

# From Vacant to Vibrant: Transforming Tolka quay through meanwhile use

---

John Edmonds



LUNDS  
UNIVERSITET

# Acknowledgment



**LUNDS**  
UNIVERSITET

Tolka Quay: Development of Dublin port through meanwhile usage  
Master thesis booklet  
2023

Lund University, Sweden  
Faculty of Engineering, LTH  
School of Architecture  
Master's programme in Sustainable Urban Design  
ASBM01: Degree project in Sustainable Urban Design

Author: John Edmonds  
Supervisor: Andreas Olsson  
Examiner: : Lars-Henrik Ståhl  
Final Presentation jury: Jenny B. Osuldsen, Daniel Wasden

I would like to express my utmost gratitude and extend my acknowledgment to these people for without them this thesis would not have been possible.

First and foremost, I would like to express my appreciation to my supervisor, Andreas Olsson for providing unwavering support, allowing me the freedom to make decisions, and guiding me along the right path throughout this journey of growth.

A heartfelt thanks goes to Teresa Arana Aristi for her exceptional dedication, both in the background and towards the students. These past two years have been truly remarkable, and I owe much of that to her.

To my mother and brother, I am forever grateful for their unfathomable amount of support. Without their presence in my life, I would not have reached this significant milestone in my life.

I extend my gratitude to the SUDes family and the friends I have made during these two years. Our shared journey is now a cherished part of my life that I will forever hold dear.

Lastly, I would like to acknowledge and express my sincere thanks to every single person who has played a role in my journey. It is because of their presence and support that has made this thesis happened.

Being a part of the SUDes family is a privilege that I will always treasure.

Thank you.

# Abstract

This thesis explores the concept of **“meanwhile use”** in the context of the Tolka Quay area of Dublin. The project proposes a temporary use of the underutilized space to activate it and contribute to the area’s long-term development. Through five phases of design, which are Connection, Landscape, Zoning, Building, and Future, the project aims to create a vibrant and sustainable community hub in Tolka Quay. Meanwhile use plays a critical role in each of these phases, providing an urban design experiment in a sustainable, low-risk, low-cost way to test new ideas and activate the space. By embracing temporary solutions, the project seeks to lay the groundwork for a more sustainable and inclusive future, where urban environments are dynamic, engaging, and constantly evolving.





# Content

## Introduction 9

Guiding research 10

## Background 13

The days in the municipality 14

Byrne's Lane, Dublin 1 16

## Meanwhile usage 19

Meanwhile use and temporary use 22

Examples of meanwhile use 24

## Case studies 27

Granby park project, Dublin 28

Box park, London 30

Reffen food market, Copenhagen 32

Criticism of meanwhile use as an urban design tool 34

Key learnings 36

Application of meanwhile use in Dublin 39

## Site analysis 41

Population 42

Climate 44

Geography 46

Economy 48

Housing 50

Urban planning in Ireland 52

Places of Dublin 54

Dublin Port 56

Morphology 58

Scale comparison 60

Ecology 62

Why Dublin port? 64

Tolka Quay 66

Site photographs 68

## Strategy and Design 77

Case study of masterplans 80

Master planning principles 82

Micro-climate strategies 84

Strategy for meanwhile usage in Tolka quay 86

Phase 01: Connection 90

Phase 02: Landscape 100

Phase 03: Zoning 120

Phase 04: Building 136

Phase 05: Future 148

## Masterplan 156

Renderings 158

## Conclusion and Bibliography 173

List of Images 181



The issue of urban regeneration has become increasingly important in recent years as cities around the world face a range of challenges, from declining populations to social inequality and environmental degradation. Meanwhile use, a term used in urban design to describe the temporary use of underutilized urban spaces, has emerged as a popular strategy for addressing some of these challenges.

The concept of meanwhile use involves activating vacant or underused spaces for community or commercial activities until a more permanent use is found for the space. This approach provides a way to activate these spaces and create a more vibrant and dynamic urban environment while also providing temporary solutions to community needs.

In the case of Tolka Quay, a neglected area within the Dublin port area, meanwhile use has the potential to serve as a catalyst for regeneration and future activation. The area is an urban island surrounded by a highway, industrial, and commercial spaces, which results in underutilized and unappealing waterfront. However, by implementing meanwhile use strategies, the area can be activated and transformed into a more vibrant and dynamic space that meets the needs of the existing and future local community.

This thesis aims to explore the potential of meanwhile use as a tool for urban regeneration in Tolka Quay. Through an analysis of relevant literature and case studies, the thesis will examine the benefits and limitations of this approach, as well as the factors that contribute to its success. By doing so, the thesis aims to provide insights into how meanwhile use can be used to create more sustainable and inclusive urban environments, and to offer recommendations for policymakers, urban designers, and community organizations interested in implementing this approach in other contexts.

# Guiding research

These are the guiding research that has helped me through the thesis.

## Designing the reclaimed landscape

Alan Berger

This book is the first practical yet in-depth exploration of how to reclaim post-industrial landscapes. Berger examines numerous case studies from practitioners and policy makers from across the US, providing valuable insights into the process and constraints associated with land reclamation.

## Cities for people : Practical Measures for Improving Urban Environments

Ronald Wiedenhoeff

Wiedenhoeff examines various urban spaces throughout Europe through a series of case studies. The book offers a critical analysis of existing urban spaces and proposes potential improvements that can be made. The insights gained from these case studies are likely to have a significant impact on the design of urban spaces with the ultimate goal of creating more functional and livable environments.

## Vastra hamnen

Ossian Grahn

Ossian Grahn provided a detailed analysis of the completed Vastra Hamnen area. The site shares many similarities with the site chosen for the project, and it is crucial to study both the successes and failures of the Western Harbour project in order to gain valuable insights.

## A Pattern Language

Christopher alexander

“A Pattern Language” has always been influential in shaping my approach towards public spaces. This book will serve as a guideline for shaping the public spaces in my design. Alexander emphasizes the significance of community in the process of creating spaces, which will be one of the core concepts of my project.

## Urban sustainability through environmental design

Kevin Thwaites, et al.

Thwaites delved into and broke down the concept of social sustainability. He referred to other practitioners such as Kevin Lynch, Jane Jacobs, Jan Gehl, and Christopher Alexander. Thwaites divided the concept of social sustainability into topics such as the necessity of diversity of people, functions, and urban details, as well as social and physical accessibility, and management and regulation of spaces. These will be the key drivers in my project when designing the phasing for meanwhile usage and general urban design.

## Life between building

Jan Gehl

Jan Gehl has been a significant influence on my approach to landscape architecture and urban design. His books have helped shape my perspective on designing spaces with empathy for people. In particular, his book “Cities for People” provides a valuable toolbox that can be adapted to different urban environments. I plan to use Gehl’s concepts and strategies to establish social sustainability in the neighborhood and create public spaces that are designed with people’s needs in mind.

## Urban transformation

Peter Bosselmann

The work of Bosselmann offers a unique perspective on the morphology of urban spaces and how cities evolve over time. In his book, he examines the changes that occur in urban spaces and evaluates whether they represent an improvement or a deterioration. This critical analysis is essential for anticipating potential changes in the future and guiding decisions around urban planning and design. As I continue on the design of the new urban area, this book will serve as an important resource for anticipating and responding to the changes that will inevitably occur over time.

# Background



# Background

## The days in the municipality

In early 2020, during the third year of my Bachelor's program, I worked as an intern landscape architect in the public realms division of South Dublin County Council.

The job mainly involved public relations works, with very little design work. However, I was involved in a project that had been in planning since at least 2018, my supervisor's aim was to create a wildflower meadow at the beginning of the Firhouse neighbourhood in South Dublin.



Initially, the project was part of the 2018-2021 pollinator plan but was never realized. While I was working there, we were in the process of updating the pollinator plan for 2021-2025, and we quickly added this project to the newly updated plan. I left the County Council in September 2020, and the project was finally realized in 2021. It took over three years for someone to come and plant wildflowers on this small patch of land.

This made me wonder if there was anything that could be done to speed up the process or if there were any other uses for the area while the planning process was underway. How can we use our land more efficiently?

These questions were the beginning of my line of inquiry that led to my master's thesis topic.





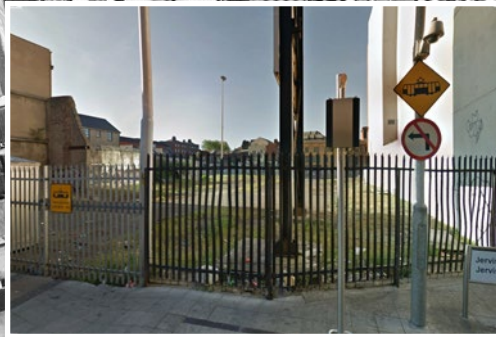
## 1-34 Abbey Street Upper, 42-51 Great Strand Street, and bounded by Byrne's Lane, Dublin 1

While reflecting on my involvement in the project with South Dublin County Council, I began to think back on previous projects from my bachelor studies. In 2018, during my second year of the program, we were given a final semester project to choose and design a landscape for any site between the Grand Canal and the Royal Canal area of Dublin. While looking through Google Maps, I found a site within the Byrne's Lane area, just a few hundred meters away from O'Connell Street in Dublin.

At the time, I discovered that the site had been sold to a development company and that there were plans for it. In May of 2019, a planning application for the site was submitted to the Department of Housing, Local Government and Heritage. The planning application was granted three months later, in August 2019 (Department of housing, 2023).

However, this prime area of land in the heart of Dublin city centre remains empty as of 2023, and no plans for development have been published, even though the planning permission is still active, and no action has been taken. The site has a great location, with a tram stop just north of it. Could something not be done with the site while the planning is being worked out?

My curiosity was piqued, and I began to research any potential urban design tools that could be used to allow a vacant site like this to be utilized. This is when I came across the term "**meanwhile usage.**"



River Liffey

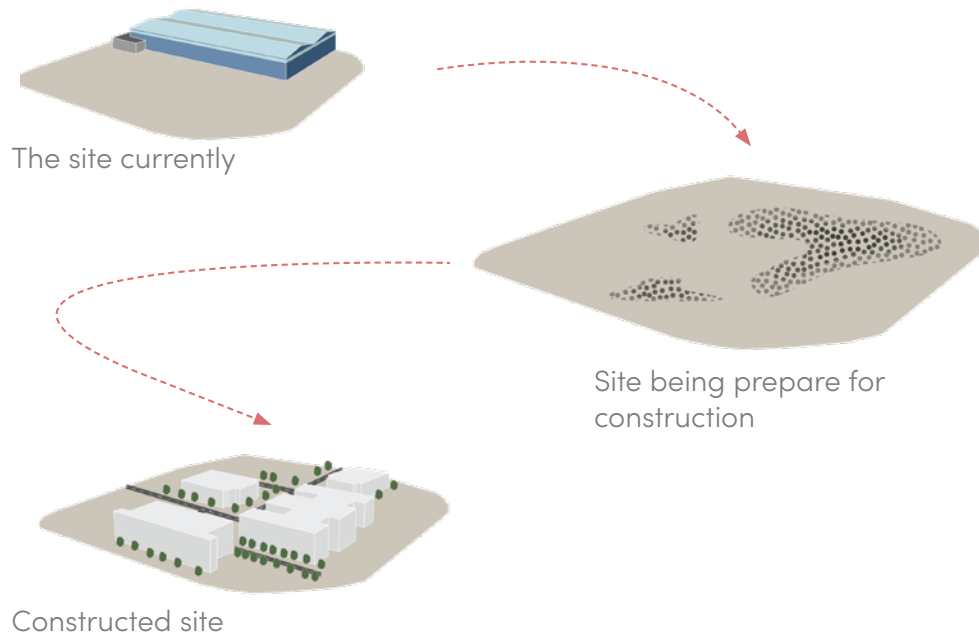


**Meanwhile use**



# Meanwhile Use

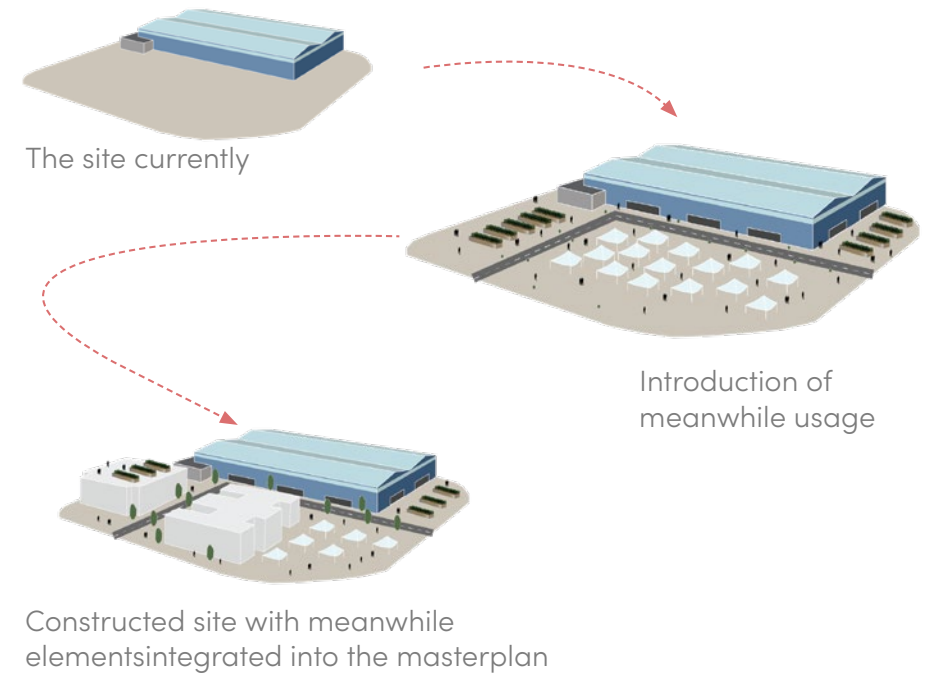
What is temporary use or “meanwhile use?”



“Meanwhile use” is a term used in urban design to describe the temporary use of underutilized urban spaces, such as vacant lots, abandoned buildings, or underused public spaces, for community or commercial activities until a more permanent use is found for the space. It is a way to activate these spaces and create a more vibrant and dynamic urban environment while also providing temporary solutions to community needs. (ARUP, 2020)

Meanwhile use can take many different forms, such as pop-up shops, temporary art installations, community gardens, or public events. These temporary uses can help to activate underused spaces, create social connections, and contribute to the vitality of the urban environment. They can also provide opportunities for experimentation and innovation in urban design and community development.

One example of meanwhile use in Dublin is the Granby Park project. In 2013, a group of urban designers, architects, and community activists



transformed a vacant lot in the city’s north side into a temporary public park. The park featured green spaces, a café, a performance space, and a community garden, providing a much-needed gathering space in the area. The park was open for six months before the land was sold for development, but the project demonstrated the potential of meanwhile use to activate underutilized spaces and provide temporary solutions to community needs. (Architects, 2023)

Meanwhile use as a temporary solution is becoming an increasingly popular strategy in urban design, particularly in cities facing challenges such as a lack of affordable housing, underutilized public spaces, or declining commercial activity. It provides a low-cost, low-risk way to test new ideas and create a more dynamic and inclusive urban environment. However, it is important to note that meanwhile use as a temporary solution is not a substitute for long-term planning and investment in urban infrastructure and development. It is a temporary solution that can provide short-term benefits while more permanent solutions are sought.

## Meanwhile and temporary use

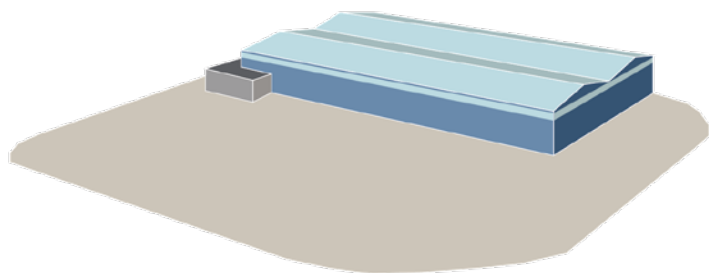
Temporary use and meanwhile use are similar concepts in that they both involve the temporary activation of underutilized urban spaces. However, there are some slight differences between the two:

**Temporary use** generally refers to the use of a space for a short period of time, with a specific end date in mind. The focus is often on providing a specific service or activity, such as a pop-up shop or temporary art installation.

**Meanwhile use**, on the other hand, is more focused on the process of using a space in a temporary way to fill a gap between its current state and its eventual future use. The focus is often on creating a temporary use that contributes to the long-term goals of a community or urban area. (Leyssen, 2018)

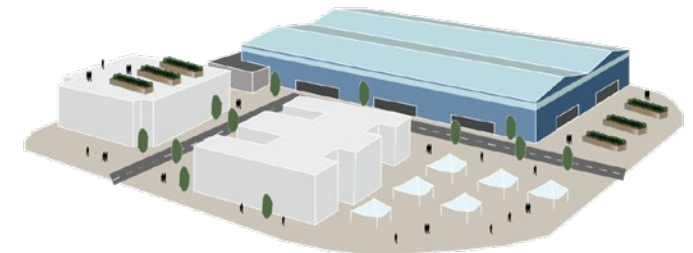
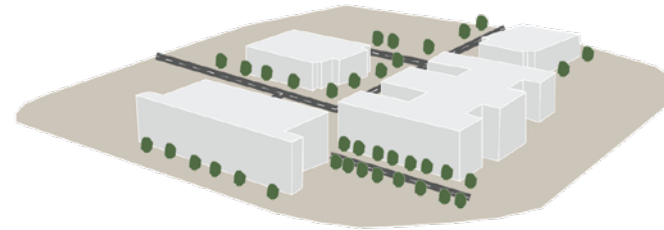
In short, temporary use is more focused on the short-term activation of a space for a specific purpose, while meanwhile use is more focused on the process of creating temporary uses that contribute to the long-term development of a community or urban area.

Through my research, I aim to delve deeper into the world of meanwhile use, to understand how we can harness its power to create lasting impact. I believe that by embracing temporary solutions, we can lay the groundwork for a more sustainable and inclusive future, one where our urban environments are dynamic, engaging, and constantly evolving.



The existing site

The built masterplan can possibly not have a sign that the temporary event was held there



The built masterplan can retain some history of the meanwhile usage, as it is part of the process of the built neighbourhood



The temporary event may be hold and at this point meanwhile use and temporary use is the same. It depends on if these temporary usage will contribute to the end masterplan or not

## Examples of meanwhile use

There are many different examples of meanwhile use, and they can vary depending on the specific needs and goals of a community. Some common types of meanwhile use include:



### Public spaces

Public spaces: Temporary public spaces, such as parklets or plazas, can be created to provide additional space for pedestrians and cyclists, or to host public events.



### Pop-up shops and restaurants

Pop-up shops and restaurants: These are temporary retail or food establishments that are set up in underused spaces, often for a short period of time.



### Art installations and exhibitions

Art installations and exhibitions: Temporary art installations and exhibitions can be a great way to activate underused spaces and engage the community.



### Community gardens

Community gardens: These are temporary gardens that can be used to grow food, flowers, or other plants. They can provide a sense of community and help to improve the aesthetics of a space.



### Co-working spaces

Co-working spaces: These are temporary office spaces that can be used by individuals or small businesses. They can provide a low-cost alternative to traditional office space.



### Event spaces

Event spaces: Temporary event spaces can be used to host a variety of events, from markets and festivals to conferences and meetings.

These are just a few examples of the many types of meanwhile use that can be used to activate underutilized spaces and create a more vibrant and dynamic urban environment.



