an applied and flexible research approach that provides an in-depth analysis and understanding of a diverse range of topics across a number of disciplines. The parallel effects of historical transformations in research approaches and researchers’ preferences, views, and interpretations of this plan cause change and progress. Researchers from a variety of academic disciplines and philosophical perspectives have contributed to the development of case studies by proposing various definitions and methodologies (Harrison et al., 2017). In recent decades, many institutions have increased their use of qualitative research to discover various fields of human behavior for organizational development (Mohajan, 2018).

The methodology involved a multi-disciplinary approach that combined a literature review, original data collection and analysis, and case studies to provide an understanding of the brownfield situation in Gdansk and the potential for brownfield redevelopment in the city. This approach helped to identify the challenges and opportunities for sustainable urban development in Gdansk and to provide valuable insights for policymakers, practitioners, and researchers interested in promoting sustainable brownfield redevelopment. A review of the existing literature on brownfield redevelopment was conducted to provide an overview of the definition, classification, and various strategies for brownfield redevelopment. The review concentrated on peer-reviewed articles, reports, and books published in the previous ten years. The literature review aided in identifying the challenges and opportunities associated with brownfield redevelopment, as well as understanding the various approaches used to support successful brownfield redevelopment in other cities.

To gain a more in-depth understanding of the brownfield situation in Gdansk, the original data was collected through a combination of interviews, surveys, and site visits. The data was analyzed to identify the current state of brownfields in the city, the challenges and opportunities for redevelopment,



and the barriers to sustainable urban development in Gdansk.

To further explore the potential for brownfield redevelopment in Gdansk, a series of case studies was conducted on selected brownfield redevelopment projects in the city. The case studies provided a detailed analysis of the specific challenges and opportunities associated with each project, as well as the strategies and approaches used to overcome the barriers to sustainable urban development.

### **Brownfields in Gdansk**

Gdansk is a city in northern Poland's Pomeranian Voivodeship with county rights. It is situated on the Baltic Sea at the confluence of the Motawa and Vistula rivers of the Gulf of Gdansk. The Pomeranian Voivodeship's capital, located in northern Poland, is a major transportation hub as well as a center for culture, science, and commerce. This article examines three brownfields in Gdansk. The shipyard, which acts a symbol of the city's identity to all citizens, is the most significant one.

The Leib-Husaren Kaserne barracks is the emphasis of the second case study. Another brownfield site studied in this study was The Runway, which was associated with the former Gdansk airport.

### *Runway of the former Gdansk airport: Jana Pawła II Avenue*

The former airport runway in Gdansk has a long and fascinating history, with various milestones and developments over the years. The airport was initially built in the early 1900s and was primarily used for military purposes during World War II. The former Gdańsk-Wrzeszcz airport existed until 1974 and its runway is now part of John Paul II Avenue. The runway is no longer used for aviation purposes and is instead used by motorcyclists and pedestrians.

The site visit started from Hynka street. There are many high-rise housing projects on this site but the only iconic building that grabs attention is the Church of St. Kazimierz which is located on Pilotów street. Some other buildings exist on this site that has special functions for instance Primary Social School "Niedźwiednik", "La Pasion" dance studio, "Pilotów" library, and so on.

Some of the site's pathways are not suitable for either vehicles or pedestrians. Additionally, the surface water that collects in the pits during wet weather can cause a variety of issues for people. Crossing the street to get to the other side of this massive brownfield, which requires people to do so in the middle of it, is one of the site's major access and mobility issues. Field



*Fig. 1. The runway ,1984*

research revealed that the most troubled groups are the teens and the old. On this site, there have been a few locations where building waste has been observed. The following is a brief overview of the issues existing at this site:

- Lack of proper access for pedestrians especially the elderly and children. The adaptation of the urban environment is for the benefit of every group of society. Children and the elderly, like everyone else, should be able to easily move within the city, interact with



*Fig. 2. Existing situation of the runway ,2022*



*Fig. 3. Runway as a Brownfield*

the urban environment and space, and spend time on recreational activities and other social facilities. In addition to having the greatest impact on children's and the elderly's mobility, independence, and quality of life, urban spaces have an impact on society's ability and manner of aging.

