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place-making and green infrastructure

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PERFECT project – Planning for Environment and Resource eFficiency in European Cities and Towns
PERFECT Expert Paper 4: *Place-Making and Green Infrastructure*
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About PERFECT

PERFECT (Planning for Environment and Resource eFficiency in European Cities and Towns) is a five-year project, running from January 2017 to December 2021, co-funded by Interreg Europe. It aims to demonstrate how the multiple uses of green infrastructure can provide social, economic and environmental benefits. It will raise awareness of this potential, influence the policy-making process, and encourage greater investment in green infrastructure.

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place-making and green infrastructure

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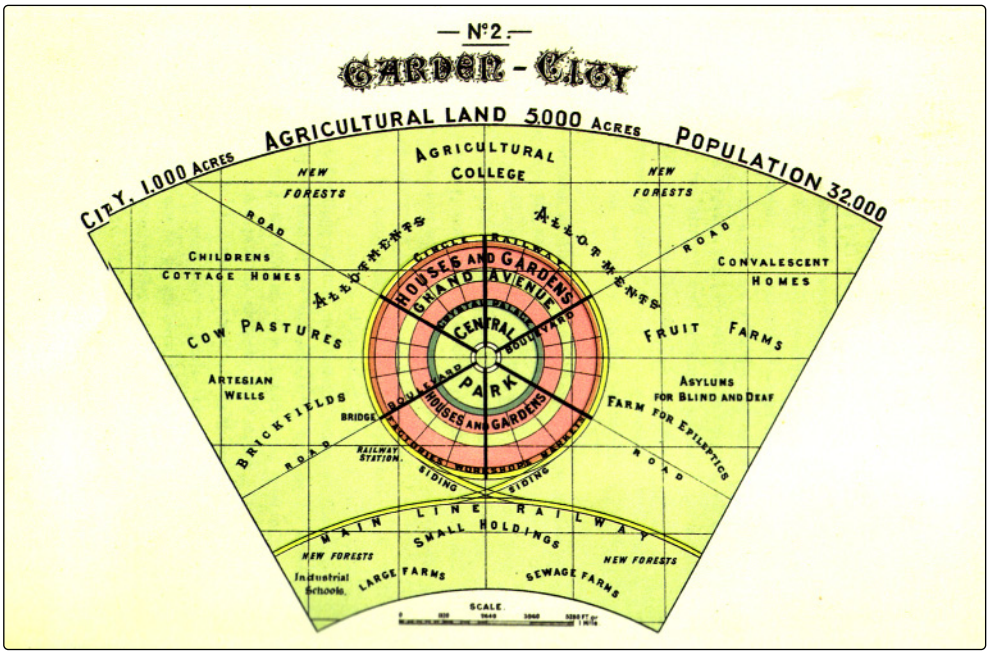
1 Introduction



'Garden City' – diagram from *To-morrow* demonstrating the central role that green infrastructure played in Ebenezer Howard's vision of a Garden City

In England we often see discussions about planning being dominated by a focus on the need for more houses. The emphasis is often on speed of delivery and quantity. The Town and Country Planning Association (TCPA) is clear that there is an urgent need for more homes that meet people's needs. But rather than fixating on housing numbers, we need to focus, in both policy and practice, on planning and building high-quality places. A crucial element of a high-quality place is green infrastructure, because of the multiple benefits it provides.

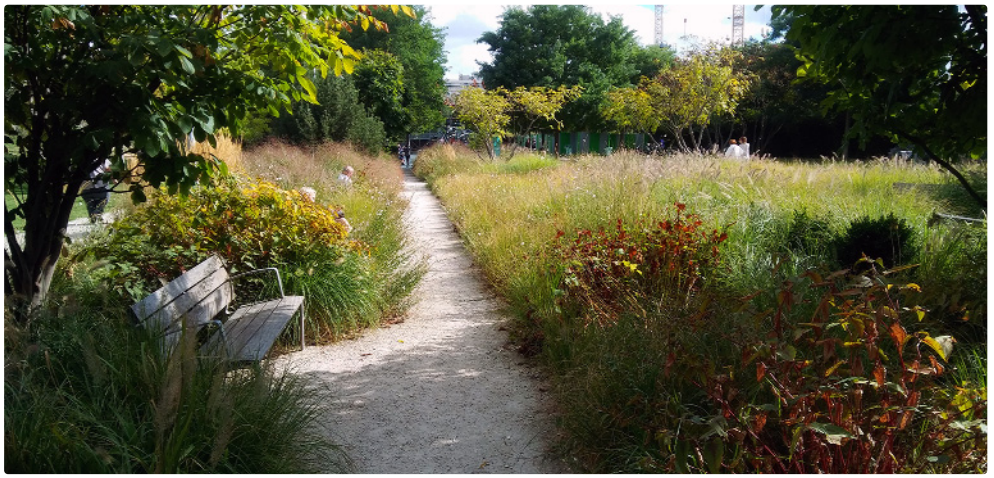
This focus on place-making is deeply embedded in the TCPA's heritage. The Association was originally created in 1899 as the Garden City Association by the founders of the Garden City movement, to promote ideas of Ebenezer Howard. Howard and his supporters knew intuitively the importance of planning and housing for people's health and wellbeing and wanted to provide the working class with an alternative option of how to live, including a chance to move out of the then crowded and unhealthy cities. Howard set out his vision in his book, *To-morrow: A Peaceful Path to Real Reform*, published in 1898,[1] and he argued that as well as homes and sites for employment there needed to be open spaces, public parks and a green belt of land around the city to provide space for food production and recreation.