# Case Studies

# Granby Park project

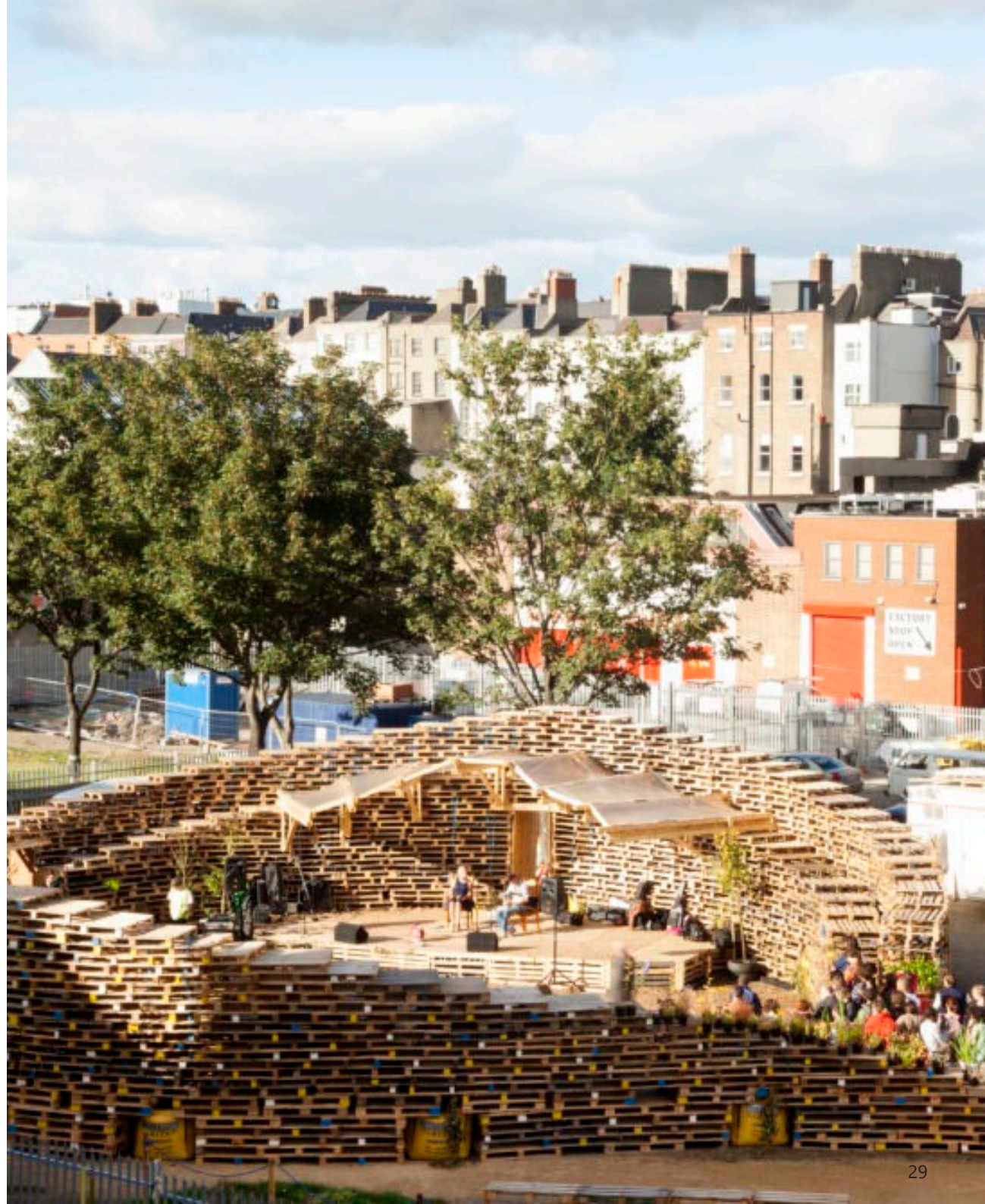
The Granby Park project was a temporary public park created in the heart of Dublin, Ireland in 2013. The project was a collaboration between a team of artists, architects, designers, and community groups, who transformed a derelict site into a vibrant green space for the community to enjoy.

The park was located on a former car park site at Granby Place, near Parnell Square in central Dublin. The site had been vacant and unused for many years, and had become an eyesore in the community. The Granby Park project aimed to bring the site back to life by creating a temporary public space that would showcase the potential of urban green spaces and demonstrate the benefits of community engagement.

The park was designed to be a sustainable and eco-friendly space, with features such as rainwater harvesting, composting toilets, and a solar-powered stage. The design included a range of seating areas, play spaces, art installations, and community gardens. The park also hosted a series of events and activities throughout the summer, including music performances, workshops, and food markets.

The Granby Park project was a huge success, attracting thousands of visitors and generating a lot of positive feedback from the community. The project demonstrated the potential of temporary public spaces to transform derelict sites into vibrant community assets, and it inspired other similar projects in Dublin and around the world.

The success of the Granby Park project also led to the creation of a new non-profit organization called Reimagine Dublin, which aims to promote community-led urban regeneration projects in the city. The organization has since collaborated on several other projects, including the creation of a community garden in Dublin's St. Anne's Park. (Town, 2023)





## Box park, London.

The Boxpark project is a series of pop-up retail and dining destinations that were launched in London in 2011. The first Boxpark location was built in the Shoreditch neighbourhood of East London, using stripped and refitted shipping containers to create a unique shopping and dining experience.

The Boxpark concept was created by Roger Wade, a fashion entrepreneur who wanted to create a platform for emerging brands to showcase their products in a unique and affordable way. The use of shipping containers made the project highly flexible and allowed for quick and easy construction of the retail units. The Boxpark project was a huge success, attracting a wide range of retailers and customers to the site. The project was also highly sustainable, as the use of shipping containers minimized the amount of construction materials needed, and the site was powered by renewable energy sources.

Since the success of the first Boxpark location, the project has expanded to other locations in London, as well as to other cities in the UK and internationally. The project has also inspired other similar pop-up retail and dining concepts around the world. (Groundnation, 2023)





# Reffen food market, Copenhagen

Located in the Refshaleøen district of Copenhagen, Denmark, Reffen is a food market and cultural space that opened in 2018 on the waterfront. Once a busy shipyard, the district has since been transformed into a vibrant cultural hub, with Reffen featuring over 50 food stalls, bars, and vendors offering a range of cuisine from traditional Danish dishes to international fare. (Reffen, 2023)

Reffen is designed to be a space for food, culture, and community, with seating areas, live music, events, and a focus on sustainability and environmental consciousness. It is part of Copenhagen Street Food, an initiative that seeks to promote the city's street food culture and support local entrepreneurs and small businesses, while emphasizing sustainable practices and reducing waste.

Reffen and Copenhagen Street Food are popular destinations for locals and tourists, offering a unique and dynamic experience that reflects the city's diverse and innovative culture. In addition, Reffen serves as an example of a meanwhile use strategy, which involves the temporary activation and use of vacant or underutilized spaces while they are awaiting more permanent development or use.

In the case of Refshaleøen and Reffen, the district was not yet slated for development when the food market was created, so the use of the space was intended to be temporary until a more permanent plan was established. Meanwhile use strategies often prioritize sustainable and community-oriented practices, which aligns with Reffen's focus on reducing waste and contributing to a more livable urban environment.

Ultimately, Reffen is a testament to the transformative power of meanwhile use in revitalizing urban spaces and fostering sustainable and community-oriented development.



# Criticism of meanwhile use as an urban design tool

While meanwhile use can be a useful strategy in urban design, it is not without its criticisms and challenges.

One of the main criticisms of meanwhile use is that it can be seen as a temporary **“band-aid”** solution that does not address the underlying structural issues facing a community. For example, creating a pop-up park in an area with little green space may provide a temporary solution, but it does not address the need for more permanent green space in the long term.

Furthermore, there are concerns that meanwhile use can exacerbate issues of **gentrification and displacement**. When temporary uses in underutilized spaces become popular and successful, they can increase property values and attract investment to an area. This can lead to higher rents and property prices, making it difficult for long-time residents and small businesses to afford to stay in the area. Another criticism of meanwhile use is that it can be used as a way for developers and city governments to **delay making more significant investments** in urban infrastructure and development. Instead of investing in long-term solutions, they may rely on meanwhile use to provide temporary solutions and create the illusion of progress.

Finally, there are concerns about the **sustainability** of meanwhile use initiatives. The temporary nature of these projects means that they often rely on donated or low-cost materials and may not be designed with long-term maintenance in mind. This can lead to issues such as waste and environmental degradation when the projects are dismantled. (Nicolas Bosetti, 2018)

In conclusion, while meanwhile use can be a useful strategy in urban design, it is important to be critical of its potential drawbacks and limitations. It should not be seen as a substitute for long-term planning and investment in urban infrastructure and development, and efforts should be made to ensure that it does not contribute to gentrification or environmental degradation.

Urban planners and policymakers should carefully consider the potential impacts of meanwhile use initiatives and work to address any negative consequences.



“Band-aid” solution



Gentrification



Delay in development



Unsustainable



# Key learning

To effectively utilize meanwhile usage as an urban design tool, it is crucial to be aware of the criticisms and avoid potential pitfalls. It is also important to learn from the challenges that arise and keep their key teachings in mind as we move forward.

## Community needs and engagement



**Community needs and engagement:** It is crucial to involve the local community in the planning and implementation of meanwhile use initiatives. This helps to ensure that the projects address actual community needs and concerns, and that they are designed and managed in a way that reflects local values and priorities.

## Long-term planning



**Long-term planning:** Meanwhile use initiatives should be seen as a temporary solution, and not a substitute for long-term planning and investment in urban infrastructure and development. It is important to consider how the temporary use of a space fits into the broader urban design and planning context, and to plan for the eventual transition to a more permanent use.

## Sustainability



**Sustainability:** Meanwhile use initiatives should be designed with sustainability in mind, both in terms of environmental impact and long-term maintenance. This can include using sustainable materials, designing for easy dismantling and reuse, and planning for ongoing maintenance and upkeep.

## Equity and inclusion



**Equity and inclusion:** It is important to ensure that meanwhile use initiatives are accessible and inclusive, and that they do not contribute to gentrification or displacement. Efforts should be made to involve and benefit diverse communities, and to address any potential negative impacts on vulnerable populations.

## Evaluation and learning



**Evaluation and learning:** Finally, it is important to evaluate the success and impact of meanwhile use initiatives, and to use this information to inform future projects. This can include gathering feedback from the local community, monitoring environmental and social impacts, and documenting best practices and lessons learned.



## Application of meanwhile use in Ireland and Dublin

Meanwhile use can be an effective approach to activating underutilized spaces in Ireland, especially in areas with a high demand for space and a limited supply of affordable properties such as Dublin. It can help to breathe new life into areas that have been left unused or underused for long periods of time, and provide opportunities for entrepreneurs and community groups to test new ideas and initiatives without the long-term commitment and financial investment required for traditional leases.

The use of meanwhile spaces can also help to address the issue of long waiting times for derelict sites to be redeveloped in Dublin. It is not uncommon for vacant sites to remain unused for years due to lengthy planning processes, funding challenges, or other reasons. Meanwhile use can provide a temporary solution, allowing sites to be used productively while permanent plans are being developed. (collective, 2023)

Example of effective meanwhile use in Dublin as mentioned previously is the Granby Park project, which transformed a derelict site into a vibrant public park for six months in 2013. The project showcased the potential for temporary, low-cost, and sustainable urban interventions to create positive social, environmental, and economic outcomes for the community. (Architects, 2023)

Meanwhile spaces can serve as a valuable tool for sustainable development in Dublin, presenting possibilities for experimentation, innovation, and community engagement, while also addressing the issue of vacant and underutilized spaces. However, to ensure the success of meanwhile use projects, it is crucial to take into account the essential lessons of community involvement, long-term planning, sustainability, equity and inclusivity, and assessment and learning. By doing so, Dublin can capitalize on the potential of meanwhile spaces, while also fostering a healthier and more vibrant urban environment for its residents.





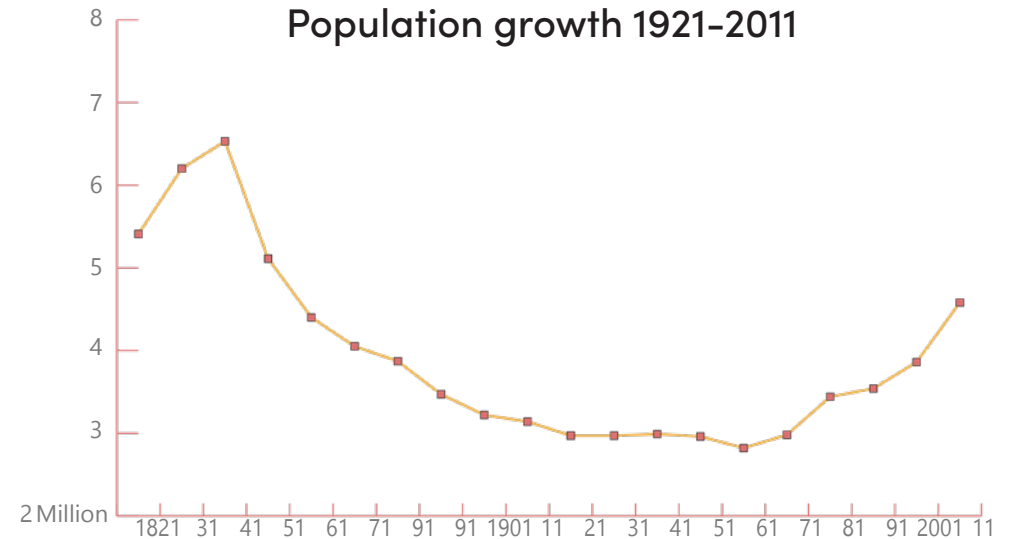
# Site analysis

# Population

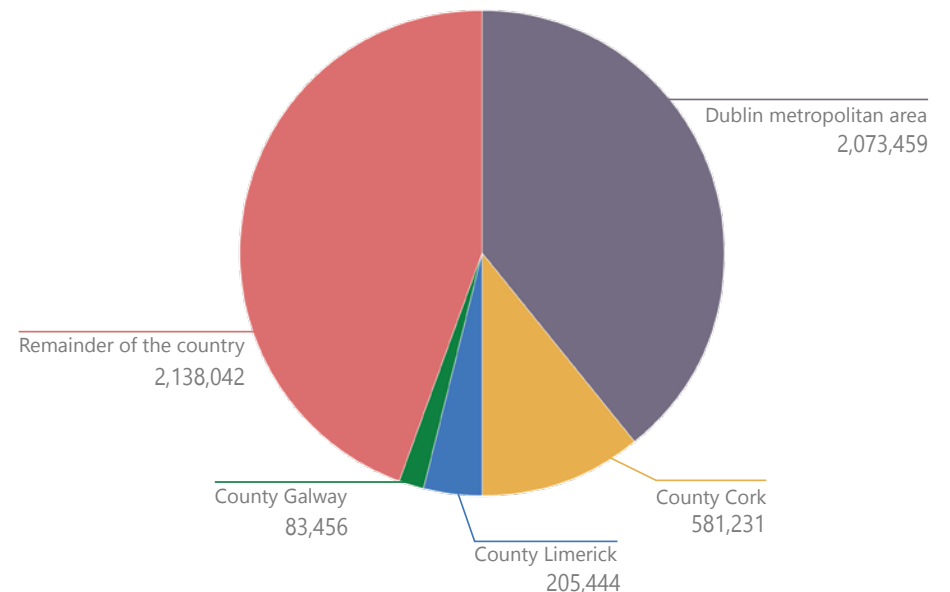
Up until 1845, the population of Ireland had been rapidly rising but suddenly fell into an incredible decline due to the potato famine which is also known as the great famine, or the great hunger. The population at the peak was at estimated 6.5 million people but towards the end of the famine the population of Ireland had been cut in half. Quarter of the population died, and the other quarter had fled the country. This huge decline in the population has not been recovered until today. (Mulhall, 2018)

The main reason that Ireland went through this famine was because of the population's reliance on potatoes as their main source of food. The famine came to a stop when British troops stopped removing food from the country, while also there were improvements to crops yielding and breeding of new variation of potatoes that became resistant to the blight. Exporting and importing became important to the economy as the country realizes that it cannot sustain itself on the crops that grows within the country. Thus, highlights the importance on the many ports in the country, and the relationship of trade that needs to be established to prevent history from repeating itself.

The importance of the port in the small island of Ireland has allow Dublin to flourish as the capital. New job opportunities, new people, new life all converge in Dublin. Now there are over **1.2 million people** which resides in the Dublin metropolitan area. This is over the quarter of the population. The area of Dublin is experiencing a growth of approximately 1-1.5% each year. (nations, 2023)