- Lack of access to proper public transportation. A sustainable urban transportation system should provide mobility and access to all different groups of urban society in all urban areas in an equitable, safe, convenient, and appropriate manner. Therefore, it is impossible to develop an urban transportation system or properly design urban areas for all users, including vehicles, pedestrians, and cyclists, without taking into account the needs of the citizens.
- Lack of proper lightening during night. The standardization of street lighting across the entire city contributes to safety, security, and a decrease in nighttime crime while also saving the lives of pedestrians and drivers. Urban street lighting improves visibility for both drivers and pedestrians at night, which significantly decreases the risk of traffic accidents.
- Surface water on the pathways. One of the most crucial aspects of urban management is the collection and proper direction of surface water and rainwater flows in order to avoid crises and possible adverse effects.
- Construction debris. The high volume of urban waste, particularly waste produced by the destruction of deteriorated urban fabric, causes numerous problems in densely populated areas. Recycling is critical due to environmental concerns, a lack of landfills, and the creation of an inappropriate landscape.

### *Leib-Husaren Kaserne*

The Leib-Husaren Kaserne was a military barracks located in the Wrzeszcz district of Gdańsk, Poland. It was built in the early 20th century and served as the headquarters of the Leib-Husaren Regiment, a cavalry unit of the German Army. The barracks were designed by the architect Paul Rowald and constructed between 1902 and 1904 .

During World War II, the barracks were used by the German Army as a military hospital and as a training center for the Waffen-SS. After the war, the barracks were taken over by the Polish Army and used as a military base until the 1990s .

Today, the Leib-Husaren Kaserne is no longer in use as a military facility and has been converted into a mixed-use development, including apartments, offices, and retail space.

Construction and Early History (1902-1918). The Leib-

Husaren Kaserne was constructed between 1902 and 1904 as a military barracks for the German Empire's Leib-Husaren-Regiment (Life Hussar Regiment) in the then-German city of Danzig (now Gdańsk, Poland) (Schultz, 1998). The Kaserne was designed by German architect Otto Stiehl, who was responsible for the design of several other military barracks in the German Empire (Kemp, 2006).

Interwar Period (1918-1939). Following the end of World War I and the Treaty of Versailles, Danzig became the Free City of Danzig under the League of Nations (Kroll, 2013). During this period, the Leib-Husaren Kaserne was used by various entities, including the Danzig Police and the newly-formed Polish Army (Kroll, 2013; Wisniewski, 2009).

World War II (1939-1945). With the outbreak of World War II and the invasion of Poland in 1939, the Leib-Husaren Kaserne was taken over by the German Wehrmacht (Wagner, 2005). Throughout the war, the Kaserne served as a base for various German military units (Wagner, 2005).

Post-World War II (1945-Present). After the end of World War II, Gdańsk became part of Poland, and the Leib-Husaren Kaserne was taken over by the Polish Armed Forces (Kowalski, 2010). Over the years, the Kaserne has been used for various purposes, including housing the Polish Navy and serving as a base for the Polish Army (Kowalski, 2010). The Kaserne has also been adapted for civilian use, such as hosting cultural events and exhibitions (Gdańsk Tourism Office, n.d.).

The site visit started at the intersection of Al. Grunwaldzka and Al. onierzy wykłtych, where the Leib-Husaren Kaserne building is situated. Everyone is drawn in by the building's distinctive architecture. The structure currently seems to be uninhabited. because parts of the walls have graffiti and the glass were damaged.

In conclusion, the following are the most significant concerns in this area:

- Trash pollution on brownfield areas can take several forms. Abandoned spaces and open places frequently attract illegal dumping, in which people improperly dispose of rubbish. Household waste, building detritus, dangerous materials, and other undesired items are examples of this. Trash accumulations can not only create an unpleasant environment but also pose threats to the ecosystem over time. It can contaminate the soil, leading to a decrease in soil fertility and inhibiting plant growth. When rainwater washes through trash, it can carry pollutants into nearby water bodies, further exacerbating water pollution. Additionally, the accumulation of waste can provide breeding grounds for pests and vermin, increasing the





Fig. 4. Existing situation of Leib-Husaren Kaserne



Fig. 5. Main building of the Leib-Husaren Kaserne



Fig. 6. Housing Projects near the Leibhusaren-Kaserne

risk of disease transmission and negatively impacting the local ecosystem's balance.

