



SNAPSHOT - DUBLIN: TOLKA VALLEY PARK WETLANDS & GREENWAY



KEY POINTS

- Resources scarcity can drive institutional and technical innovation, resulting in more sustainable solutions**
- When the implementation of greenery depends on private developers, it can lead to environmental injustice, lack of transparency and civil engagement**
- Top-down education and information should not be conflated with bottom-up participation**
- Cross-departmental coordination, consistent project leadership and community consultations are key for sustainable NBS**

ABOUT THE PROJECT

NATure-based URban innovATION is a 4-year project involving 14 institutions across Europe in the fields of urban development, geography, innovation studies and economics. We are creating a step-change in how we understand and use nature-based solutions for sustainable urbanisation.





Sustainability challenges and opportunities

Tolka Valley Park suffers from chronic soil and water pollution. Sustainability policy prioritizes its environmental remediation, altering the function of this green space for surrounding communities.

The Tolka River runs through a park on the northern edge of Dublin City, bordering an industrial estate, low-income residential areas and a newly-developed block of luxury apartments. The northeast of the park was a landfill decommissioned in the 1970s. The rest of the Park was used for illegal dumping and other criminal activities and was stigmatized as an unsafe place for years prior to its regeneration. The park had several environmental challenges. These included “**a typically polluted storm water system (stream) discharging to a well-stocked fishing river via an ornamental pond in a public park**”¹, and increasingly-frequent flooding in the southeast of the park due to upstream over-urbanisation. While building an integrated wetland to de-pollute the pond during the 1st phase of regeneration (1999-2001) was relatively inexpensive (€40,000), the 2nd phase (2009-2013), which included the Greenway and the second set of wetlands, was more costly (more than €3 million) and challenged by the economic crisis of 2008.

Solution story and key actors

The regeneration of Tolka Valley Park was led by the Dublin City Council. It resulted in improved ecological quality and enhanced biodiversity while opening the park to a diverse public.

Tolka Valley Park feeds into a Special Protection Area (the South Dublin Bay and River Tolka estuary), whose catchment spans three local authorities. The regeneration project involved two Integrated Constructed Wetlands (ICWs) and other soft engineering methods and landscaping improvements. It was strictly led by Dublin City Council (DCC) in the area within its jurisdiction. The first ICW has attenuated pollutants from an underground tributary of the Tolka River, reducing unpleasant odours, enhancing the pond's amenity value, and creating new wetland habitat for biodiversity. Having distinct patches of different plant species results in greater biodiversity and also improves its pollutant-retention capacity.² The second ICW absorbs pollution from run-off and slows storm water drainage into the River Tolka. In addition, a cycling and walking path was installed through the park. The transformation of a previously-polluted open space into a much-frequented public park has benefitted the surrounding neighbourhoods. However, socio-economic inequalities and cultural divisions are still reflected in how and by whom the park is used. The stigma of the area persists and the park “**is not used as much as most parks**” since “**it had a bit of an ‘antisocial behaviour’ problem because of the area that it’s in**”.³



Governance strategies

Tying NBS to private developments provides funding in the face of budget shortfalls. Making resources available through private finance has implications for institutional decisions and priority-shaping around NBS.

Whereas the two phases of park regeneration appear as a continuation of the same project idea, the actors and the governance model behind them differ. Institutionally, water quality and habitat considerations, driven by European regulations, guided the overall regeneration effort, especially in the 2nd phase. While the first Integrated Constructed Wetland (1999-2001) was designed and implemented entirely by the Council, the Greenway and second set of wetlands (2009-2013) was sub-contracted to a landscape architecture firm. This was seen to have weakened inter-departmental communication in the Council. More importantly, the 2nd phase was much more expensive and tied to levies by real estate developers' plans to construct housing along the west side of the park. The overall regeneration has been framed as "**a green infrastructure route that links urban and peri-urban Dublin communities**",⁴ with the potential for reducing criminality in the area. It also offers "**a stretch of biodiverse parkland, right beside one of Dublin's most troubled communities**".⁴ The resulting biodiversity-oriented park focuses on passive recreation, reflecting both regulatory shifts at a European level, and a vision for a park that serves a new type of users, and not the surrounding working-class residents or traveller community that had historically lived in the area.



Business models

Private-public partnerships for urban regeneration that include NBS become more prominent at the municipal level, influencing political decision-making.

A severe recession during the second phase of regeneration delayed implementation and forced the Parks Department to look into alternative funding sources. Including a cycle path, for example, secured funding from the Transport and Infrastructure Ireland agency. However, "**if it wasn't for the levies, the project probably wouldn't have been possible**".⁵ Public-private urban regeneration programs have been proliferating in Ireland since the 1990s; the private sector supplies the finance and secures the economic risk in return for government unlocking land and property for development.⁶ However, an elevated sense of entitlement for new residents was detected, as "**people who bought the apartments, and a levy was included for upgrading the area, felt they had paid to have a park**".⁴



Citizen engagement

Public participation and civil engagement for transparency in the public interest are hard to achieve in privately-initiated NBS and should not be conflated with information and education activities.

Environmental challenges have been closely tied to the socio-economic conditions of the surrounding population. Initial opposition to the 2nd phase of the project fell away after extensive consultations between Dublin City Council and local residents. Information and communication efforts improved common understanding of the biophysical and economic challenges of the project. The introduction of benefits like enhanced fishing spots and the right to use sport facilities of the neighbouring county alleviated concerns and earned the support of local stakeholders. Nevertheless, linking communities of different socio-economic status was in itself a contested issue. Due to the park's history of criminal activity, residents feared its opening and connection to their neighbourhoods. Long-term consultations and gradual evidence of the park's transformation helped overcome the challenge of "***persuading the local people that this park should be a place where people could go and have passive recreation***".⁴



Innovation pathways

Budget shortfalls can catalyse innovative ideas and sustainable choices in materials, infrastructure and design, as well as new ways of funding NBS.

In the face of economic downturn, project funding had to be innovative. Including a cycle path and tying the project to drainage secured about €2 million from Transport and Infrastructure Ireland. An agreement with the neighbouring county to share facilities also avoided the construction of a new football pitch. Deciding against the construction of a pathway through the ICW proved beneficial for bird nesting. Previous plans for a costly new bridge were revised and soil and other materials were brought in from other sites, all reducing costs. Some other innovative measures that combined sustainability and savings included using barley straw to prevent algal blooms and remove pollutants from the pond, detention ponds to manage runoff, bank engineering and planting of trees to prevent erosion, and biodegradable anti-weed matting to remove invasive species.

¹Collins, John, and Don McEntee. 2009. "Integrated Constructed Wetland Tolka Valley Park Dublin."; ²Biodiversity Survey of the Integrated Constructed Wetland at Tolka Valley Park, Finglas, Co. Dublin, 2008. ³Tolka Valley Park gardener, 2018; ⁴Tolka Valley Park project superintendent, 2018; ⁵Tolka Valley project manager, 2018; ⁶Payne, Diane, P. Stafford, and J. R. Gupta. 2004. "The Politics of Urban Regeneration in Dublin." *Europe of the City and Regions: Patterns of Co-operation in Comparative Perspective* 65–90; Photo credits: Dublin City Parks, 2018.