## Inhabitant distribution 2022



# Climate

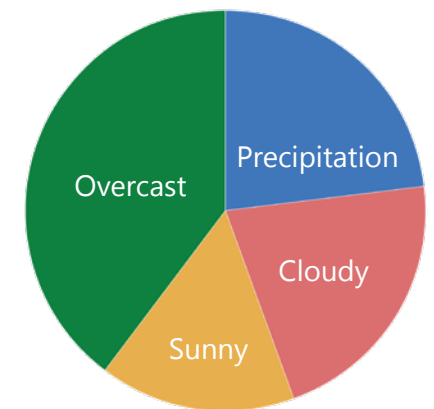
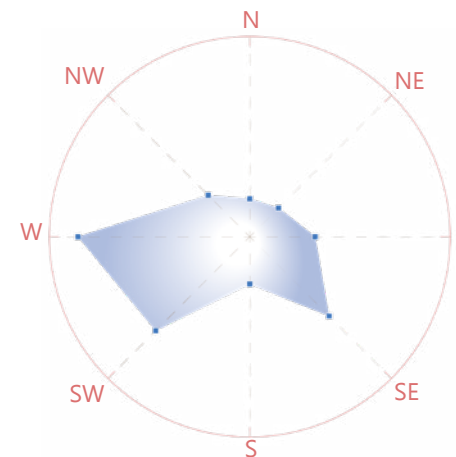
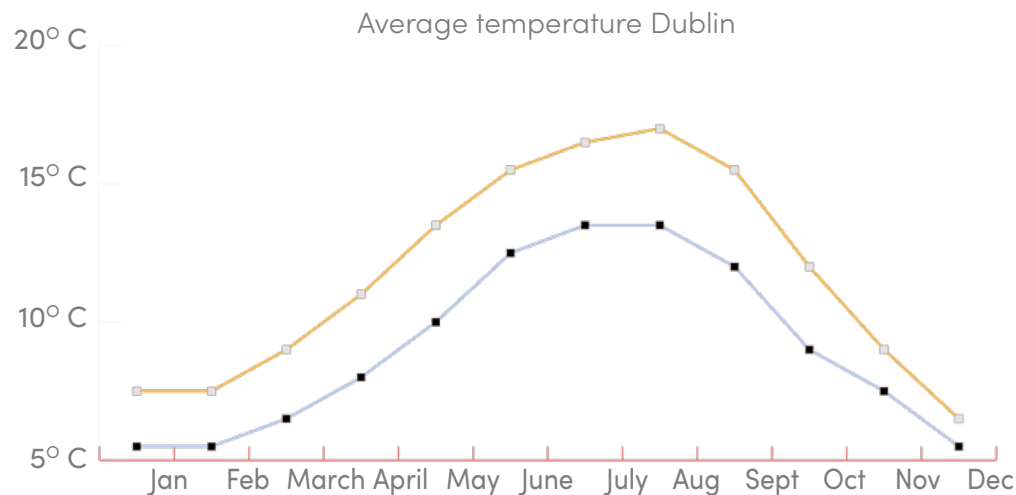
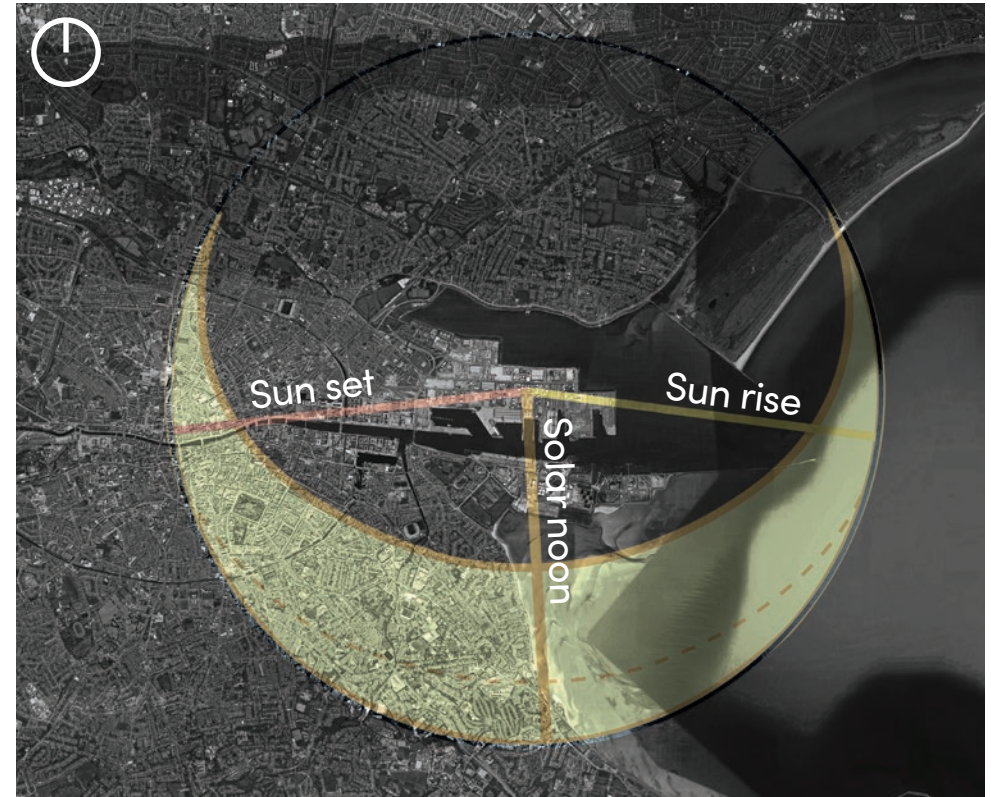
Ireland's mild and humid climate is due to its location in the path of the warm and moist Gulf Stream, which brings relatively warm oceanic air to the country. As a result, Ireland experiences relatively mild temperatures throughout the year, with average temperatures ranging from around 5°C in winter to 19°C in summer. (Climatestotravel.com, 2023)

However, while temperatures are generally mild, the climate is also known for being changeable and unpredictable, with frequent rain and wind. This is because Ireland is in a region where cold polar air from the north and warm tropical air from the south can collide and cause sudden and extreme weather changes.

Rainfall is also a defining characteristic of the Irish climate, with average annual precipitation ranging from around 800 to 2,000 millimetres depending on the region. This abundant rainfall contributes to the country's lush green landscape but can also lead to flooding and other weather-related hazards.

Overall, while the Irish climate is relatively mild and humid, it is also characterized by changeable and rainy conditions, which can make planning and adapting to weather patterns an important consideration in various aspects of life, including urban design and outdoor activities.

## Average weather of Dublin 2022





# Geography

Often Ireland is described as a bowl. A flat karst land surrounded by mountains of bogs. Travelling by the way of the rivers in Ireland was often the case for the Vikings of the old days, which had led most of the cities to be formed around the river. Dublin, Cork, Limerick, and Waterford are all considered Viking cities. (Corráin, 2008)

Dublin, which is the capital, is relatively flat and is cut through by the river Liffey and create a sort of divide between the north and south of Dublin. In the east is the Dublin dock land and the Dublin port areas. Surprisingly most of the land which the dock land and the port are built on is reclaimed over the last 100-200 years or so. The industrial port area is constantly being pushed further and further away into the sea. (Simms, 2004)

The Dublin Dockland was the former port. In the late 20th and early 21st century the area undergone an urban transformation project and became the extension of Dublin's International Financial Services Centre. Many projects were completed during that time such as the Bord Gais theatre, Point village, and the Grand Canal Dock. The area quickly became a place of significant for not only the inhabitant of Dublin but for the rest of the country.

The Port, which is situated right next to the west of Dublin Docklands, is a huge barrier between the inhabitants and the sea as most of the area are privately owned by the port company and are restricted. The area of the Dublin port is cut in half by the Liffey River. The north part of the port is approximately 510 acres which is surrounded by two residential areas and Alexandra Quay. The south side of the wall is approximately 130 acres and lies at the beginning of the Poolbeg peninsula. (Dublin, 2023)

Access to the sea is something that is highly valuable. In Dublin there are over 8 areas in which the seafront is accessible for the public, all of which receives millions of visitors per year collectively. The love for the sea and cold bathing is both shared in the Irish culture and Scandinavia.





# Economy

Dublin, the capital city of Ireland, is not only the largest city in the country but also its economic and administrative center. The city is home to the country's parliament, majority of civil services, and the hub of all transport infrastructure, including the Dublin Port, Airport, Road network, and Train infrastructure. With most of the population and businesses residing in Dublin, it has become a major financial center, ranking 5th in Europe and 43rd globally in the Global Financial Centers Index (Caproasia, 2022).

Dublin's economy is supported by a well-educated workforce with a third level education degree, thanks to the presence of three of the biggest universities in the country. These universities include Trinity College Dublin, which had approximately 18,900 students in 2020 (TCD, 2023), and University College Dublin, which had approximately 38,000 students in 2022/23 (UCD, 2023).

Tourism

Stopping point into Europe



# Housing

For a long time owning a property was made difficult if you are an Irish catholic person. During the British occupancy of Ireland there were many land acts there were passed to ensure that the landownership is more accessible if you were British. Most notably the 1881 land act which contained measures that monitored the relationship between landlord and tenant. Landownership became something that is difficult to achieve as an Irish catholic up until recent times. This has put a lot of strain on building apartment blocks in general as it is more desirable to own your own piece of land, your own home. The attitude of landownership has played a huge role in the colonization of arable land into a suburban utopia. Cities were spreading outwards instead of upwards. (Encyclopedia, 2019)

Soon affordable housing became difficult to find as it is economically unsustainable to keep up the supplies for single family houses, causing years of housing undersupply, coupled with an exodus of small landlords from the market as people in the upper-class treat being a landlord like a full-time job.



Not only this but the recent policies also influenced the cause for the lack of affordable housing. Under Part V of the Planning and Development Act 2000, up to 20 per cent of the development space were to be set aside to ensure an adequate supply of housing for all sectors of the existing and future population when a planning application for the exact purpose of a development containing more than nine houses, or on a site which exceeds 0.1 hectares (Planning and Development Act, 2000)

In 2002 after Martin Cullen took over the position of the Minister for the Environment, Minister Cullen proposed to amend the 2000 Planning Act by going against and contradicting one of the core provisions; a requirement that under Part V of the Act, up to 20 per cent of all new housing schemes and developments was to be set aside for affordable and social housing (Planning and Development (Amendment) Act, 2002) Minister Cullen and the construction industry saw the urgency for this amendment due to the fear that their overpriced private houses and apartments would no longer attract investors if “poor people” were going to live in the same place. The amendment that Cullen made to Part V of the Planning and Development Act 2000 allows the development firms to, instead of allocating 20 per cent of housing for affordable and social housing, alternatively make a financial contribution to the local authority (McDonald, 2011).

This amendment has resulted in developers “buying their way out” of allocating spaces for social and affordable housing. Between 2002- and 2011-Part V should have delivered up to 20 per cent (approximately 80,000) but instead has only produced just over 3.5 per cent (just over 15,000) affordable or social houses (O’Brien, 2014). Subsequently, as of 2020 there are almost 69,000 households are on the social housing waiting list and a further 90,000 are under the Housing Assistance Payment (HAP). Only 9 per cent of Ireland’s housing are dedicated to social housing compared to the EU average of 20 per cent (RING, 2020).

Ireland, especially Dublin, needs densification. To create more affordable housing which sustains socio and economical dynamic of Dublin there need to be an attempt to change the mindset of the people, and in consequence the mindset of the policymakers.



## Urban planning in Ireland

While urban planning in Dublin has seen some progress in recent years, there are still significant challenges and criticisms that must be addressed.

One of the most significant issues facing Dublin is the lack of affordable housing. While the Affordable Housing Scheme is a step in the right direction, it has been criticized for being too limited in scope and not providing enough affordable homes for those in need. Additionally, the city's zoning laws and planning regulations have been criticized for limiting the amount of housing that can be built, contributing to the housing crisis. (Pope, 2022)

Another criticism of urban planning in Dublin is the lack of focus on sustainable transportation. While the city has made some improvements, such as expanding the Luas tram system and introducing the Dublin Bikes bike-sharing scheme, there is still a heavy reliance on cars, leading to congestion and pollution. There has been criticism that the city should prioritize public transportation and active modes of transportation, such as cycling and walking, over private cars.

Sustainability is also an area where Dublin's urban planning falls short. Despite the city's ambitious targets for reducing greenhouse gas emissions and increasing energy efficiency, there are concerns that these targets are not being met quickly enough. There is also criticism that the city's green spaces are not being adequately protected, with some parks and green areas being threatened by development. (Conghaile, 2022)

Preserving Dublin's cultural heritage is also an area where urban planning has faced criticism. While many historic buildings and landmarks have been protected and preserved, there have been cases where development has threatened the city's cultural heritage. The proposed demolition of the historic Moore Street buildings, for example, has faced significant opposition from community groups and heritage advocates. (university, 2014)

In conclusion, while there have been some positive developments in Dublin's urban planning, there are still significant challenges and criticisms that must be addressed. The lack of affordable housing, unsustainable transportation practices, insufficient progress towards sustainability, and threats to the city's cultural heritage are all areas where urban planning in Dublin must do better. It is crucial that urban planners work to address these issues and engage with the community to create a more sustainable, liveable, and equitable city for all residents.





# Places of Dublin

National Botanical Gardens

Royal Canal

Bull Island

Phoenix Park

O'Connell St.

Dublin Port

Docklands

Liffey river

Heuston Station

Trinity College

Dublin Castle

Grand canal dock

Grand Canal

St. Stephen's green

Sandymount Beach

Belfield





# Dublin Port

The area of Dublin port is owned and operate by Dublin Port Company (DPC). The headquarter is located just at the west of the site. DPC is a semi-state company. The company is responsible for the infrastructure and upkeeping of the port area. The port is responsible for the majority of cargo import and exporting of the country via freights. In 2019 approximately 38.1 million tons of cargo were handled and there were 7,898 ship movements and 158 of them were cruise ships (Company, 2021) .

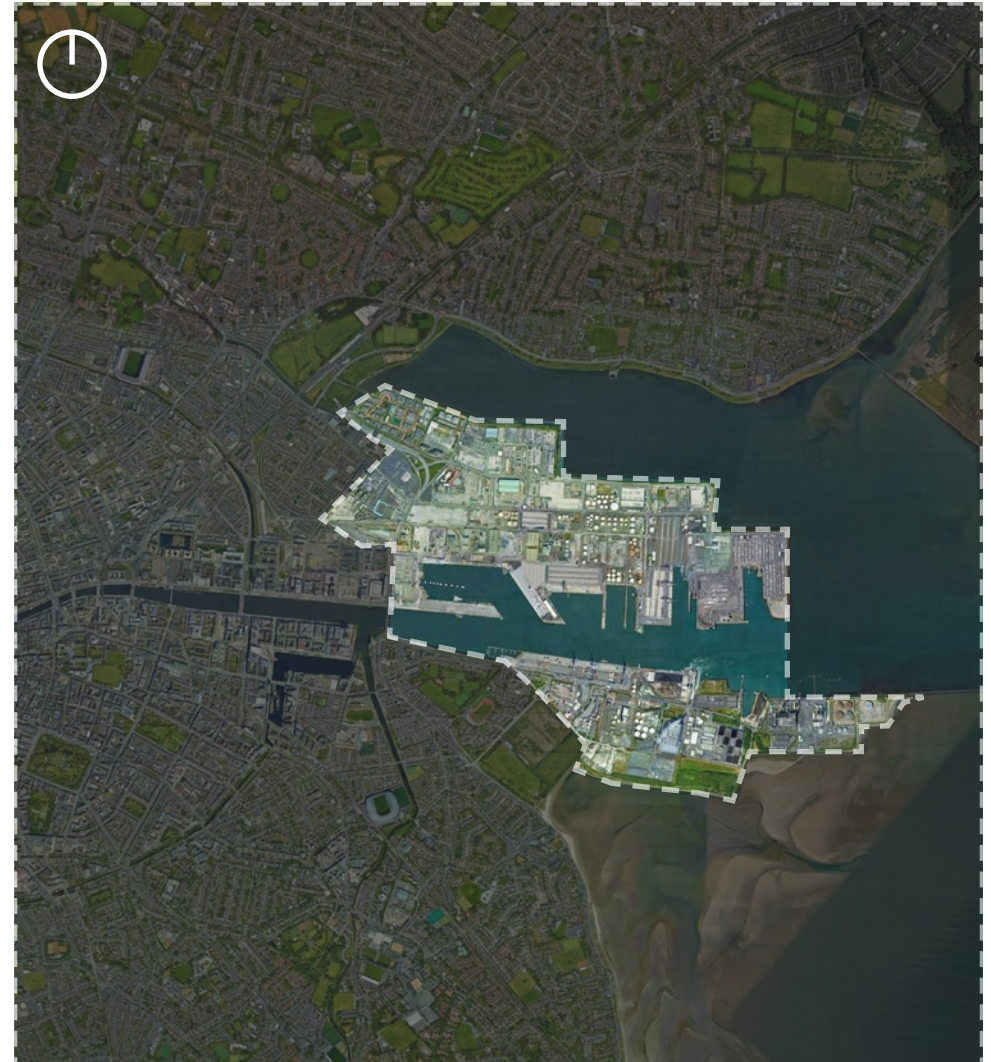
Dublin Port is a major port and transportation hub located on the east coast of Ireland. It is the largest port in Ireland and handles approximately two-thirds of the country's trade. The land use in Dublin Port is primarily industrial, with a mix of container terminals, vehicle terminals, and bulk cargo handling facilities. The port also has a number of warehouses, storage facilities, and distribution centres.

In recent years, there has been a push to redevelop the land use in Dublin Port to better utilize the valuable waterfront space. This has led to discussions around the potential for mixed-use development that incorporates residential, commercial, and recreational uses. Some proposals have included the creation of a new urban quarter that would serve as a gateway to Dublin city centre, complete with housing, retail, and cultural amenities. (DPC, 2018)

However, there are also concerns about the impact of such redevelopment on the industrial operations of the port, as well as the potential displacement of existing communities and businesses. In addition, there are environmental concerns related to the port's operations, such as air pollution and the impact on nearby marine ecosystems.

Overall, the land use in Dublin Port is a complex issue that requires careful consideration of a range of factors, including economic, social, and environmental concerns. It will likely require a collaborative effort between the various authorities, including port authorities, government agencies, local communities, and developers, to arrive at a plan that balances competing interests and achieves sustainable development.

According to the development plan until 2040, the existing landscape surrounding the port area would change significantly in the next 30 years. There is an increased awareness of landscape issues and in future years, Dublin Port Company would seek to complement the preservation and projection objectives for the surrounding open spaces and residential amenities. (DPC, 2018)





# Morphology

The coastal line morphology of Dublin has undergone significant changes since the arrival of the Vikings in the 9th century. The Vikings established a settlement at the mouth of the River Liffey, which provided them with access to both the sea and the hinterland. (Corráin, 2008)

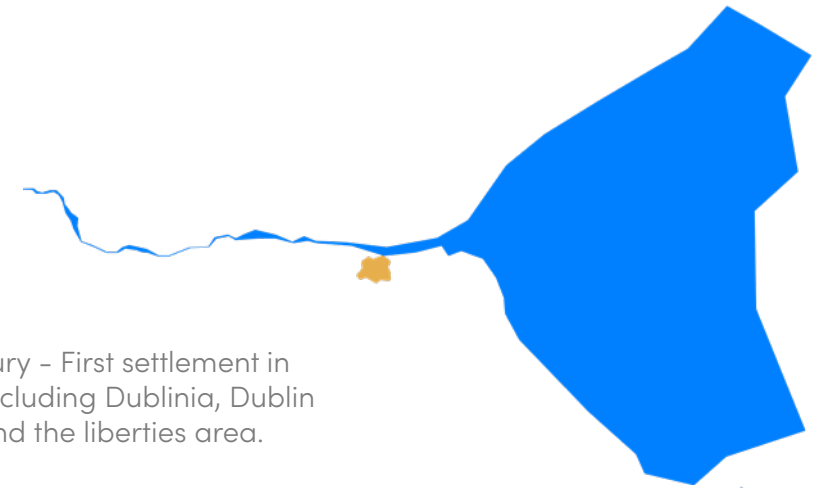
Over time, the Viking settlement grew, and a defensive wall was constructed around the area known as Dublinia, which is now the site of Dublin Castle. The wall extended along the banks of the Liffey, enclosing the area known as the Liberties.

In the centuries that followed, Dublin continued to grow, and the city's coastline was transformed by the construction of numerous quays and harbours. The River Liffey became a bustling port, with ships from all over the world docking in the city to trade.

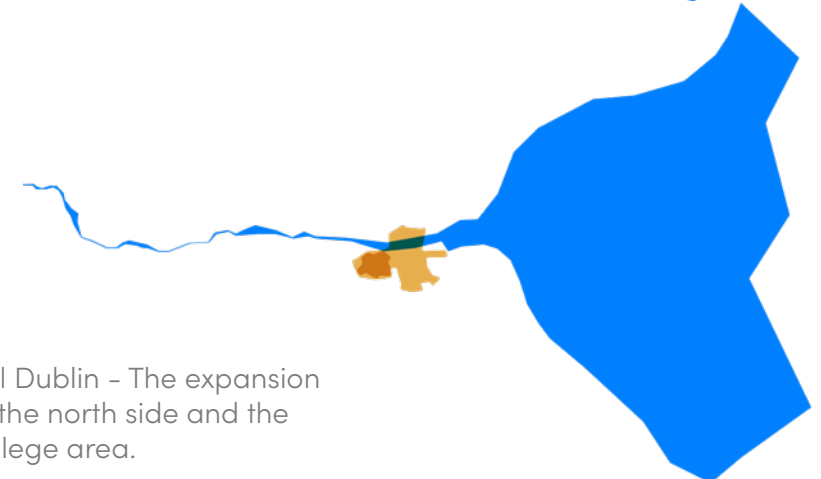
The Great South Wall, which extends out into Dublin Bay, was constructed in the early 19th century to provide a safer route for ships entering the port. The wall also helped to protect the port from the strong winds and high waves that are common in the bay. (Simms, 2004)

In the late 20th century, the focus of Dublin's port activity began to shift towards container traffic, and the port's infrastructure was adapted to accommodate larger ships and more modern cargo handling techniques. The construction of the East-Link Toll Bridge in the 1980s also provided improved access to the port from the city centre.