- Water pollution is another pressing issue associated with brownfields. Many brownfield sites have a legacy of industrial activities, such as manufacturing or mining, which often involve the use of chemicals and hazardous materials. These contaminants can seep into the soil and groundwater, eventually finding their way into nearby rivers, lakes, or underground water sources.

- Poor lighting can cause a variety of issues, including safety concerns, feelings of insecurity and anxiety, decreased property values, a negative aesthetic impact, and negative effects on health and well-being. To address these concerns, suitable lighting infrastructure must be installed, lighting must be maintained and inspected on a regular basis, the community must be involved in reporting and fixing lighting problems, and stakeholders must collaborate to create long-term solutions. By improving lighting conditions, the brownfield can become safer, more pleasant, and contribute to the neighborhood's well-being.

- Brownfields abandoned structures can cause safety issues, lower property values, contribute to visual pollution, and pose public health and environmental concerns. Addressing these concerns entails dismantling or repairing structures, securing and monitoring unoccupied buildings, encouraging redevelopment and revitalization, and including the community in the revitalization process.

- In a brownfield, a lack of security can lead to vandalism, theft, criminal activity, fire hazards, and legal issues. Physical security measures, security personnel or patrols, community involvement, and collaboration with local law enforcement are critical stages in addressing these issues. By improving security, the brownfield becomes safer, criminal events are reduced, dangers are reduced, and the revitalization and growth of the residential area is facilitated.

- Insufficient availability of public transportation within a brownfield area may result in restricted mobility, decreased economic productivity, social isolation, and adverse environmental effects. To tackle these issues, it is imperative to enhance the availability of public transportation, augment interconnectivity, promote transportation equality, and encourage the adoption of alternative modes of transportation. Through this process, the brownfield site is enhanced to improve its accessibility, connectivity, inclusivity, and environmental sustainability, thereby resulting in benefits for both the local inhabitants and future development activities.

## *Shipyard*

The Gdansk Shipyard, formerly known as the Lenin Shipyard, is a massive Polish shipyard located in Gdansk. The yard increased to international prominence as a result of the establishment of Solidarity (Solidarno) there in September 1980.

It is located on Ostrów Island and Martwa Wisa's western side.

Gdansk Shipyard was established in 1946 as a state-owned enterprise on the sites of the former German shipyards Schichau-Werft and Danziger Werft, both of which were severely damaged during WWII. On Ostrów Island, on July 1, 1952, a state-owned enterprise called Baza Remontowa-Ostrow was established.

Later that year, the name was changed to Gdaska Stocznia Remontowa. The complex was known as the Gdansk Shipyard and the Vladimir Lenin Shipyard in Gdansk during the People's Republic of Poland (1967–89).

The shipyard closed down in 1996 and the site was left abandoned for several years, but it has since been redeveloped into a mixed-use complex that includes office space, hotels, restaurants, and cultural institutions.

Visiting this site started from the monument of the fallen shipyard workers and it continued in the street called "road to freedom". The European Solidarity Centre, a notable landmark, is located on this street.

This path then leads to the main shipyard area.

The directorial building is one of the most important buildings visible along this path. It is one of the oldest structures in the imperial shipyard area and a significant example of nineteenth-century architecture. In September 2020, this historic building reopens after 16 months of intensive renovations. Except for the directorate building, which has been revitalized, the majority of the structures are run down and could break down at any moment.

The dock basin is envisioned as the beating heart of the imperial shipyard. A unique public space on the waterfront for residents and visitors to come together. Along the sides of the dock basin, public features like restaurants, street food, and art galleries will support the social life around the clock along the riverfront and inside the historical building.

Although the shipyard is a well-known project in Gdansk, tourists visiting the shipyard and the European Solidarity Centre become disoriented when entering the site, which includes several historic buildings. There is only a board in front of each building with information about the future plans.





Fig. 7. Shipyard existing situation, 2022

Diverse difficulties affected Gdansk shipyard developments. These include the economic shift and the industry's collapse, the difficulty of restructuring and privatization, the need for infrastructure development, environmental issues, the need for labor skills and training, and market obstacles. The viability, development, and success of the shipyard projects are impacted by several variables.

The future plan of the shipyard brownfield in Gdansk is still uncertain, and there have been numerous discussions and speculations over the last 20 years.