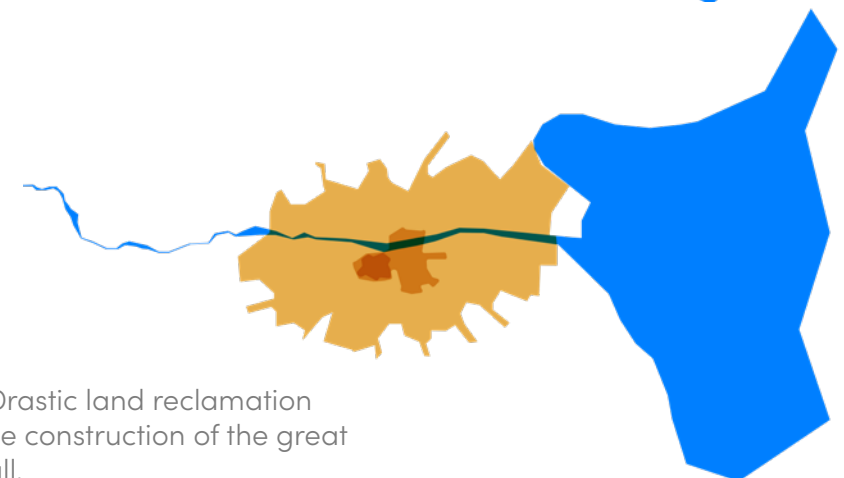
Today, the coastline of Dublin continues to evolve, with new developments such as the Dublin Port Centre and the ongoing expansion of the port's container terminal. The city's relationship with the sea remains a key aspect of its identity, and the waterfront is an important part of Dublin's public realm.



9th century - First settlement in Dublin including Dublinia, Dublin castle, and the liberties area.

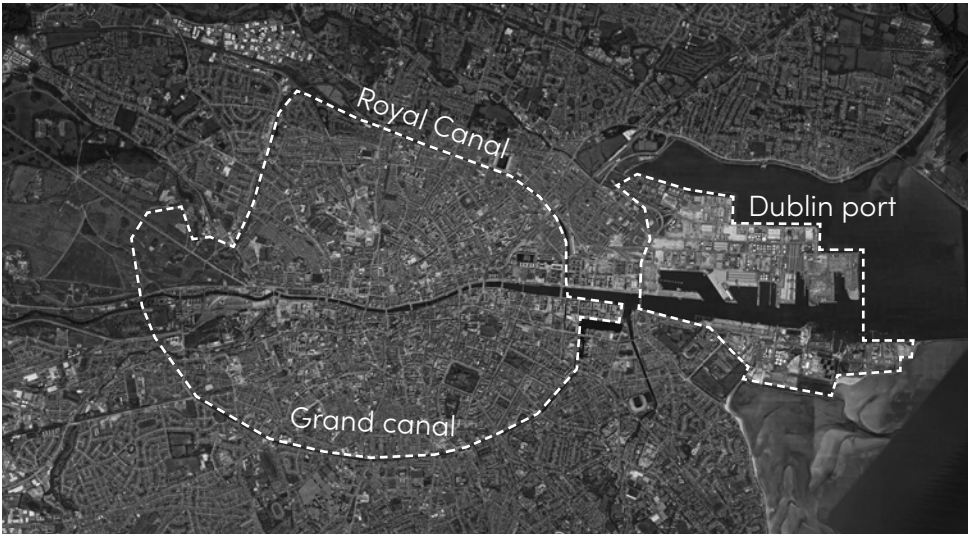


Medieval Dublin - The expansion towards the north side and the trinity college area.

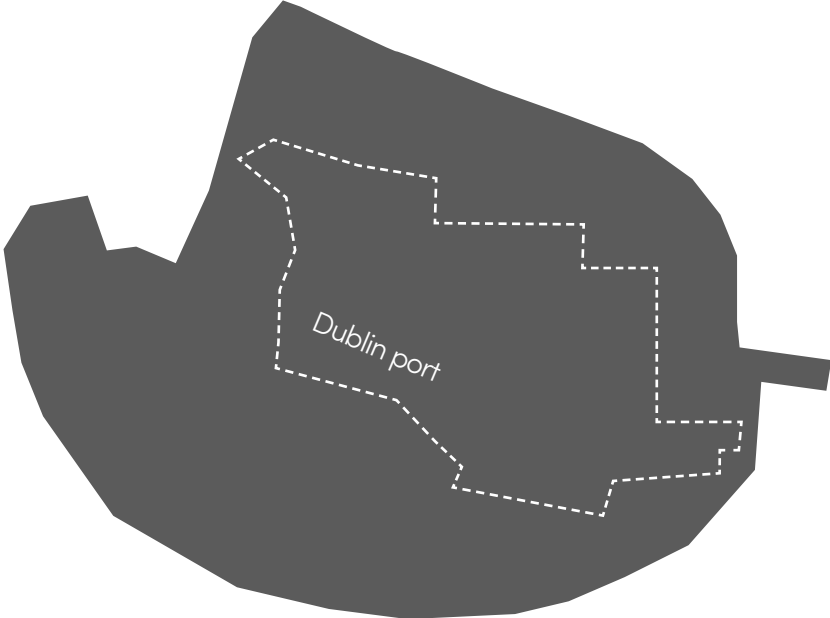


1900s - Drastic land reclamation due to the construction of the great south wall.

# Scale comparison



The Dublin core area which is considered to be the area within the Royal canal and the Grand Canal.



Dublin core area



Dublin

Urban area: 117.8 km<sup>2</sup>

Pop : 1.2 million (2020)



Copenhagen

Urban area: 525.50 km<sup>2</sup>

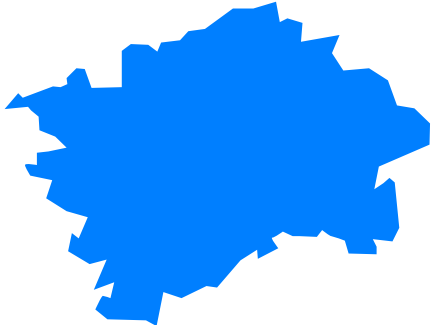
Pop : 1.3 million (2020)



Stockholm

Urban area : 188 km<sup>2</sup>

Pop : 975,551 (2020)



Prague

Urban area : 496.2 km<sup>2</sup>

Pop : 1.3 million (2019)





Ecology

Fairview park

Tolka Estuary

Clontarf promenade

Bull Island

Royal Canal greenway

Dublin Bay

River Liffey

Ringsend park

Sean moore park

Irishtown nature park

Grand Canal





# Why develop in Dublin port?

The question of whether housing should be proposed in the Dublin Port area is a complex one, with arguments both for and against such development.

On the one hand, there is a significant shortage of affordable housing in Dublin, and developing new residential spaces in the Port area could help to alleviate this problem. The Port area is well-located, with easy access to the city centre and public transportation, and there is potential to create a mix of affordable and market-rate housing that could benefit a range of residents.

Additionally, there are arguments that developing the Port area for housing could help to create a more vibrant and diverse urban environment, with a mix of residential, commercial, and industrial spaces that could support a range of activities and uses. Such development could also help to address issues of social inequality and exclusion, by providing new opportunities for residents to live and work in the city.

On the other hand, there are concerns about the potential impacts of residential development on the Port area. The Port is a major economic hub for the city, with a range of businesses and industries operating within its boundaries. Developing the area for housing could potentially displace these businesses or limit their ability to expand and grow in the future.

There are also environmental concerns associated with developing the Port area for housing. The area is prone to flooding, and developing new residential spaces in this zone could exacerbate existing flood risks. Additionally, there are concerns about the potential impacts of housing development on biodiversity and wildlife in the area, particularly given the proximity of the Port to Dublin Bay.

Overall, whether or not housing should be proposed in the Dublin Port area is a complex question that requires careful consideration of a range of factors. While there are arguments both for and against such development, it is clear that any proposed housing development in the Port area must be approached with caution, and with a focus on ensuring that it is both sustainable and inclusive.





# Tolka Quay



Tolka Quay is an area located in the northern part of Dublin, near the river Tolka estuary and the Royal Canal. Historically, the area was primarily industrial, with several warehouses and factories located along the canal and riverfront. In recent years, the area has undergone significant redevelopment, with a focus on creating new housing and commercial spaces.

One of the key developments in the area is the North Strand Strategic Development Zone (SDZ), which was designated by Dublin City Council in 2013. The SDZ covers an area of approximately 28 hectares, including Tolka Quay and nearby North Strand, and aims to create a mixed-use development with a focus on sustainable design and community engagement. The development includes plans for over 2,000 new homes, along with commercial and retail spaces, parks and open spaces, and improved transport infrastructure. The design of the development includes a focus on sustainability, with plans for energy-efficient buildings, renewable energy sources, and green spaces.

In addition to the North Strand SDZ, there have been a number of other developments in the Tolka Quay area in recent years. These include the redevelopment of the former Glass Bottle Company site, which is now home to a mix of housing, retail, and commercial spaces (bottle, 2023). There are also plans for the development of a new marina and boatyard at Tolka Quay, which would provide a new amenity for residents and visitors to the area.

Overall, the redevelopment of the Tolka Quay area is part of a broader trend in Dublin towards creating more sustainable, mixed-use developments that prioritize community engagement and environmental sustainability. While there are concerns about the impact of development on existing communities and potential displacement of residents, the aim of the North Strand SDZ and other development projects is to create a more vibrant and liveable urban environment for all residents.



# Tolka Quay and Dublin port site photographs















0 50m 100m

# Tolka estuary

Office areas

Motor way (M50)

Storage spaces and container yards

Storage spaces and container yards





**Strategy & Design**





0 50m 100m





# Case studies of masterplans

## Sulselholmen, Copenhagen



One of the notable advantages of designing in close proximity to a body of water is the opportunity to foster a strong connection with water. In the case of the future Tolka Quay neighborhood, the aim is to bring the people of Dublin closer to the water, fostering a relationship between life on land and life beneath the water's surface.

An important design feature of Tolka Quay is the creation of canals. The purpose of these canals is multifaceted. Firstly, they serve to maintain the ecological health of the life on land by effectively managing water runoff. Additionally, the canals contribute to the unique character of the neighborhood, providing a distinct living experience closely intertwined with water. This concept of living in close proximity to water is not a new idea, as it has been successfully implemented in various neighborhoods worldwide, such as Solselholmen in Copenhagen, Denmark.

The master planning of Tolka Quay draws inspiration from the approach employed in the development of Solselholmen, specifically in regard to the use of canals. By utilizing canals, the streets of Tolka Quay can be shaped to embrace the presence of the ocean or river, allowing residents to have a direct connection with the water from the very entrance of their homes. This approach enhances the overall design and promotes a seamless integration of the natural water element into the fabric of the neighborhood.

## Bo01, Malmö



The location of Tolka Quay, situated near a body of water, presents challenges in the future planning process due to the harsh coastal climate characterized by strong winds and frequent rain. However, valuable lessons can be learned from the infamous Bo01 neighborhood in terms of mitigating the impact of such harsh conditions and creating a successful microclimate for its residents.

The neighborhood of Bo01 has gained recognition in the field of urban design, particularly for its effective strategies in dealing with strong winds and establishing favorable microclimates within the area. It is crucial to study and apply the principles utilized in Bo01 to the planning of Tolka Quay, as both neighborhoods share similar requirements for addressing microclimate concerns. By incorporating these lessons, Tolka Quay can strive to create a comfortable and inviting living environment, despite the challenging coastal climate it faces.



# Master planning principles

## Sustainable Development Goals

In the planning of future neighborhoods, it is imperative to prioritize Sustainable Development Goals (SDGs) to ensure the creation of a sustainable living environment for people, flora and fauna, the economy, and the land.

Tolka Quay exemplifies a commitment to these goals by consistently referring to them throughout the phases of development and design. By incorporating the SDGs into the planning process, Tolka Quay aims to foster a sustainable and holistic approach that addresses social, environmental, and economic aspects. This emphasis on sustainability will contribute to the well-being of residents, the preservation of natural ecosystems, the promotion of a thriving economy, and the responsible utilization of land resources.



To achieve a truly sustainable neighborhood tailored to the unique site of Tolka Quay, there are specific goals that require close implementation to ensure the success of other sustainability objectives. These goals encompass various aspects of sustainability and include:

9. Innovation in Infrastructure: Emphasizing the development of innovative infrastructure solutions that minimize environmental impact, optimize resource efficiency, and enhance overall sustainability.

10. Reducing Social Inequalities: Promoting social integration within the neighborhood to reduce inequalities and foster a sense of community, ensuring that the benefits of sustainable development are accessible to all residents.

11. Sustainable Cities and Communities: Establishing a framework for creating sustainable cities and communities that prioritize environmental protection, social well-being, and economic prosperity.

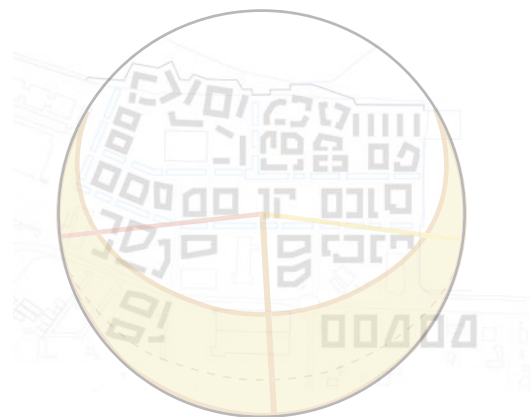
12. Responsible Consumption and Production: Adopting responsible practices in material usage and monitoring to minimize waste generation, promote circular economy principles, and reduce the environmental footprint associated with consumption and production processes.

13. Climate Action: Implementing strategies to mitigate climate change impacts, such as reducing greenhouse gas emissions, promoting renewable energy sources, and enhancing resilience to climate-related hazards.

14, 15. Life Below Water and Life on Land: Incorporating measures to protect and enhance aquatic and terrestrial ecosystems, ensuring the preservation of biodiversity and ecological balance within Tolka Quay.

By closely integrating these specific goals into the planning and design processes of Tolka Quay, the neighborhood can effectively address key sustainability challenges, create a harmonious environment for residents, and contribute to the overall well-being of the community and surrounding ecosystems.

## Micro-climate strategies sun and wind



Given the north-facing nature of the site, it becomes crucial to prioritize the optimization of sunlight exposure for the residences in the area, both within their homes and outdoor spaces. Adequate access to sunlight offers several benefits, including improved natural lighting, enhanced well-being, and energy efficiency.

In the design and planning of Tolka Quay, careful consideration should be given to factors such as building orientation, layout, and open spaces to maximize sunlight penetration. This involves strategic placement of buildings, the integration of architectural features that allow for ample daylighting, and the creation of open and green spaces that receive sufficient sunlight.

By ensuring that the residences in Tolka Quay receive the highest possible amount of sunlight, the neighborhood can create a more comfortable and enjoyable living environment. Moreover, optimized sunlight exposure promotes energy efficiency by reducing the need for artificial lighting and potentially lowering heating requirements. This aligns with the broader sustainability objectives of Tolka Quay, contributing to the overall well-being of residents while minimizing the environmental impact of the neighborhood.

## Coastal winds



Considering the significance of wind as a factor, it becomes essential to take wind patterns from both the prevailing wind and the coastal wind into account during the planning of Tolka Quay. By strategically positioning buildings and considering the layout of the neighborhood, efforts can be made to minimize the formation of wind corridors and create a more pleasant micro-climate for the inhabitants.

Through careful design and placement of structures, it is possible to mitigate the impact of strong winds and create protected areas within the neighborhood. This can be achieved by incorporating windbreaks, such as green spaces, landscaping features, or physical barriers, which help to redirect or block the flow of wind and reduce its intensity in specific areas.

Taking wind patterns into account and implementing design strategies to create a more favorable micro-climate demonstrates the commitment of Tolka Quay to address the specific environmental conditions of the site and optimize the living experience for its future inhabitants.

These two strategies falls right into number 13 of sustainable development goals.



# Strategy for meanwhile use in Tolka Quay

The Tolka Quay site, located within the Dublin Port area, currently has no development plan and the overall Dublin Port development plan extends only until 2040. Surrounding Tolka Quay are several offices, including one adjacent to the site, the Dublin Docklands area, and scattered office spaces throughout the Dublin Port area. Additionally, there are few dense housing or mixed-use areas in the immediate vicinity to support these offices. (DPC, 2018)

To address this, the proposed development of Tolka Quay will serve as an urban experiment in implementing sustainable meanwhile usage throughout different development phases of the site. Four types of meanwhile usage will support the development of Tolka Quay: activation-type meanwhile use, landscape-type meanwhile use, and two types of supporting-type meanwhile usage. These meanwhile use types will be implemented during the five development phases of the site: activation and connection, landscaping, zoning, neighbourhood construction, and sustainable future growth.

By incorporating meanwhile usage throughout the different phases of the development, the project aims to create a sustainable and inclusive neighbourhood that addresses the needs of the city and surrounding communities.

This approach will allow for experimentation and learning while also ensuring that the site's history and legacy of meanwhile usage is preserved in the future neighbourhood.



# Strategy for meanwhile use in Tolka Quay



Step 1 : Spatial activation



Step 2: Contextual connection



Step 1: Topography & water



Step 2: Phytoremediation



Step 3: Landscape type Meanwhile use



Step 1: Landscape zoning



Step 2: Framing public space



Step 3: Supporting type meanwhile usage



Step 1: Beginning neighbourhood construction



Step 2: Supporting type meanwhile usage



Integrating meanwhile usage into the neighbourhood





## Phase 1 : Connection

Due to its location, Tolka Quay can be described as an urban island that is cut off from the surrounding area by the M50 highway. The site's disconnection from the surrounding area makes it challenging for people to travel to the site, and there is currently no attraction or incentive to draw people to the area.

Before construction begins, it is crucial to generate excitement and create attention for the area. Activation of the site can serve as a catalyst to draw people to the area and showcase its potential. Additionally, simultaneous improvements in transportation infrastructure are needed to better connect Tolka Quay to the surrounding area. By addressing both these issues, Tolka Quay can become an integrated and thriving part of Dublin's urban fabric.

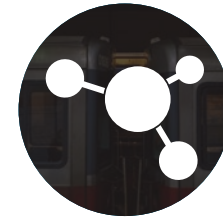
### Step 1 : Spatial activation



Phase 1, Step 1 aims to activate Tolka Quay and the surrounding Dublin port area, which is crucial in gaining public attention and kick-starting the whole process. One effective way of activating the area is to repurpose the existing warehouse buildings. One of the warehouses can be transformed into an information centre, serving as a meeting point, and

jump-starting the educational aspect of "meanwhile usage." Meanwhile, the other warehouse has the potential to be converted into an urban farm centre to prepare for the landscape phasing of the project. Additionally, enhancing the existing landscape features can help raise awareness of the value of Dublin port and Tolka Quay.

### Step 2: Contextual connection



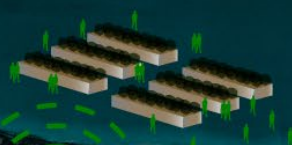
While the activation of the site is crucial, it is equally important to establish a strong connection between Tolka Quay and its surrounding area. Without such a connection, people may not have easy access to the site, which could hinder its potential success. One solution is to extend the Luas line, which currently ends at "The Point," further into the Dublin Port area. This would involve the addition of two new stops: "Tolka Quay," which would serve the design site within Tolka Quay, and "Dublin Port," which would be located at the end of the Dublin Port area, providing service to both the workers of Dublin Port and those using the ferry service.