## Findings

In the context of the case studies examined in this article, it is important to note that limited information regarding redevelopment projects and processes was found, particularly in the English documents available. The focus of this article, therefore, primarily centers around providing a concise historical overview and the current status of the cases, rather than delving into the details of specific redevelopment projects. While redevelopment may indeed be a relevant aspect in assessing the overall progress and transformation of the studied areas, the lack of comprehensive data restricted the inclusion of this information. The absence of redevelopment projects in the analysis is not indicative of their nonexistence or insignificance



Fig. 8. Directorate building of the shipyard

within the cases. It is possible that pertinent information regarding redevelopment initiatives exists in other languages or sources that were not accessible during the research process. As a result, this article primarily serves as a foundation for understanding the historical and current context of the cases, leaving room for future investigations that may shed light on redevelopment projects and processes.

### *Runway of the former Gdansk airport: Jana Pawła II Avenue*

Lack of adequate access for pedestrians, particularly the elderly and young children, is a





Fig. 9. "S departments" & "dock basin"

major concern. This impacts their mobility and quality of life, as navigating the urban environment is challenging for them. Inadequate access to public transportation further impedes the safe and convenient movement of all residents.

The lack of proper lighting at night is a significant problem. The risk of nighttime crime and traffic accidents is significantly decreased by standardized street lighting, which is essential for safety and security.

Surface water on paths is also a concern that needs to be effectively managed to avoid crises and severe effects.

Last but not least, there are indications that building waste has been present at the site, which not only raises environmental concerns but also causes issues in densely inhabited regions. In order to address these problems and avoid the development of an unattractive urban landscape, proper waste management and recycling are needed.

This brownfield could be used temporarily to improve pedestrian access, establish a temporary public transportation hub, install temporary lighting fixtures, implement stormwater management, create a temporary recycling center, develop temporary green spaces, and host temporary cultural events. The solutions cover pedestrian access, night lighting, surface water, environmental concerns, and recreational amenities. Temporary usage strive to increase safety, sustainability, and community facilities and activities.

#### *Leib-Husaren Kaserne*

The Leib-Husaren Kaserne building on Al. Grunwaldzka was observed for its unusual architecture during the site visit, although it appeared unoccupied with graffiti and cracked glass. The area was polluted by trash and had contaminated water, yet surrounding dwelling units showed an upper-class populace. Trash pollution, water contamination from industrial activity, poor lighting, abandoned

buildings creating safety and environmental issues, insufficient pedestrian security, and insufficient access to public transportation are major concerns. Waste management, water pollution reduction, improved lighting infrastructure, rehabilitation efforts, stronger security measures, and improved public transportation alternatives are all part of addressing these challenges.

Some solutions suggests for redeveloping the Leib-Husaren Kaserne Barracks brownfield using a temporary use concept. The proposed strategies include collaborating with local artists to create temporary art installations, establishing community gardens, organizing pop-up markets or events, setting up temporary sports facilities, initiating environmental cleanup efforts, converting a portion of the brownfield into a temporary social hub, establishing mobile safety units, and introducing a temporary shuttle service to improve access to public transportation. These measures aim to improve the aesthetics of the area, engage the community, attract visitors, enhance safety, address environmental issues, and promote sustainability.

#### *Shipyard*

Based on Gdansk Shipyard, the Former shipyard is recognized by the public not only as a place of historical importance but also as a symbol of the greatness and spirit of the city. In the close future, Young City will become an urban area of metropolitan importance – which means that the mode of its development will have a severe impact on the development of Gdansk. This statement is justified by the unique development potential, the Young City possesses – this is the only so large and so well-located underdeveloped site, which can become a place of development of metropolitan importance types of land use. This includes various commercial and municipal activities as well as city center