In addition to the human connection, it is also important to consider the ecological connection. The Tolka Estuary is home to a diverse array of flora and fauna, which extends beyond the mouth of the river. To protect this important ecosystem, the already existing boardwalk can be extended and connected into Dublin Port. This would provide more recreational space for humans while also establishing protected migration paths for animals.



# Step 1 : Spatial activation

The first urban farms on the site. This will be a part of the preparation of the landscape phasing



1

2

3

This will be the first stop on the site. It will serve as both a meeting point and an information point.

New point of interest for the area as the end point for the newly proposed walkway.

## Key :

- 1 Urban farm
- 2 Information and meeting point
- 3 View point into the Irish sea



Fairview Park

The Yacht Bar and Restaurant

CLONTARF

EASTPOINT BUSINESS PARK

EAST WALL

TOLKA QUAY

DUBLIN PORT

Dublin Port

Stena Line - Dublin Port

"Gate of Dublin"

POINT VILLAGE

3Arena

Irish Ferries

0 50m 100m



# Step 1 : Spatial activation

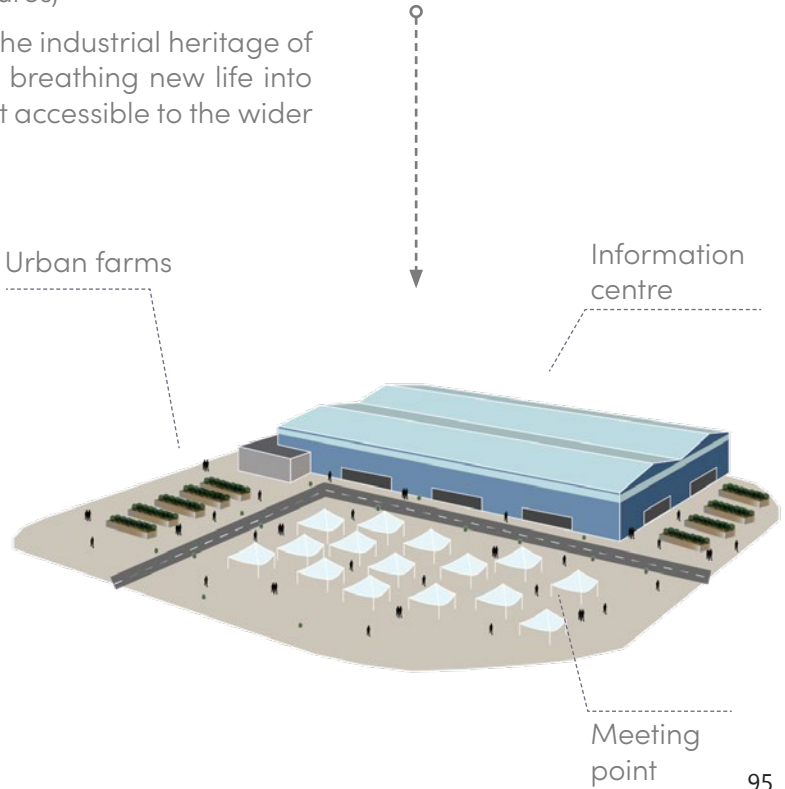
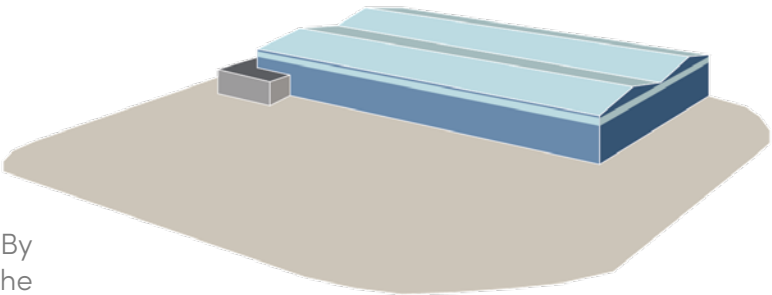


Converting the existing industrial buildings into a new center for the area would serve as a great first point of contact for visitors when they arrive on the site. This could be used as a hub for

information, a space for educational activities, and a meeting point for events and

workshops. By repurposing the existing structures,

we can retain the industrial heritage of the area while breathing new life into it and making it accessible to the wider community.





# Step 2: Contextual connection



**Key:**

- 1 Pedestrian connection
- 2 Tramway (Luas) extension
- 3 Ecological connection

New walkway which connects Fairview park to Dublin port terminal stop. This will also become an ecological corridor.

Extension of the luas proposed to serve the visitors to tolka quay and the workers of Dublin port.

Fairview Park

The Yacht Bar and Restaurant

CLONTARF

Eastpoint Business Park

Tolka Quay stop

TOLKA QUAY

DUBLIN PORT

Dublin Port

The Point (Existing stop)

POINT VILLAGE

3Arena

Dublin Port

Stena Line - Dublin Port

Irish Ferries

0 50m 100m





# Boardwalk through the areas





## Phase 2: Landscape

Preparing the landscape for future use is an essential step that follows the activation of the site. It allows people to visit and see the site, while also serving as an educational landscape that showcases the process of landscape transformation from the start of neighbourhood construction to finish. This will help establish a stronger connection and attachment to the land for local inhabitants and visitors alike.

### Step 1: Topography & water



After the activation of the site, the next step in the preparation of the landscape for future use is topography work. The first task is to remove the asphalt surface and expose the contaminated soil (Council, 2023).

This soil needs to be remediated to prepare it for future use. Phytoremediation is one potential technique that can be used to remove the heavy metals and other contaminants from the soil. Soil is dug out to create the water channels the water channels to dilute any future contaminants in the soil and prevent future flooding.

The excavated soil will then be use as embankment for the new water edge.

### Step 2: Phytoremediation



The soil on the site has been deemed toxic based on a survey conducted by the Dublin City Council (Council, 2023). There are several methods to deal with contaminated soil, but one of the most sustainable ways is phytoremediation, which involves using plants to absorb heavy metals from the soil and improve the landscape.

However, this process can be slow, taking anywhere from 3 to 7 years depending on the level of toxicity. The reason for selecting this method is because it is sustainable, cost-effective, and allows time for the establishment of future planting for the neighbourhood.

### Step 3: Landscape type Meanwhile use



While phytoremediation is ongoing, temporary landscape uses can be implemented on the site. These could include urban farms, pocket parks, temporary markets, event spaces, natural playgrounds, and more. This will ensure that the site remains active and productive while the phytoremediation process is ongoing, making better use of the land.

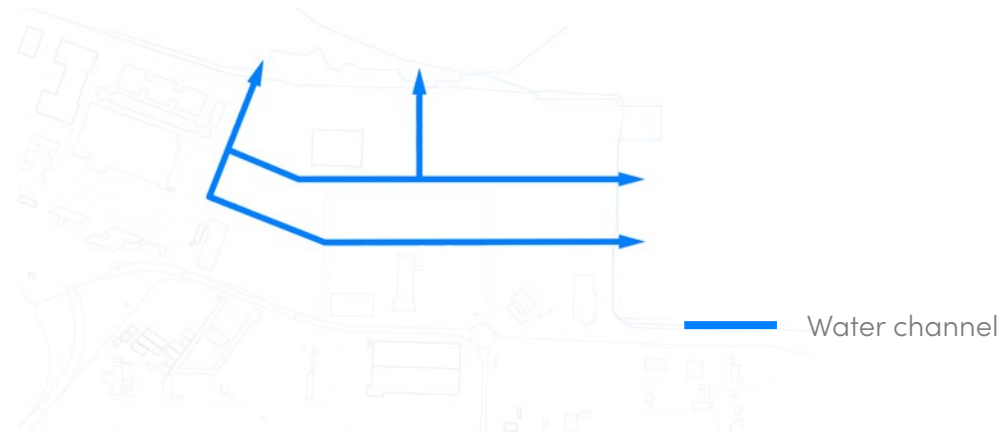
Additionally, this temporary use of the site can also serve as an opportunity for people to learn about the landscape and feel more connected to the area.





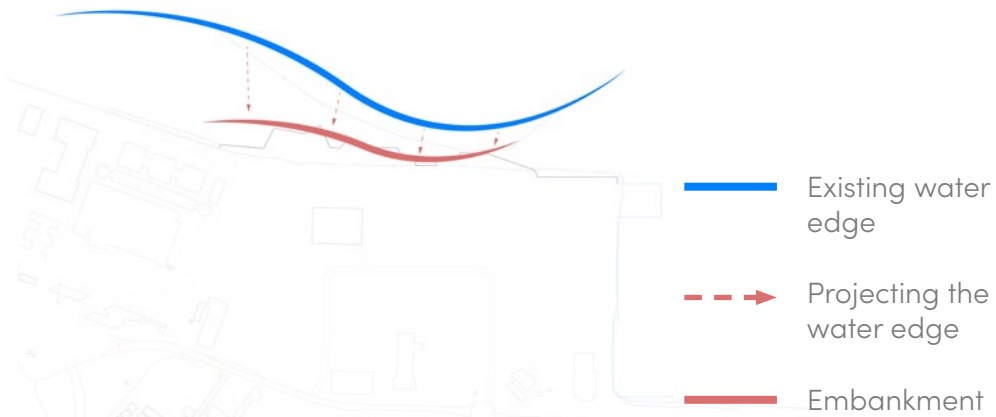
# Step 1: Topography & water

## Water channel creation



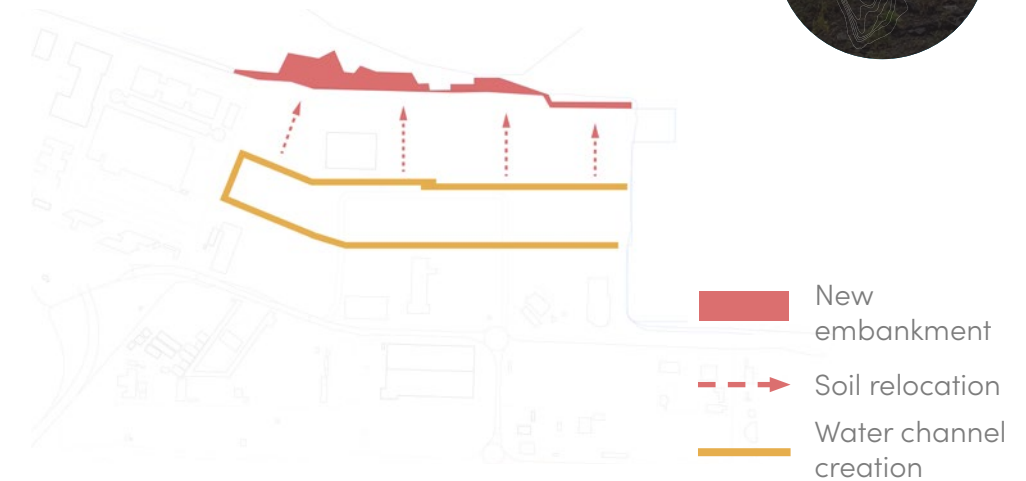
Creating water channels within the site, and preparation for soil remediation. The direction of the water channel creation follows the urban fabric. This is an attempt to fit Tolka quay future development into the urban fabric of Dublin

## Mimicking the landscape pattern



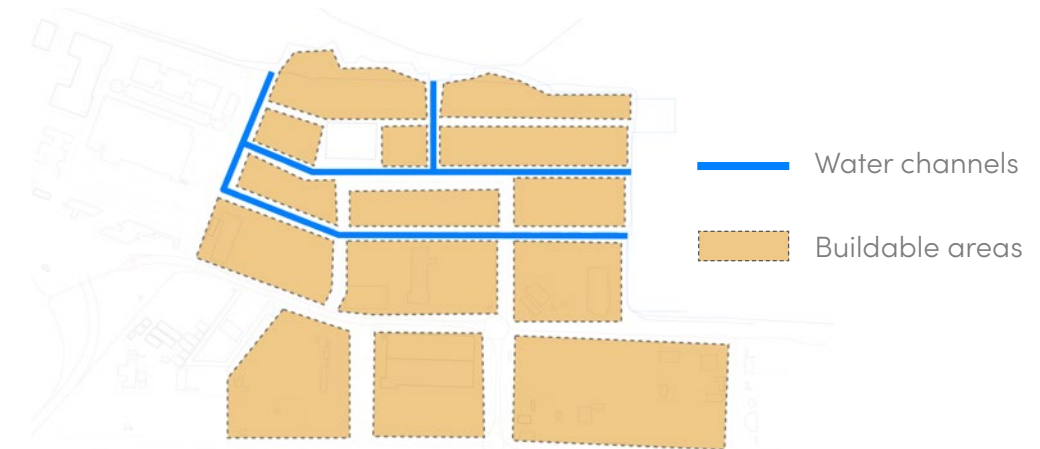
Considering the pattern of the landscape to find out the flow of which the embankment will be. This will help to break up the waterfront for the future neighbourhood.

## Embankment



Taking the soil from the water channel creation and relocating it to the water edge. This, reducing the emission from transportation of soil to a different site.

## Zone division by the water channels and pathways



Defining a preliminary urban fabric using the newly created water channels and existing and proposed pathways.

# Step 2: Phytoremediation

Once the soil has been exposed and the water channels have been created, the site can undergo the phytoremediation process. This process will involve a combination of high biomass planting and trees, which will treat the contaminated soil and eventually become established urban trees within the future neighbourhood.



- Green spaces
- Water
- Water way

## Planting examples



Hyacinthus sp.



Helianthus sp.



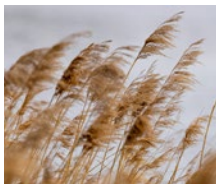
Zea mays



Sinapis juncea.



Typha latifolia



Phragmites australis



Iris germanica



Trifolium sp.



Populus nigra



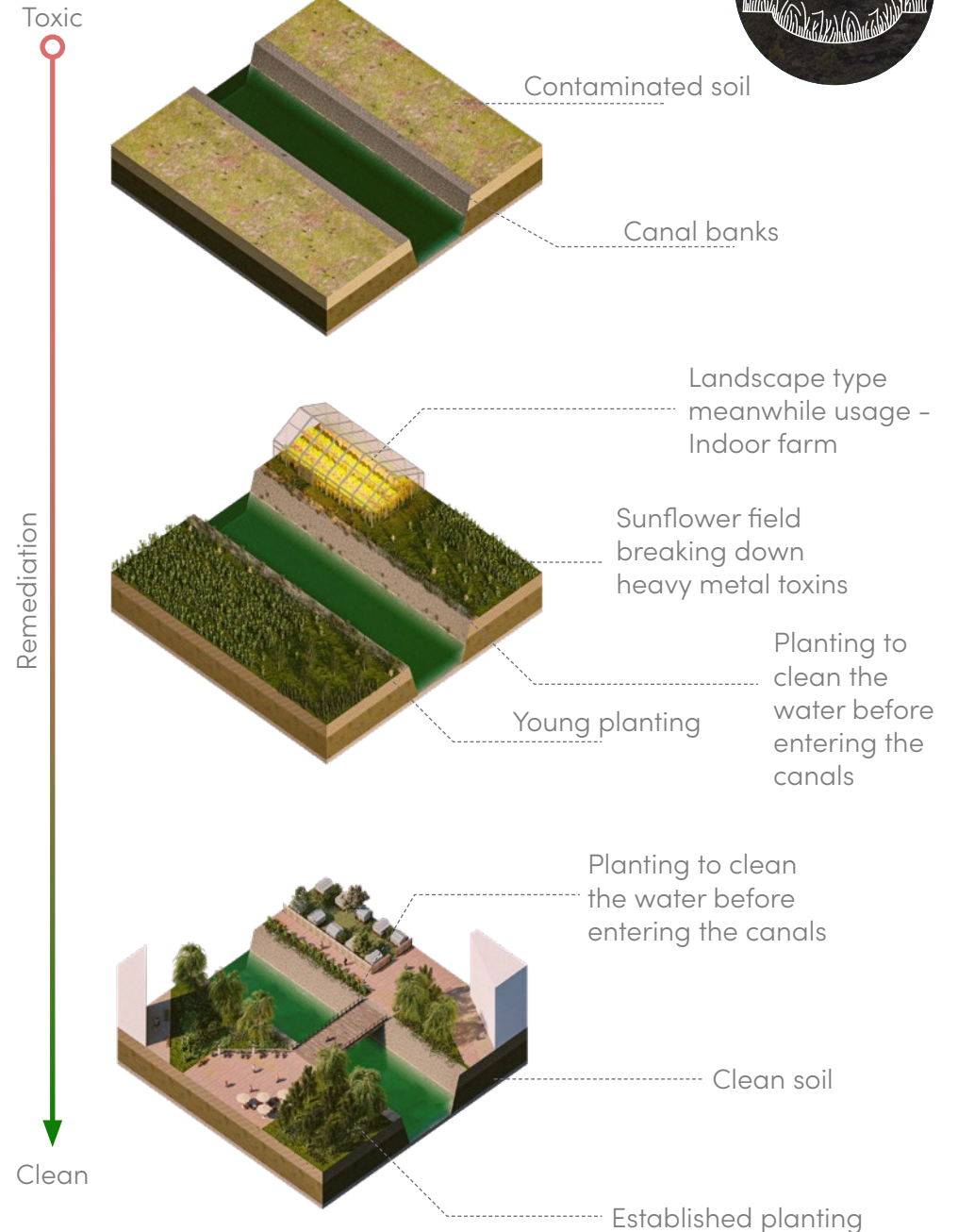
Salix sp.



Betula sp.



Corylus sp.