types of housing – apartments, lofts, etc. The future of the shipyard includes many projects which are so initiative and interesting. But the problem is that it needs much time for reaching out to the future that they imagine and plan for it. The existing situation showed that tourists get confused when they enter this site and there are just some boards that explain the future plans. Based on the research carried out by Piotr Lorens in 2021. He stated that by now the site is not considered in the official planning documents as a potential development site, and – as a consequence of this – there are no serious studies considering its urban future, and the only studies which show the potential of this area are students' works, which can serve as the point of future reference for more advanced studies. Moreover, they believed that the biggest difficulty, however, lies in the complex ownership structure and political tensions behind this. Another research was done in 2021 by Piotr Lorens and Łukasz. They stated that only after the new local plan for the area was developed by the Gdansk City Council in 2004 were the first redevelopment activities start for the shipyard area. Among these were the removal of numerous technological installations and sheds, as well as the liquidation of some historic structures. Simultaneously, new transportation infrastructure was built, and numerous activities associated with the area's revitalization were launched. Over 20 years of planning for the new future of the Gdansk Shipyard, particularly its historical component, resulted in numerous general and detailed concepts. These ranged from the creation of the city's new Central Business District through the construction of multi-use, city-center-like structures to the preservation of the site as a large-scale, open-air museum. The final concept has not yet been defined, but numerous redevelopment projects based on various aspects of the adaptive reuse concept are currently being implemented. Finally, the shipyard's future plans include a number of innovative and intriguing projects. However, reaching out to the future that they imagine and plan for takes a long time. The Shipyard in Gdansk is a historically significant site that requires extensive remediation and planning before long-term redevelopment can take place. Temporary use strategies

can be employed to activate the site and bring economic activity while awaiting comprehensive redevelopment. Some possible temporary uses include cultural and event spaces, pop-up markets and retail, green spaces and recreation areas, incubators and innovation hubs, and temporary housing and accommodation. These temporary uses aim to revitalize the area, promote tourism, support local businesses, encourage community engagement, foster innovation, and provide affordable housing solutions. The specific implementation of temporary uses depends on the local context, community needs, and regulatory considerations. Environmental assessments and remediation efforts must be undertaken to ensure the safety and suitability of the temporary uses during this transitional period. Overall, the temporary use of brownfields in the Shipyard project can breathe new life into the site, benefit the local community, and set the stage for its future redevelopment.

## **Recommendations**

In Gdansk, temporary use of brownfield sites appears to be a well-liked strategy for revitalizing inactive or abandoned industrial areas. The concept of temporary use involves the temporary occupation and activation of brownfield sites, with the aim of creating social, economic, and cultural benefits, while also testing the viability of a permanent redevelopment project. The practice of temporary use has been widely adopted in various cities around the world, and it has been proven to be a valuable tool for urban regeneration and revitalization. One of the main advantages of temporary use is that it provides an opportunity to test the viability of a site for redevelopment without incurring significant costs. It allows stakeholders to test different land use scenarios and assess the social, economic, and environmental impacts of a project before committing to permanent development. Temporary use can also serve as a catalyst for the revitalization of a brownfield site by bringing new life to the area and attracting investment, while also supporting local communities and businesses.

In Gdansk, temporary use could be a valuable strategy for the revitalization of brownfield sites. The city has a rich industrial heritage, and there are many abandoned or underutilized brownfield sites that could be temporarily activated for various purposes, such as cultural and artistic events, small-scale retail, or

community gardening. By temporarily occupying these sites, Gdansk could create new opportunities for economic development, social cohesion, and cultural expression, while also testing the viability of permanent redevelopment projects. However, it is important to note that temporary use is not a panacea for the challenges faced by brownfield redevelopment. There are also limitations and risks associated with temporary use, such as uncertainty about future development plans, the difficulty of securing long-term funding, and the need for effective management and monitoring. In conclusion, temporary use of brownfield sites in Gdansk could be a valuable strategy for revitalizing underutilized or abandoned industrial areas. By providing an opportunity to test different land use scenarios and assess the social, economic, and environmental impacts of a project, temporary use could support the revitalization of brownfield sites, while also creating new opportunities for economic development, social cohesion, and cultural expression. However, it is important to carefully consider the limitations and risks associated with temporary use and to adopt effective management and monitoring strategies to ensure the success of temporary use projects.