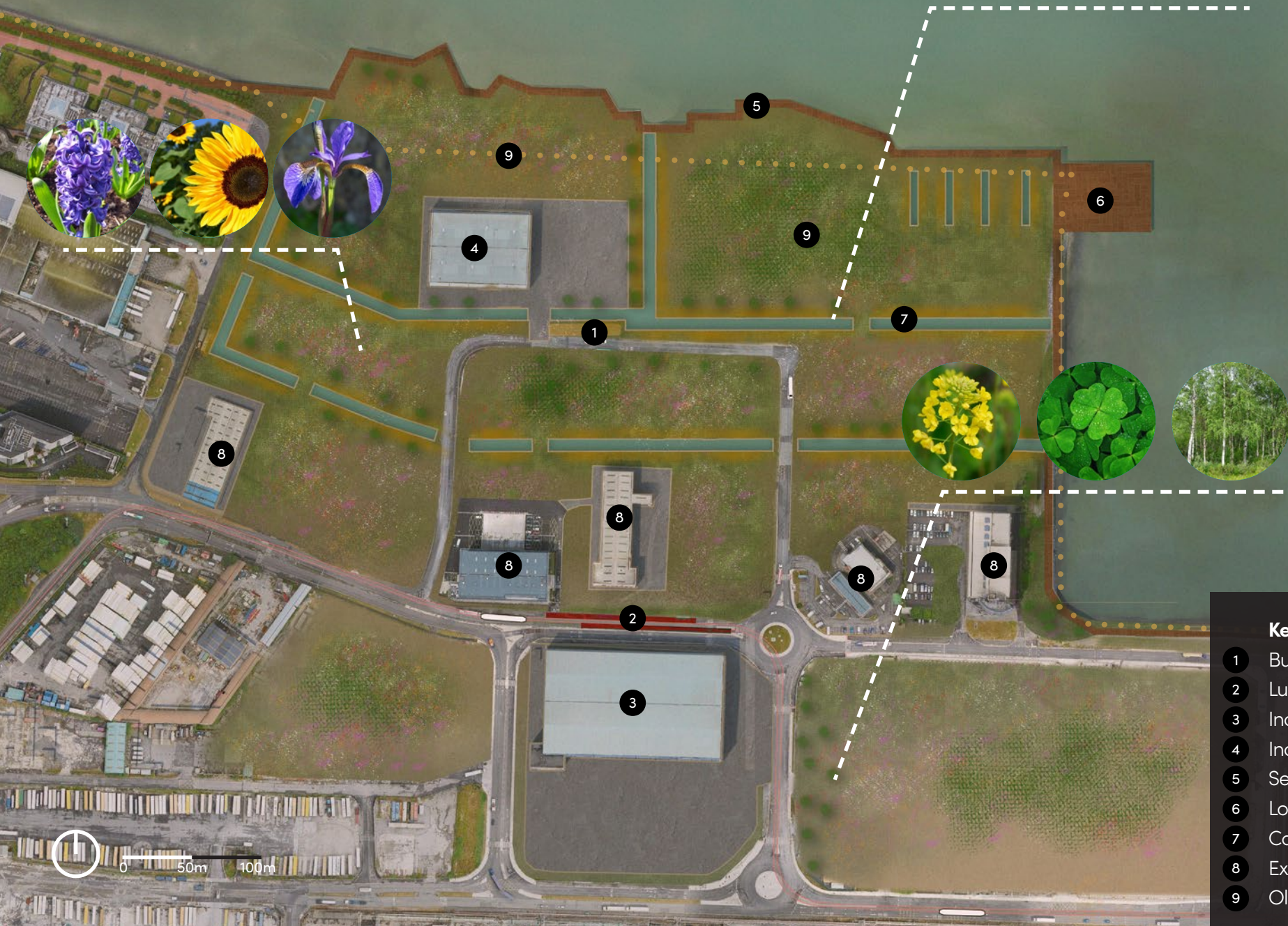


# Stage 1 & 2: Topography & Phytoremediation





# Stage 1 & 2: Topography & Phytoremediation



Soil is relocated, water edges are defined, and plants are planted to absorb toxins, return nutrients, and create a buffer area.

- Key:**
- 1 Bus stop
  - 2 Luas (tram) stop
  - 3 Indoor market + meeting point A
  - 4 Indoor farm + meeting point B
  - 5 Seaside walk
  - 6 Lookout point and event space
  - 7 Canal
  - 8 Existing buildings
  - 9 Old coastline





## Stage 3: Landscape type meanwhile use

These are some of the landscape type and examples of meanwhile usage that can happen during this phasing of the project.



### Pop-up park: Granby Park

The successful pop-up park in Dublin can serve as a reminder of what a space can become within a limited time frame and help establish a legacy. This is something that is valuable to the project site to have.

### Food market: Reffen

A thriving food market can serve as a pivotal attraction to draw people to the site, and also create opportunities for small businesses to establish themselves in the future neighborhood.

### Urban Farm: Frau Gerolds Garten

The urban farm in Zurich is an excellent demonstration of using recycled materials and containers to create functional spaces. Additionally, it exemplifies how urban farming can be a temporary space that fosters community engagement.

### Temporary event: Karusel music festival

Karusel serves as a great example of a temporary event that can contribute to the activation of an area, and this is a strategy that could be implemented in Tolka Quay



# Stage 3: Landscape type meanwhile use





# Stage 3: Landscape type meanwhile use



- Urban farms
- Event space
- Market
- Carparks

The strategy involves identifying and establishing temporary uses for the site while it undergoes transformation, with each area zoned for specific temporary uses.



- Key:**
- 1 Event area
  - 2 Urban farm centre
  - 3 Information + meeting point
  - 4 Outdoor market
  - 5 Carparks
  - 6 Public transport stops
  - 7 Temporary plant nursery

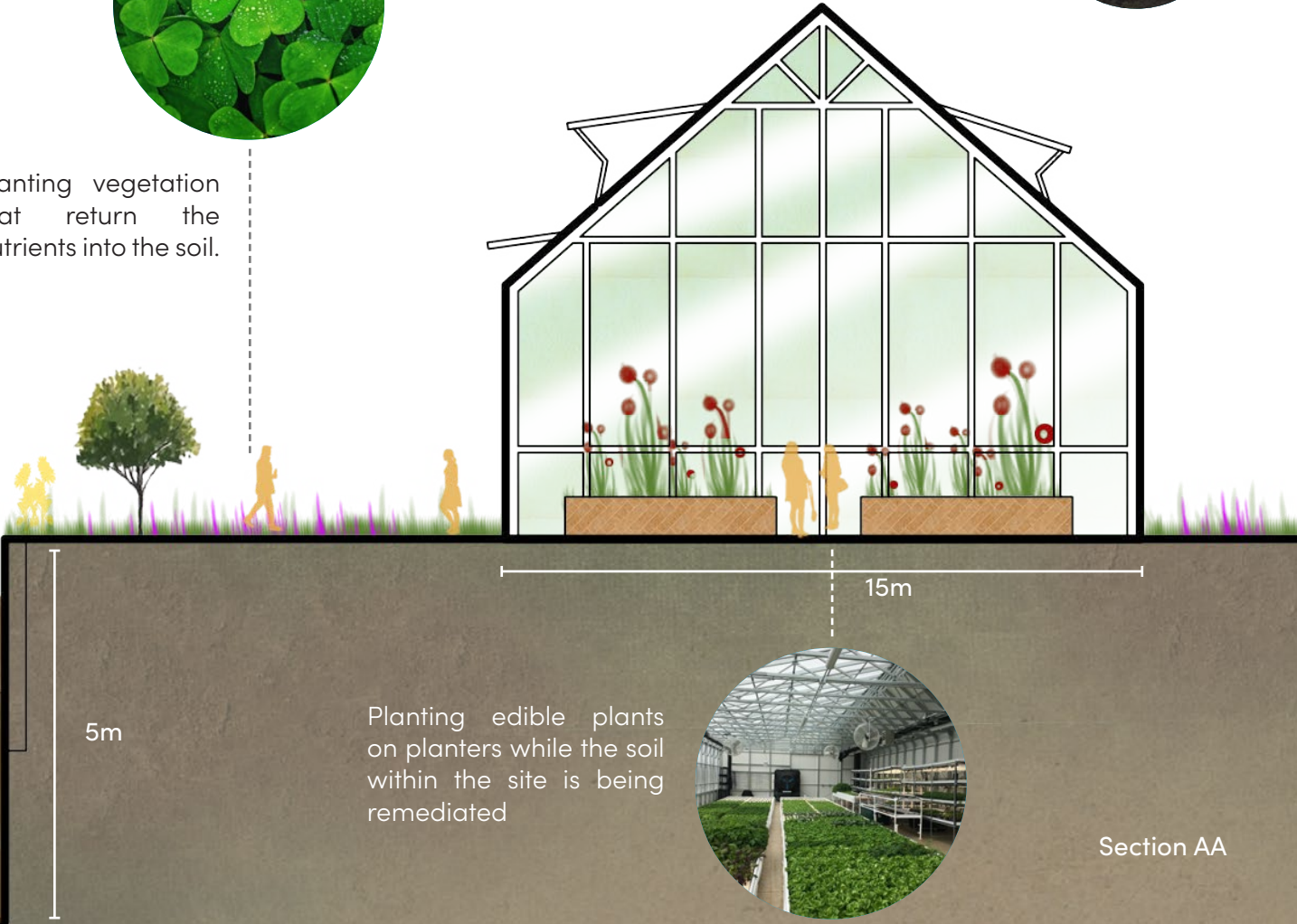
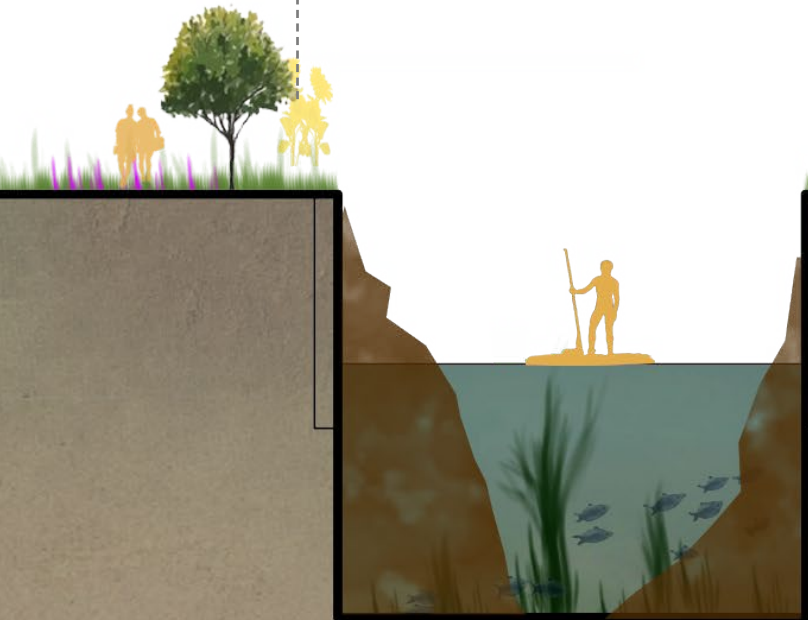


# Stage 3: Landscape type meanwhile use

Using high bio-mass vegetation can help absorb and break down heavy metals from the soil, as well as clean the groundwater before it enters the ocean.



Planting vegetation that return the nutrients into the soil.



Planting edible plants on planters while the soil within the site is being remediated



Section AA



# Stage 3: Landscape type meanwhile use



Typha sp. Absorbing heavy metals and breaking it down from the canal water. Also serve as an ecological buffer zone

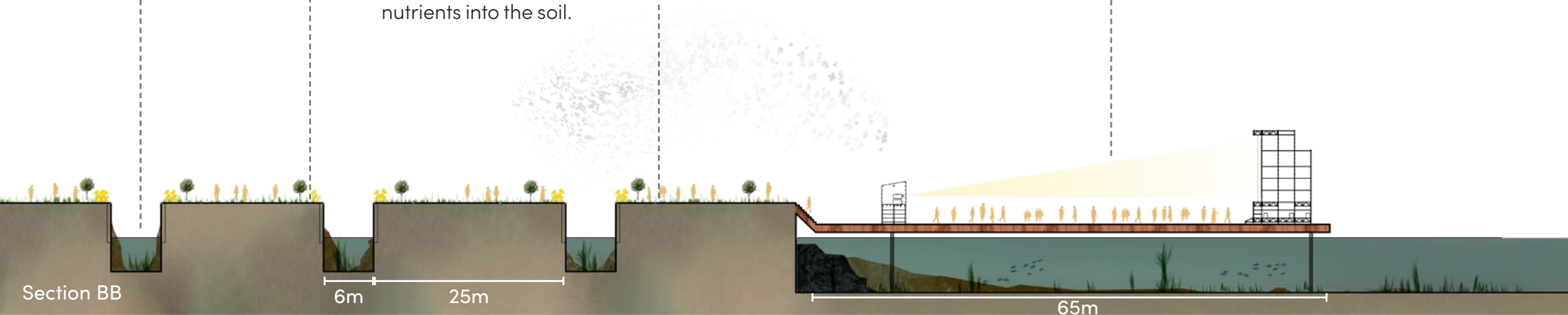


High bio-mass vegetation to absorb and breakdown heavy metal from the soil and clean the ground water before entering into the ocean



Planting vegetation that return the nutrients into the soil.

Space for temporary events such as outdoor cinema, concerts, exhibitions , etc.



Section BB

6m

25m

65m



## Phase 3: Zoning

Once the soil has been remediated, the landscape can be shaped to prepare for the future neighbourhood. This involves improving the zoning of the landscape, shaping public spaces prior to neighbourhood construction, and supporting changes to the landscape and the new community through the use of meanwhile activities.

### Step 1: Landscape zoning



The initial step is to preserve the existing ecological values of the landscape following the remediation phase. This involves securing the ecological corridor for flora and fauna and defining the future green spaces.

### Step 2: Framing public space



As the majority of the site will be developed in the future, it's crucial to prioritize public spaces. This can be achieved by utilizing the current landscape to create a sense of direction, incorporating varied ground textures, and strategically positioning buildings to frame the streetscape. Establishing these public spaces early on will be beneficial in shaping the overall feel and function of the future neighbourhood.

### Step 3: Supporting type meanwhile usage



The first group of people who will utilise the site for long-term will be the people within the office, industrial and commercial spaces. The priority of the first users will be from the offices that will be relocated from within the Dublin port area to ensure a more efficient space usage for the overall port area. The proposed type of meanwhile usage is supporting, aimed at providing services to the people who will be working in the first offices. Examples of such services include pop-up cafes, bike repair shops, recycling stations, and temporary playgrounds.



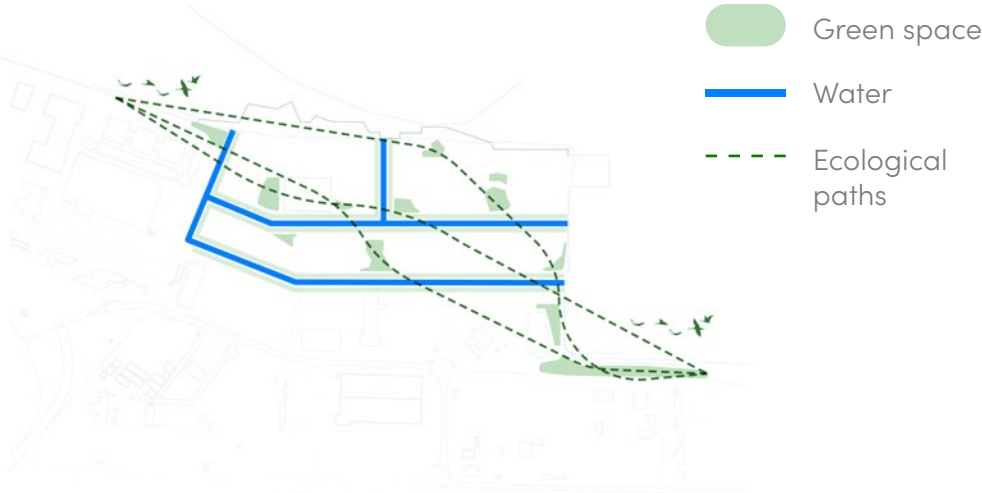


# Step 1: Landscape Zoning

This step involves compacting the green spaces to make room for future public spaces and buildings. To achieve this, a ground water treatment system such as bioswales will be established. Additionally, it is important to secure the ecological corridor for flora and fauna and maintain the landscape-type meanwhile usage for the future.



Condense landscape elements towards water channels, begin framing green spaces.



Defining the ecological corridor



## Some fauna found around Tolka quay



Magpie



Egret



Moorhen



Mallard



Wild insects



Pollinators



Seals



Cod



Bream



Dolphins



# Step 1: Landscape Zoning





# Step 1: Landscape Zoning



Condensing the green spaces and securing the ecological corridor after soil remediation.

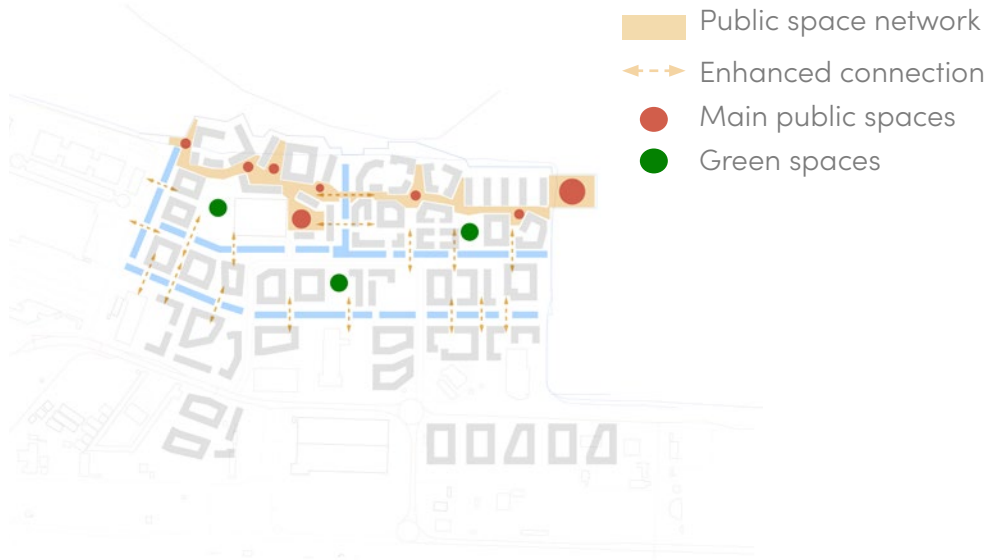
**Key:**

- 1 Ecological corridor
- 2 Defining landscape corridor
- 3 Treated soil
- 4 New urban farm centre

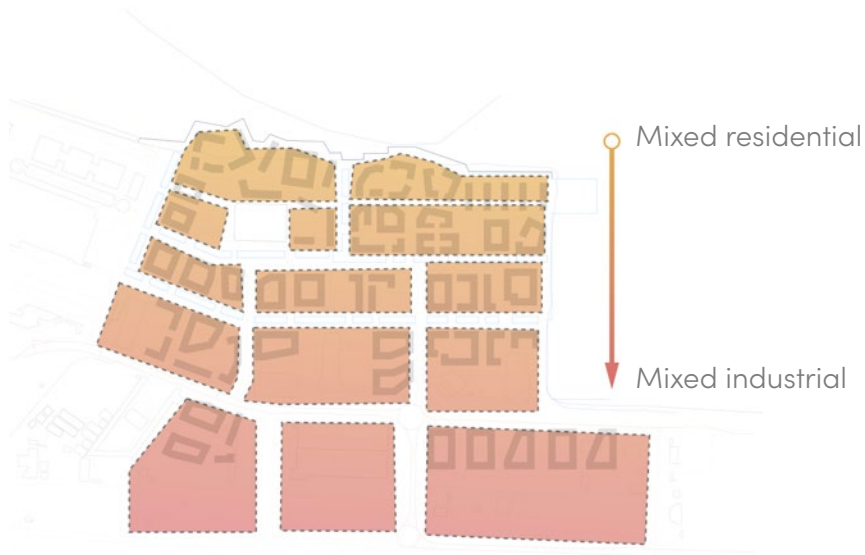


# Step 2: Framing public space

## Creating public space network



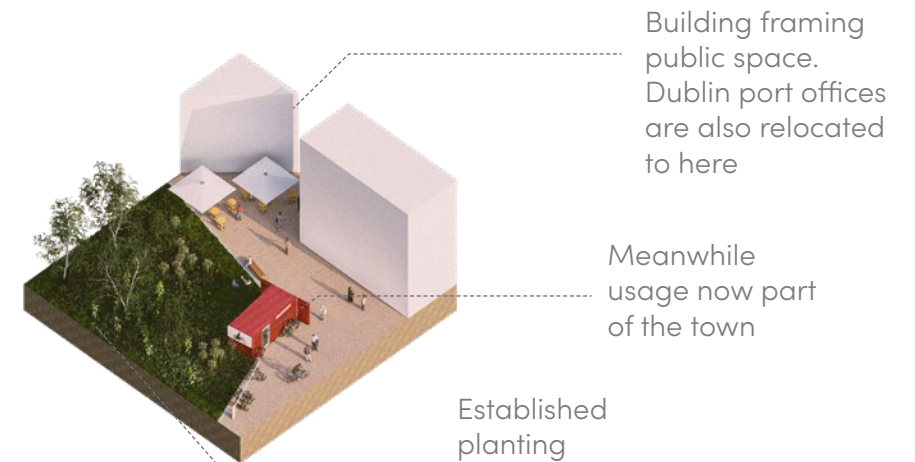
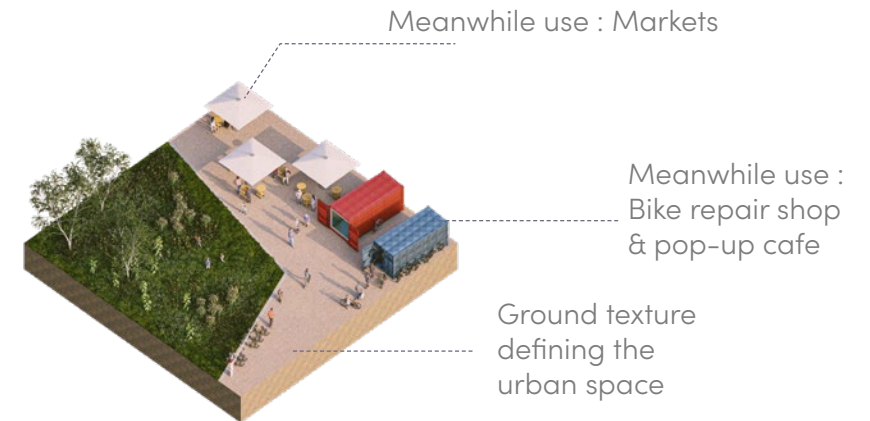
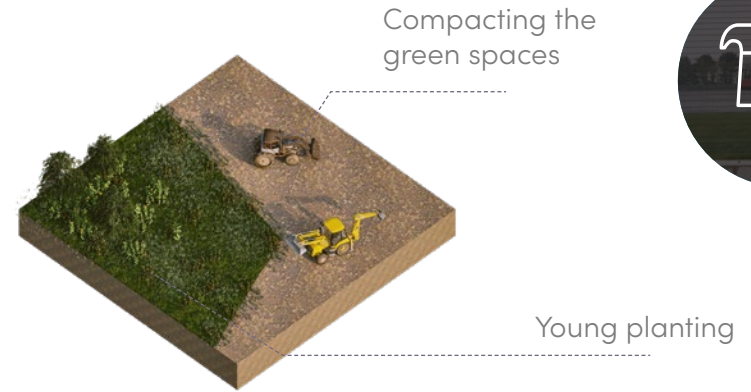
## User typology gradient



Wild

Framing space

Urban





### Step 3: Supporting type meanwhile usage



Bike repair shops



Pop-up cafes



Temporary playgrounds



Recycling centres



# Step 3: Supporting type meanwhile usage



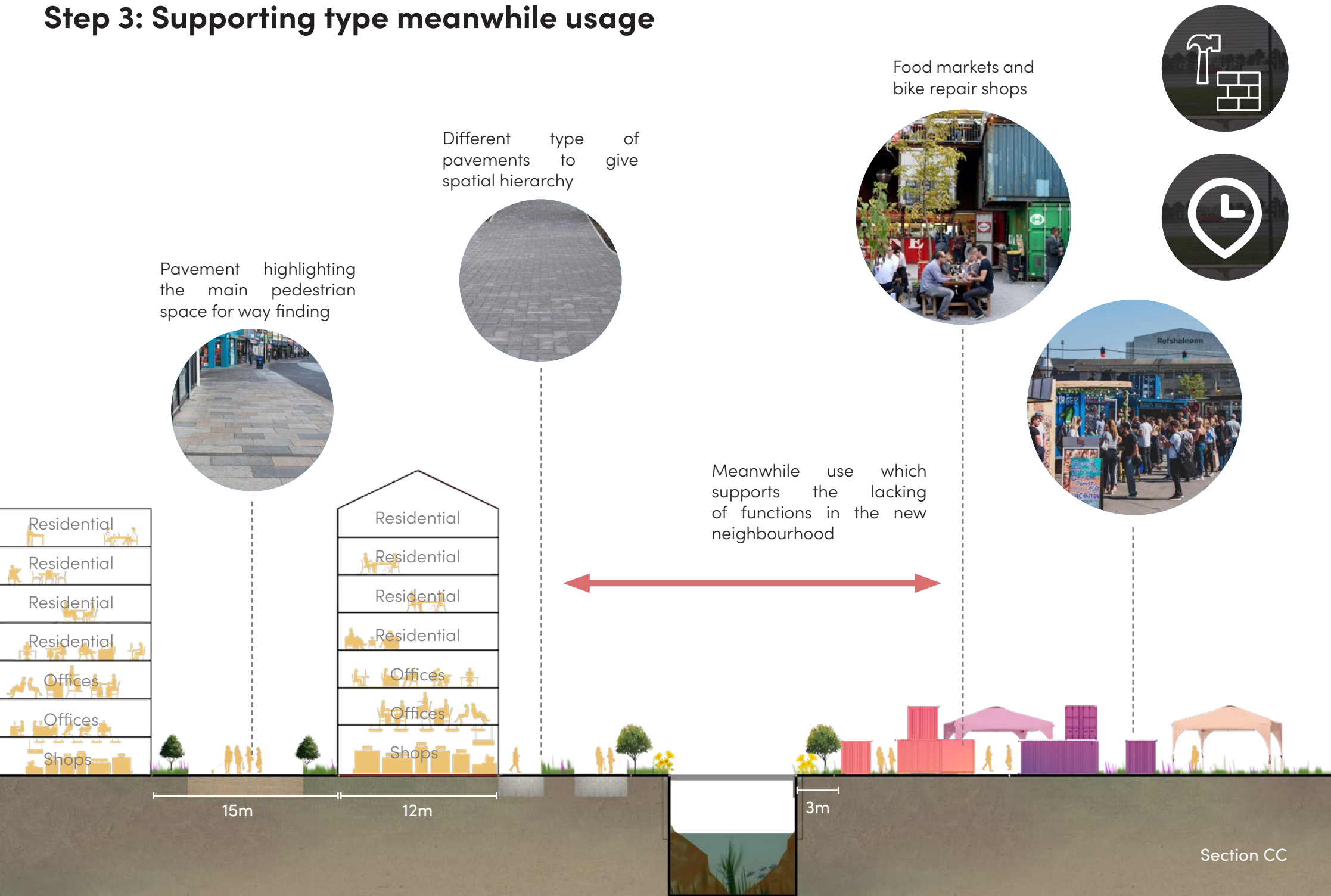
To make the site usage more efficient, the first step will be to construct the first buildings as a buffer zone and relocate offices from Dublin port to the area.

**Key :**

- 1 First buildings
- 2 Car park and Grocery store
- 3 Containers for meanwhile usage
- 4 Canal bridges



# Step 3: Supporting type meanwhile usage





## Phase 4 : Building

After Phase 03 construction and establishment of public spaces, the residential building construction will begin, which will be an ongoing process. To support this, a type of meanwhile usage will be designed to provide substitute functions to the urban areas which the new residences will require. These can include pop-up libraries, zero-waste labs, and other similar facilities.

## Step 1: Beginning neighbourhood construction



The new building areas will consist primarily of residential buildings with commercial and office spaces to support a mixed-use neighbourhood. The focus will be on providing housing for those in need, while also promoting inclusivity, equity, sustainability, and learning.

## Step 2: Supporting type meanwhile usage



The proposed meanwhile usage for this stage is to support the new residential buildings with facilities such as zero-waste labs, sharing shops, maker spaces, and outdoor gyms. These temporary uses will help to supplement the missing functions of the new neighbourhood and promote a sustainable and inclusive community.





# Step 1: Beginning neighbourhood construction



This is a typical courtyard within a neighbourhood block. The neighbourhood block consist of mainly residential spaces but is surrounded by commercial spaces such as shops, restaurants, and cafe.

**Key :**

- ① Boardwalk
- ② Common green space
- ③ Bin house
- ④ Bike storage space
- ⑤ Community garden
- ⑥ Pier



# Step 2: Supporting type meanwhile usage



Open air gym



Makers space



Pop-up library



Pop-up exhibitions





# Step 1: Beginning neighbourhood construction







# Step 1: Beginning neighbourhood construction



-  Key public spaces
-  Meanwhile usage zone

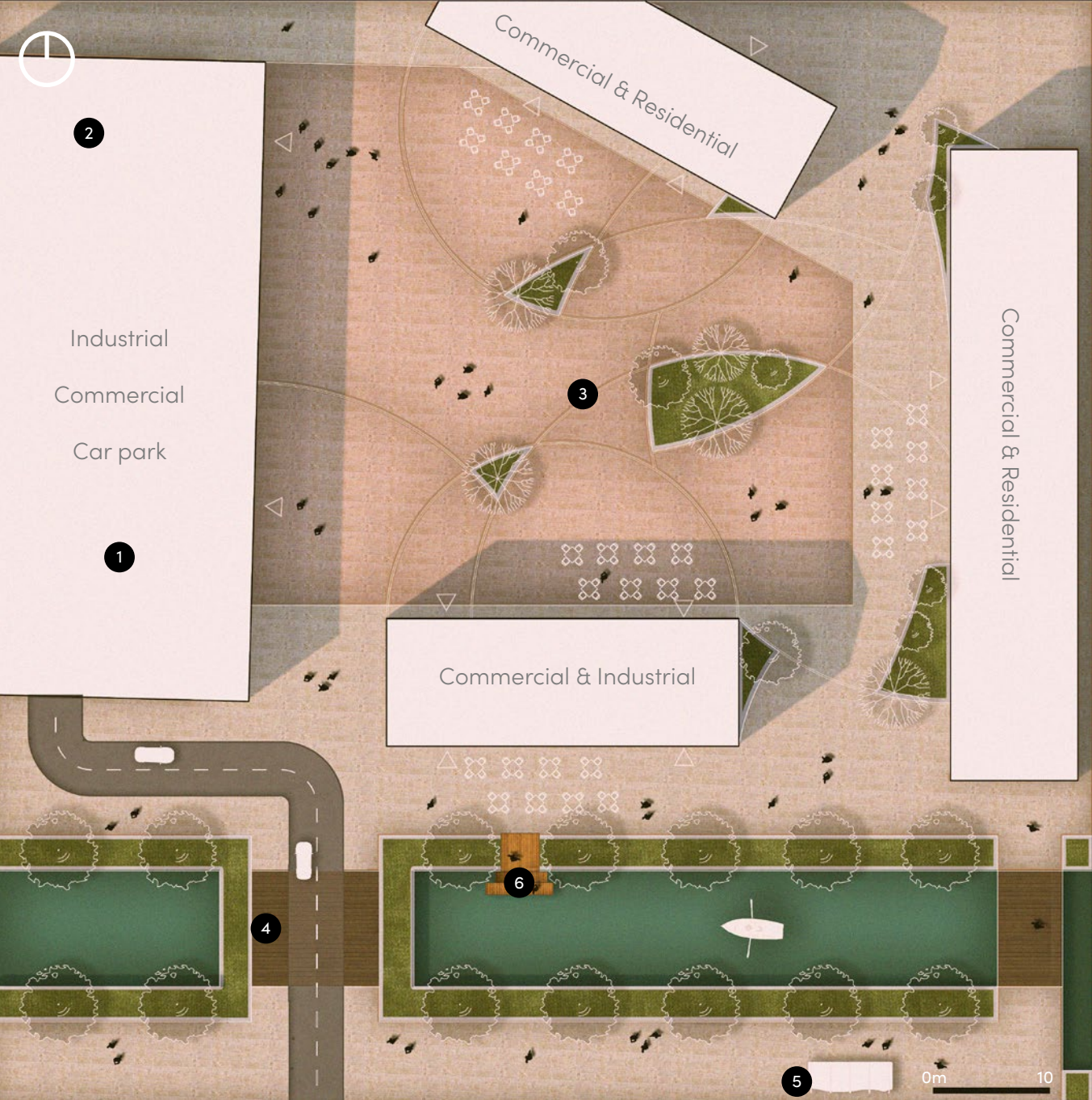
Adding areas of meanwhile use which supports the new influx of residences. Putting this in the centre of the neighbourhood to optimize accessibility to the meanwhile usage area.

- Key:**
-  New neighbourhood area
  -  Meanwhile use relocated and neighbourhood supporting type meanwhile usage added





# Step 2: Supporting type meanwhile usage



This is the main public space on the site. It is a courtyard surrounded by mainly commercial and industrial buildings.

This is a meeting point area for the neighbourhood zone as there is the bus stop, and the biggest car park house on the site.

It also contains meeting point elements such as cafe, outdoor seatings, and shopping places.

**Key:**

- 1 Car park entrance
- 2 Grocery store
- 3 Main plaza
- 4 Canal bridge
- 5 Bus stop
- 6 Pier





## Phase 5: Future

In this phase, the focus is on completing the construction of the proposed plan, with the majority of the remaining buildings being industrial and offices mixed with some commercial usage. The main objective is to integrate meanwhile usage into the future neighbourhood in a more permanent way.

Throughout the various stages of the masterplan, meanwhile usage has been proposed to help facilitate the growth of the area in different ways, and this can be seen in the overall plan. It is important to preserve the history of this urban design experiment and allow people to continue learning and exploring how meanwhile use can be introduced when planning for a neighbourhood. This will help to ensure that the soul of the meanwhile usage is retained and incorporated into the future neighbourhood.

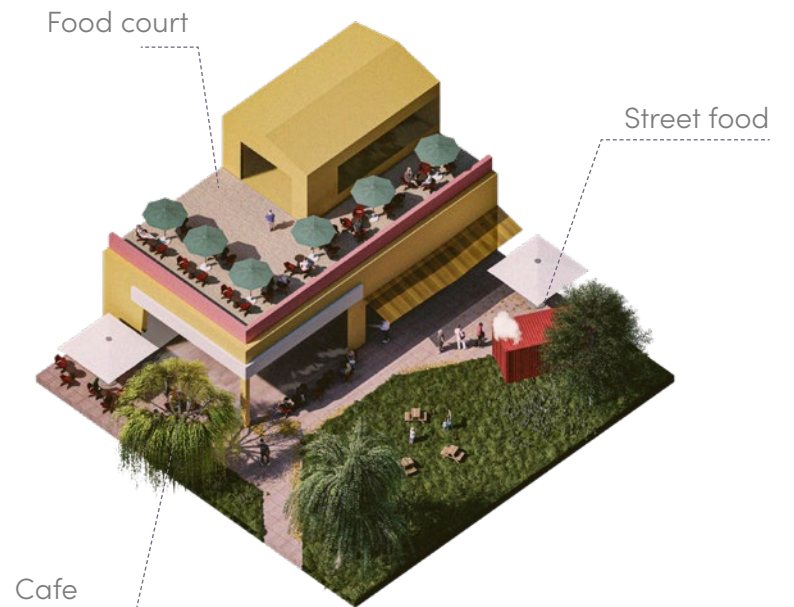


### Integrating meanwhile usage into the neighbourhood

## Activation type meanwhile usage



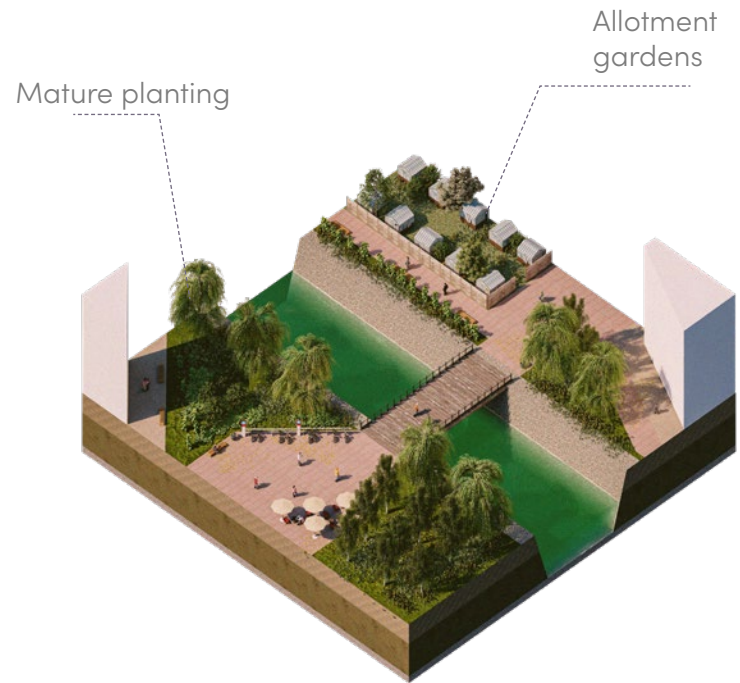
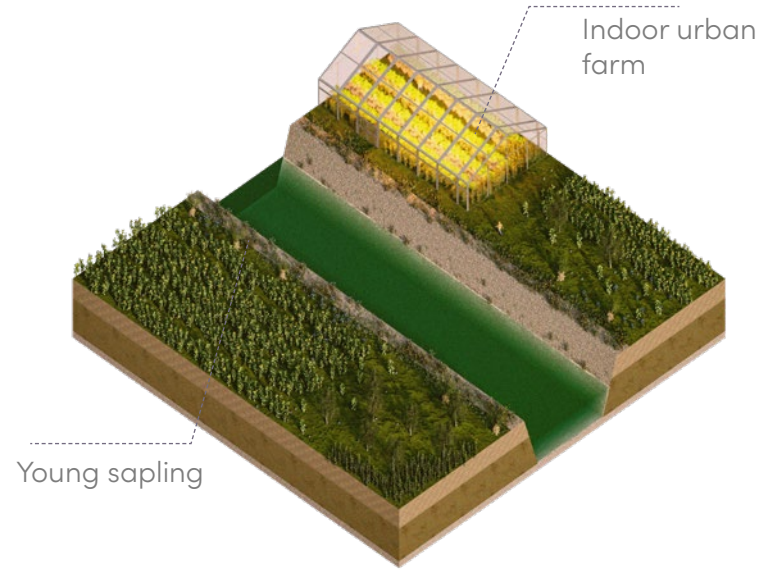
Integration into the future neighbourhood





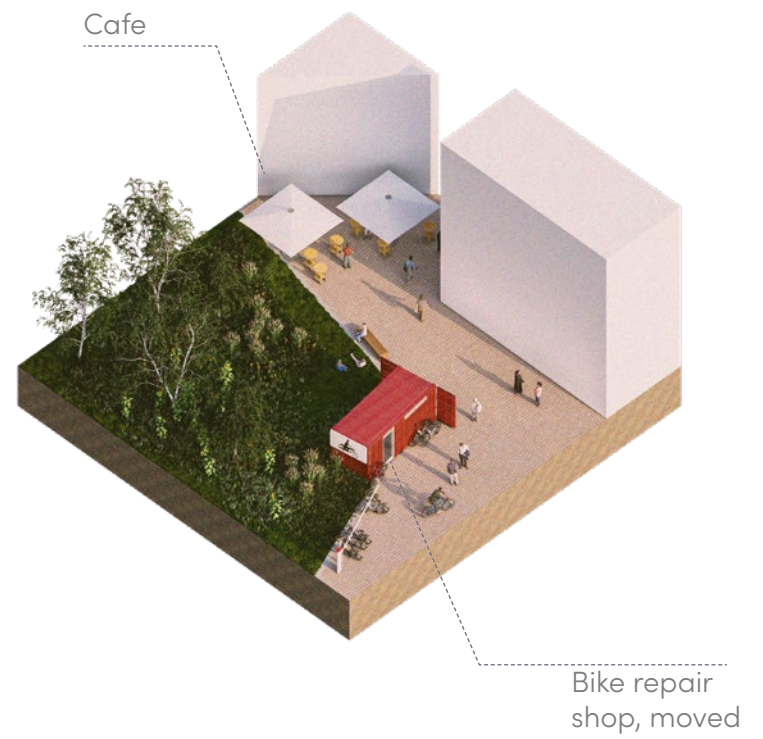
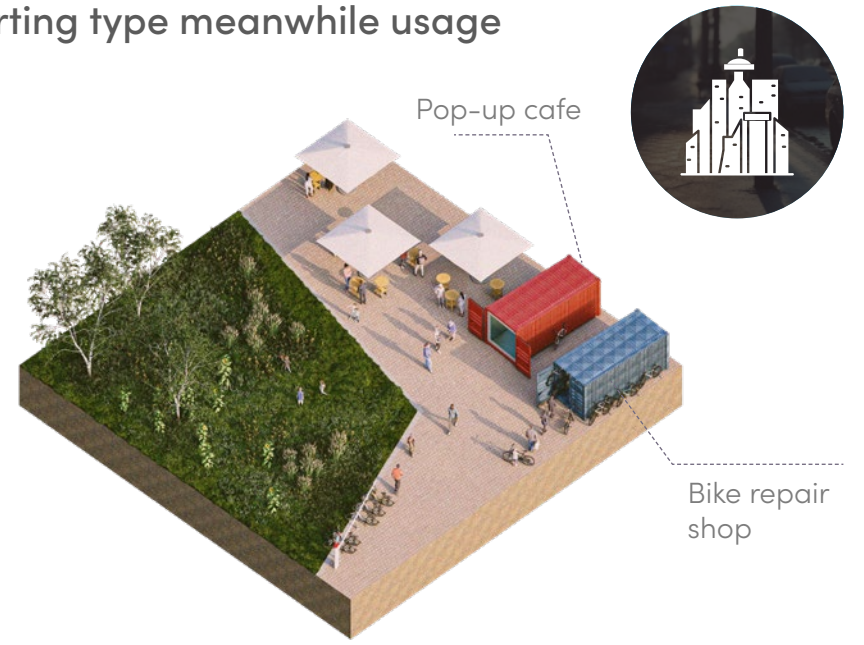
## Landscape type meanwhile usage

Integration into the future neighbourhood



## Supporting type meanwhile usage

Integration into the future neighbourhood











Integrating  
meanwhile  
usage into future  
neighbourhood.