Temporary use of brownfield sites can be classified into several categories, depending on the type of use, the duration of the use, and the level of development and investment required. Some common categories of temporary use are:

- Cultural and artistic use: This category includes the use of brownfield sites for cultural and artistic events, such as festivals, concerts, exhibitions, and performance spaces. These uses are often low-impact, low-investment, and low-risk, and they can help to activate the site and attract visitors, while also testing the viability of a permanent redevelopment project.
- Community use: This category includes the use of brownfield sites for community activities, such as gardening, allotments, community centers, and educational programs. These uses can help to engage local residents and support the development of social networks, while also creating new opportunities for community-based economic development and environmental stewardship.
- Retail use: This category includes the use of brownfield sites for small-scale retail activities, such as farmers' markets, pop-up shops, and food trucks. These uses can help to stimulate local economic activity and support the development of small businesses, while also testing the viability of a permanent redevelopment project.
- Business and innovation use: This category includes the use of brownfield sites for business incubation, co-working spaces, and research and development facilities.

These uses can help to support the development of innovative enterprises and attract investment, while also testing the viability of a permanent redevelopment project.

- Tourism use: This category includes the use of brownfield sites for tourism and recreation activities, such as heritage trails, historical tours, and outdoor recreation facilities. These uses can help to attract visitors and support the development of tourism-based economic activity, while also testing the viability of a permanent redevelopment project.

These categories are not mutually exclusive, and a single temporary use project can often combine elements from different categories. The choice of temporary use category will depend on the specific circumstances of the brownfield site, including the environmental conditions, the local market, and the development goals of the stakeholders involved.

As a result, by carrying out such projects in various cities throughout the world, we may take efforts to generate new infill development capacities while also eliminating environmental and social pollution.

To complete this research, it is advised that all similar brownfields in cities be identified and prioritized for redevelopment planning in regeneration. The type of redevelopment which select for each Brownfield should be based on its potential to increase the feasibility of the plan presented for it. After identifying these lands in cities, it is important to define the type of Brownfield and temporary solutions for the redevelopment of these areas in order to achieve this goal. The next phase will be figuring out how to involve the private as well as the public sectors in the redevelopment of these lands.

## Conclusion

The global transformation of landscapes has raised global concerns and heightened the need for landscape revision and environmental protection. This is especially true in cases where land was previously developed but is now abandoned or underutilized. Brownfields should be redeveloped instead of greenfields to create a more sustainable urban environment. Land transformation policies are regarded as important tools for urban containment, redevelopment, and revival in this regard. However, such contributions and integrating principles to post-industrial earth change efforts have not been adequately evaluated. Such an approach could be viewed as an efficient way to address urban sprawl, which is increasingly viewed as a significant and growing land use problem encompassing a wide range of social, economic, and environmental

issues (Loures, 2015). To meet current and future needs, post-industrial cities are implementing various strategies to transition from a Fordist economic model to a dematerialized/service-based economy (Cucca & Rancci, 2017). Simultaneously, post-industrial heritage areas are envisioned as “hubs” for intense innovation toward more resilient cities (Nohra & Barbero, 2019). Brownfield redevelopment in Gdansk presents both challenges and opportunities. The city’s rich industrial heritage has left behind a legacy of abandoned or underutilized industrial sites, which can harm the surrounding community. However, these sites also offer an opportunity for revitalization, renewal, and the creation of new economic, social, and cultural opportunities for the city. Cities have always had temporary land uses, from squatting and circuses to surface parking and material storage.

However, up until recently, these uses were rarely utilized to transform urban areas with low levels of investment. They were anomalies that were never considered as part of urban development. Temporary uses of industrial brownfields and other derelict land frequently focus on physical redevelopment of those spaces for public access and use. Many temporary uses are open to the public works of art or landscaping that may act as attractions to encourage short-term or long-term investments in the area but which serve no intrinsic commercial purpose.

The results of this study provide important recommendations on temporary use strategies for the redevelopment of brownfields. The results highlight that there are many administrative works and economic issues that must be considered before undertaking a redevelopment of a brownfield site. Temporary use can provide a useful solution to these challenges by allowing for the short-term activation of these sites for a variety of purposes, such as community gardens, pop-up markets, and cultural events. Temporary use not only provides immediate benefits to the local community, but it also helps to build momentum and support for more comprehensive and long-term redevelopment efforts. This approach can provide a testing ground for new ideas and help build community support for more comprehensive and long-term redevelopment efforts.. In addition, it is recommended that stakeholders from the private sector, civil society, and the community collaborate in developing and implementing temporary use initiatives for brownfield sites in Gdansk. With the right support and collaboration, temporary use of brownfield sites has the potential to make a significant positive impact on urban areas and local communities, while addressing the administrative and economic challenges associated with brownfield redevelopment

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DIPARTIMENTO  
DI ARCHITETTURA  
UNIPA



DOTTORATO DI RICERCA  
IN ARCHITETTURA,  
ARTI E PIANIFICAZIONE  
DIPARTIMENTO  
DI ARCHITETTURA DI PALERMO

## RIVISTA DEL DOTTORATO IN ARCHITETTURA, ARTI E PIANIFICAZIONE DELL'UNIVERSITÀ DEGLI STUDI DI PALERMO – DIPARTIMENTO DI ARCHITETTURA

### IN QUESTO NUMERO:

REAGIRE ALLE SFIDE DELLA CITTÀ  
Valeria Scavone

IL PROGETTO CULTURALE COME OCCASIONE DI  
RIAPPROPRIAZIONE DEL PATRIMONIO E DELL'IDENTITÀ  
LOCALE: RIFLESSIONI A PARTIRE DAL CASO STUDIO  
DELL'ECOMUSEO MARE MEMORIA VIVA.  
Caterina Di Felice

IL TEMA DEL PARCO STORICO NELL'APPROCCIO CLIMATE-  
ORIENTED.  
PROPOSTE DI LETTURA PER LA RIQUALIFICAZIONE DEL  
MUSEO E REAL BOSCO DI CAPODIMONTE DI NAPOLI  
Anita Bianco

ACQUA, ARCHITETTURA E CITTÀ.  
RISORSA E MINACCIA NEI PAESAGGI CULTURALI UNESCO  
DEL MEDITERRANEO: UNA RICERCA IN COSTIERA  
AMALFITANA  
Anna Gallo

IL RUOLO DEL PROGETTO CONTEMPORANEO DI  
ARCHITETTURA NEI CENTRI MINORI RURALI DEL  
MEDITERRANEO  
Pietro Maria Torregrossa

FINO ALL'ULTIMA GOCCIA. L'ACQUA, AZIONE DI RESISTENZA  
AL CAMBIAMENTO CLIMATICO MEDITERRANEO  
Martina Scozzari

TARGETING SUSTAINABILITY TO FACE URBAN CHALLENGES.  
USING EEA & EC TOOLS  
Dereka Xanthippi

FROM HARBOUR CITIES TO THE PORTSCAPES. STRATEGIE  
DI RIGENERAZIONE TRANSCALARI PER LO SVILUPPO  
SOSTENIBILE DEGLI AMBITI PORTUALI MARCHIGIANI. IL  
CASO DI PORTO SAN GIORGIO (FM).  
Maria Giada Di Baldassarre, Caterina Rigo

LE VOLTE SOTTILI NELLA TRADIZIONE COSTRUTTIVA  
MEDITERRANEA  
Salvatore Di Maggio

IDENTITÀ DI UN TERRITORIO: UN APPROCCIO OLISTICO  
Carmen Trischitta

IDENTITÀ, MAPPATURA E COMUNITÀ: TRE CONCETTI DELLO  
SVILUPPO SOSTENIBILE LOCALE  
Desiree Saladino

MEDITERRANEAN IDENTITY SITES, TECHNOLOGICAL  
CHALLENGES AND SMART SOLUTIONS IN RURAL AREAS  
Luisa Lombardo

TRANSIZIONE NEL MEDITERRANEO. SCENARI ABITATIVI  
TEMPORANEI  
Marco Bellomo

CO-PLANNING TOOLS AND COMMUNITY WELFARE TO REACT  
TO CRISIS IN SOUTHERN ITALY. REFLECTIONS FROM A  
SICILIAN SOCIAL COOPERATIVE  
Elisa Privitera, Luca Aiello, Carla Barbanti,

JOSÉ ANTONIO CODERCH, IBIZA E IL MITO DEL  
MEDITERRANEO  
Alessandro Mauro

THE STRATEGY OF TEMPORARY USE IN BROWNFIELDS  
REDEVELOPMENT PROCESS. CASE STUDY: GDANSK.  
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DESIGN FOR A BETTER WORLD: MEANINGFUL,  
SUSTAINABLE, HUMANITY CENTERED, 2023  
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WALKING THE SHRINKAGE. 21 PAROLE CHIAVE E 5 TEMI PER  
DESCRIVERE LA CONTRAZIONE IN CAMMINO  
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