**Key:**

- 1 Urban farm area
- 2 Cargo containers with space for pop up shops
- 3 Event space
- 4 Market
- 5 Main street





P3

P4

P2

P1



0 50m 100m























Remnant of meanwhile use and the recycled materials that was used during the phasing time.





Remnant of meanwhile use and the recycled materials that was used during the phasing time.







# Conclusion & Bibliography



# Conclusion

In conclusion, the Meanwhile in Tolka Quay project presents a unique opportunity to explore the potential of meanwhile use in urban design. By activating underutilized spaces and engaging with the community, the project seeks to create a more vibrant and dynamic urban environment.

The project also aims to demonstrate the importance of community engagement, collaboration in urban design, and a more sustainable way to prepare the landscape for the city. These are the key elements which will be crucial to create a sustainable, vibrant and dynamic community.

The five phasings of the design part of the project, namely Connection, Landscape, Zoning, Building, and Future, provide a clear framework for the development of the site. Each phase builds on the previous one and contributes to the overall goal of creating a sustainable and inclusive urban space. By focusing on issues such as access, biodiversity, and shaping public spaces, the project seeks to address some of the key challenges facing urban areas today.

The project also highlights the potential of meanwhile use as a temporary solution to address pressing urban challenges, such as the need for affordable housing and the revitalization of underused public spaces. However, it is important to recognize that meanwhile use is not a substitute for long-term planning and investment in urban infrastructure and development. Rather, it can serve as a complementary approach that provides short-term

benefits while more permanent solutions are sought.

Overall, the Meanwhile in Tolka Quay project represents an innovative and community-driven approach to urban design.

By embracing the potential of meanwhile use and seeing the possibility of this urban design experiment, the project offers a model for creating sustainable, inclusive, and vibrant urban environments that meet the needs of all residents.



# Bibliography

Planning and Development Act, 2000.

Architects, A., 2023. Granby Park. [Online]  
Available at: <http://www.a2.ie/portfolio/granby-park/>  
[Accessed 20 03 2023].

ARUP, 2020. Meanwhile use London, London: ARUP.

bottle, G., 2023. Glass bottle. [Online]  
Available at: <https://glassbottle.ie/>  
[Accessed 20 03 2023].

Caproasia, 2022. The 2022 Global Financial Centres Index – Full Ranking. [Online]

Available at: <https://www.caproasia.com/2022/03/26/full-ranking/>  
[Accessed 15 02 2023].

Climatestotravel.com, 2023. Ireland climate. [Online]  
Available at: <https://www.climatestotravel.com/climate/ireland>  
[Accessed 10 02 2023].

collective, L. b. b., 2023. Meanwhile, In Ireland. [Online]  
Available at: <https://www.littleblackboxcollective.com/blog/meanwhile-in-ireland>  
[Accessed 20 03 2023].

Company, D. P., 2021. DUBLIN PORT THROUGHPUT INCREASES BY +7.6% IN FOURTH QUARTER OF 2020. [Online]

Available at: <https://www.dublinport.ie/dublin-port-throughput-increases-7-6-fourth-quarter-2020/>  
[Accessed 15 02 2023].

Conghaile, P. Ó., 2022. Dublin ranked one of the least eco-friendly cities to visit in Europe. [Online]  
Available at: <https://www.independent.ie/irish-news/dublin-ranked-one-of-the-least-eco-friendly-cities-to-visit-in-europe/42024141.html>  
[Accessed 15 02 2023].

Corráin, D. Ó., 2008. THE VIKINGS AND IRELAND. In: The Viking World. s.l.:s.n., p. 6.

Council, D. C., 2023. 16.34 Contaminated Land. [Online]  
Available at: <https://www.dublincity.ie/dublin-city-development-plan-2016-2022/16-development-standards/1634-contaminated-land>  
[Accessed 26 03 2023].

Department of housing, l. g. a. h. o. l., 2023. National planning application map viewer. [Online]

Available at: <https://myplan.ie/national-planning-application-map-viewer/>  
[Accessed 27 02 2023].

DPC, 2018. Dublin Port Masterplan 2040, Dublin: Dublin Port Company.

Dublin, V., 2023. Visit Dublin. [Online]  
Available at: <https://www.visitdublin.com/guides/best-places-to-swim-dublin>  
[Accessed 17 03 2023].

Encyclopedia, 2019. Land Acts Of 1870 And 1881. [Online]  
Available at: <https://www.encyclopedia.com/international/>



encyclopedias-almanacs-transcripts-and-maps/land-acts-1870-and-1881  
[Accessed 13 04 2023].

Gattupalli, A., 2023. Meanwhile Spaces: Temporary Interventions for Lasting Urban Development. [Online]  
Available at: <https://www.archdaily.com/997447/meanwhile-spaces-temporary-interventions-for-lasting-urban-development>  
[Accessed 15 03 2023].

Groundnation, 2023. We are BOXPARK. [Online]  
Available at: <https://www.boxpark.co.uk/>  
[Accessed 20 03 2023].

Leyssen, D., 2018. Meanwhile Use as an Act of Resistance, coimbra: Editorial do Departamento de Arquitetura.

McDonald, F., 2011. Minister risks returning to bad old days of planning. [Online]  
Available at: <https://www.irishtimes.com/opinion/minister-risks-returning-to-bad-old-days-of-planning-1.587401>  
[Accessed 20 03 2023].

Mulhall, D., 2018. Blog by Ambassador Mulhall on Black '47: Ireland's Great Famine and its after-effects. [Online].

nations, U., 2023. Dublin, Ireland Metro Area Population 1950-2023. [Online]  
Available at: <https://www.macrotrends.net/cities/21542/dublin/population#:~:text=The%20current%20metro%20area%20population,a%201.14%25%20increase%20from%202020.>  
[Accessed 01 03 2023].

Nicolas Bosetti, T. C., 2018. Meanwhile, in London: Making use of London's empty spaces. 03 October.

O'Brien, C., 2014. Planning law did not deliver on vision of creating socially mixed communities. [Online]  
Available at: <https://www.irishtimes.com/news/social-affairs/planning-law-did-not-deliver-on-vision-of-creating-socially-mixed-communities-1.1948557>  
[Accessed 20 03 2023].

Planning and Development (Amendment) Act (2002).

Planning and Development Act (2000).

Pope, C., 2022. Lack of activity in Dublin social housing market 'jaw-dropping', says expert. [Online]  
Available at: <https://www.irishtimes.com/ireland/housing-planning/2022/11/29/lack-of-activity-in-dublin-social-housing-market-jaw-dropping-says-expert/#:~:text=Dublin%20City%20Council%20saw%20a,2017%20to%207%2C663%20in%202021.>  
[Accessed 20 03 2023].

Reffen, 2023. Reffen - Copenhagen. [Online]  
Available at: <https://refren.dk/en/>  
[Accessed 23 03 2023].

RING, E., 2020. Social Justice Ireland rues 'crazy' lack of social housing. [Online]  
Available at: <https://www.irishexaminer.com/news/arid-30977859.html>  
[Accessed 20 03 2023].



# Images

Simms, A., 2004. Medieval dublin: A topographical analysis. Irish geography, pp. 157 - 175.

TCD, 2023. About trinity. [Online]  
Available at: <https://www.tcd.ie/about/>  
[Accessed 01 02 2023].

Town, W. a. D., 2023. We are Dublin Town. [Online]  
Available at: <https://www.wearedublintown.ie/reimagine-dublin-one/project-overview/>  
[Accessed 20 03 2023].

UCD, 2023. UCD by numbers. [Online]  
Available at: <https://www.ucd.ie/about-ucd/about/ucdbynumbers/>  
[Accessed 01 02 2023].

university, P., 2014. URBAN ACTIVISM IN DUBLIN: FROM THE POLITICIZATION OF URBAN DEVELOPMENT TO THE RIGHT TO THE CITY?. Provisional university.

Listed in the order of appearance

Page 04	Render perspective 02_Canal creation and urban farm
Page 14	SDCC Pollination Plan 2021 – 2025
Page 15	Photograph_ Entrance into Firhouse, Dublin
Page 15	Diagram_ Site location of Firhouse entrance
Page 16	Diagram_ Site location of Byrne's Lane entrance
Page 16	2023 Google Street view_ From Abbey Street
Page 20	Diagram_ Lack of meanwhile use
Page 21	Diagram_ Meanwhile use in play
Page 22-23	Diagram_ Meanwhile and temporary use
Page 24	Photograph_ Granby Park _ <a href="https://sha.ie/sha_projects/granby-community-park/">https://sha.ie/sha_projects/granby-community-park/</a>
Page 24	Photograph_ Box park_ <a href="https://www.boxpark.co.uk/">https://www.boxpark.co.uk/</a>
Page 24	Photograph by Matthew Henry_ <a href="https://burst.shopify.com/">https://burst.shopify.com/</a>
Page 25	Photograph_ Frau Gerolds Garten,



Zurich\_ <https://www.newlyswissed.com/frau-gerolds-garten-in-zurich/>

Page 25 Photograph by Sarah Pflug\_ <https://burst.shopify.com/>

Page 25 Photograph\_ Karusel music festival\_ <https://www.karusel.dk/>

Page 29 Photograph\_ Granby Park \_ [https://sharie/sha\\_projects/granby-community-park/](https://sharie/sha_projects/granby-community-park/)

Page 30 Photograph\_ Box park\_ <https://www.boxpark.co.uk/>

Page 33 Photograph\_ Reffen\_ <https://reffen.dk/en/>

Page 35 Diagram\_ Band-aid solution\_ Image from <https://burst.shopify.com/>

Page 35 Diagram\_ Gentrification\_ Image from <https://burst.shopify.com/>

Page 35 Diagram\_ Delay in development\_ Image from <https://burst.shopify.com/>

Page 35 Diagram\_ Unsustainable\_ Image from <https://burst.shopify.com/>

Page 36 Diagram\_ Community needs and engagement\_ Image from <https://burst.shopify.com/>

Page 36 Diagram\_ Long-term planning\_ Image from <https://burst.shopify.com/>

Page 37 Diagram\_ Sustainability\_ Image from <https://burst.shopify.com/>

Page 37 Diagram\_ Equity and inclusion\_ Image from <https://burst.shopify.com/>

Page 37 Diagram\_ Evaluation and learning\_ Image from <https://burst.shopify.com/>

Page 38 Photograph\_ 65 Everton road\_ [https://commons.wikimedia.org/wiki/File:65\\_Everton\\_Road.jpg](https://commons.wikimedia.org/wiki/File:65_Everton_Road.jpg)

Page 43 Diagram\_ Population growth 1821 - 2011 (Source : <https://www.cso.ie/en/csolatestnews/presspages/2022/censusofpopulation2022-preliminaryresults/>)

Page 43 Diagram\_ Census of population 2022 (<https://www.cso.ie/en/releasesandpublications/ep/p-cpr/censusofpopulation2022-preliminaryresults/geographicchanges/>)

Page 44 Diagram\_ Average temperature in Dublin 2022 (Climate sources: <https://world-weather.info/archive/ireland/dublin/>)

Page 45 Diagram\_ Sun path\_ <https://sun-direction.com/city/33869,dublin/>

Page 45 Diagram\_ Wind rose of Dublin.

Page 45 Diagram\_ Chance of precipitation within a year of Dublin

Page 47 Edited photograph\_ Ireland From International space station 2020



Page 49	Diagram_ Economic connection of Ireland	Page 74	Diagram_ Design site boundary
Page 50	Myrtle street, Dublin (source : <a href="https://www.flickr.com/photos/infomatique/30102274607">https://www.flickr.com/photos/infomatique/30102274607</a> )	Page 79	Masterplan
Page 53	Photograph_ Raise the roof_ <a href="https://www.thesun.ie/news/9795727/raise-roof-dublin-rally-homelessness/">https://www.thesun.ie/news/9795727/raise-roof-dublin-rally-homelessness/</a>	Page 82	Diagram_ Strategy and phasings
Page 54	Diagram_ Places of Dublin	Page 84	Photograph_ between subway cars_ Jp
Page 57	Diagram_ Location of Dublin port	Valery	
Page 59	Diagram_ Morphology of Dublin coastline	Page 84	Diagram_ Phase 1 Step 1
Page 60	Diagram_ Scale of Dublin core area and Dublin port	Page 85	Diagram_ Phase 1 Step 2
Page 60	Diagram_ Dublin outline	Page 86-87	Diagram_ Spatial activation
Page 60	Diagram_ Copenhagen outline	Page 88	Diagram_ Building 1 highlighted
Page 61	Diagram_ Dublin port area within core area of Dublin	Page 88	Diagram_ Building 2 highlighted
Page 61	Diagram_ Stockholm outline	Page 89	Diagram_ Urban recycling
Page 61	Diagram_ Prague outline	Page 90-91	Diagram_ Contextual connection
Page 62	Diagram_ Ecology of green and blue	Page 92	Photograph_ Taken by Author
Page 65	2023 Google Earth_ Dublin port North	Page 92	Diagram_ Phase 2 Step 1
Page 66	Diagram_ Development plan and Tolka Quay	Page 93	Diagram_ Phase 2 Step 2
Page 68 – 73	Site photographs taken by Author	Page 93	Diagram_ Phase 2 Step 3
		Page 94	Diagram_ Water channel creation
		Page 94	Diagram_ Mimicking the landscape
		pattern	
		Page 95	Diagram_ Embankment
		Page 95	Diagram_ Zone division by the water channels and pathways
		Page 96	Diagram_ Drainage
		Page 97	Diagram_ Phytoremediation stages



Page 98 -101 Plan\_ Topography and remediation

Page 102 Photograph\_ Granby Park \_ [https://sha.ie/sha\\_projects/granby-community-park/](https://sha.ie/sha_projects/granby-community-park/)

Page 102 Photograph\_ Reffen\_ <https://reffen.dk/en/>

Page 102 Photograph\_ Frau Gerolds Garten, Zurich\_ <https://www.newlyswissed.com/frau-gerolds-garten-in-zurich/>

Page 102 Photograph\_ Karusel music festival\_ <https://www.karrusel.dk/>

Page 104-107 Plan\_ Landscape type meanwhile use

Page 108-109 Section\_ AA

Page 110-111 Section\_ BB

Page 112 Photograph\_ Taken by Author

Page 112 Diagram\_ Phase 3 Step 1

Page 113 Diagram\_ Phase 3 Step 2

Page 113 Diagram\_ Phase 3 Step 3

Page 114 Diagram\_ Landscape condensing

Page 114 Diagram\_ Ecological corridor

Page 116-119 Plan\_ Landscape Zoning

Page 120 Diagram\_ Framing Public space

Page 120 Diagram\_ User topology gradient

Page 121 Diagram\_ Framing of public space stages

Page 122 Photograph\_ <https://recwell.umd.edu/programs-activities/adventure-program/bike-shop>

Page 122 Photograph\_ <https://www.bostonglobe.com/magazine/2016/01/06/fresh-faces-and-bold-new-ideas-from-boston/qC73YuK1zNEH53C4ecfB3M/story.html>

Page 123 Photograph\_ <https://worldlandscapearchitect.com/studio-fink-matthew-childs-design-collaborated-on-temporary-landscape-play-installation-in-moscow/?v=f003c44deab6>

Page 123 Photograph\_ <https://www.monash.vic.gov.au/Waste-Sustainability/Monash-Recycling-Waste-Centre>

Page 124-125 Plan\_ Supporting type meanwhile usage

Page 126-127 Section CC

Page 128 Photograph\_ Matthew Henry\_ <https://burst.shopify.com/>

Page 129 Diagram\_ Phase 4 Step 1

Page 129 Diagram\_ Phase 4 Step 2

Page 130 Plan\_ Detail A

Page 132 Photograph\_ <https://www.visitstockholm.com/o/open-air-gyms/>

Page 132 Photograph\_ [https://www.youtube.com/watch?v=DDp2R-4GC0s&tab\\_channel=WhitsundayRegionalCouncil](https://www.youtube.com/watch?v=DDp2R-4GC0s&tab_channel=WhitsundayRegionalCouncil)

Page 133 Photograph\_ <https://miencompany.com/what-is-a-makerspace/>



Page 133	Photograph_ <a href="https://www.designhousetockholm.com/se/stories/post/exhibition-minimum-berlin">https://www.designhousetockholm.com/se/stories/post/exhibition-minimum-berlin</a>
Page 134-137	Plan_ Beginning neighbourhood construction
Page 138	Plan_ Detail B
Page 140	Photograph_ Tomáš Hustoles_ <a href="https://burst.shopify.com/">https://burst.shopify.com/</a>
Page 140	Diagram_ Phase 5: Future
Page 141	Diagram_ Integrating Activation type meanwhile use
Page 142	Diagram_ Integrating Landscape type meanwhile use
Page 143	Diagram_ Integrating Supporting type meanwhile use
Page 144-147	Plan_ Phase 5: Future plan
Page 148-149	Masterplan
Page 150-151	Perspective 1_Phase 1
Page 152-153	Perspective 1_Phase 2
Page 154-155	Perspective 1_Phase 3
Page 156-157	Perspective 1_Phase 4
Page 158-159	Perspective 1_Phase 5
Page 160-161	Perspective 3_Looking from the boardwalk
Page 162-163	Perspective 4_Looking from Kayakers
188	



**Thank you!**