At a time when we are facing housing, health, climate and biodiversity crises, we need development that seeks to address rather than exacerbates these issues. We cannot think

1 E Howard: *To-morrow: A Peaceful Path to Real Reform*. Swan Sonnenschein, 1898 (Original edition reprinted, with commentary by Peter Hall, Dennis Hardy and Colin Ward, by Routledge, 2003 – available from the TCPA)

about delivering new homes in isolation. The vision and ideas that underpinned the two Garden Cities in England remain as relevant as ever in terms of a model for sustainable place-making which has green infrastructure at its heart. Placing multi-functional green infrastructure at the core of development, and using the benefits provided to make the economic case, has been the key theme throughout the PERFECT project.

2 Place-making with green infrastructure at its heart



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One of the aims of the Garden City vision was to provide the best possible blend of town and country, which did not just allow access to the natural environment but brought the environment into the heart of the city.[2] Ebenezer Howard and colleagues, most notably Frederic Osborn, worked to implement his vision through the development of both Letchworth Garden City from 1903 and then, following the First World War, Welwyn Garden City, where the land was acquired in 1919. Much has, of course, changed over the decades since the pioneers of the Garden City movement set out to create these places. But much of this early vision can still be seen today in places across Europe and beyond. And there are still important lessons to be learnt.

In the UK the urgent need for more houses following the end of the Second World War led to a programme of New Towns which drew on the Garden City model. The programme resulted in 32 New Towns over a period of 50 years, providing homes and jobs for over 2.8 million people.[3]

One of the shared characteristics of the new communities was an attempt to a combine town and country using networks of green spaces across the development sites. In addition to formal and informal parks and open spaces, the green infrastructure was also frequently set out alongside transport corridors to support more active travel through walking and cycling.

There is much to learn from this programme of rapid place-making. The quality of the materials used in many places have not stood the test of time, and many housing estates are now in desperate need of renewal. Furthermore, although green infrastructure is seen as a positive legacy of the New Towns programme, a lack of resources to manage the network and public realm has also resulted in challenges.[4]

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2 H Ellis, K Henderson and K Lock: *The Art of Building a Garden City: Designing New Communities for the 21st Century*. RIBA Publishing, 2017

3 *Ibid*.

4 *New Towns and Garden Cities – Lessons for Tomorrow. Stage 1: An Introduction to the UK's New Towns and Garden Cities*. TCPA, Dec. 2014. **https://www.tcpa.org.uk/research-gcnt**

3 The Garden City Principles

Drawing on the vision of the Garden Cities and lessons from the New Towns programme, the TCPA has developed nine interlocking 'Garden City Principles', including the need for development to enhance the natural environment through a network of green infrastructure (see Box 1). Maintenance of green infrastructure is essential to maximise its multiple benefits.[5] A crucial lesson from the New Towns programme was the importance of implementing a model of managing community assets, including green spaces, in the long term. If such an approach is not taken, there is a high risk that, although networks of green space and other assets might be created when a development is first built, they might then not be well managed, thus losing the functionality that they were designed to provide.

There are different models of providing the long-term management[6] of green infrastructure, but key points for those planning green infrastructure to consider include:

- Begin thinking about how it will be managed from the outset of the planning process.
- Consider how it will be funded in the long term – not just in the first instance.
- Give thought to how management arrangements will be governed.
- Consider how to involve the community in the thinking about design, management and governance.

These points of consideration are also relevant to those seeking to retro-fit green infrastructure into an existing area that is being renewed or regenerated.

Box 1

The Garden City Principles

A Garden City is a holistically planned new settlement which enhances the natural environment and offers high-quality affordable housing and locally accessible work in beautiful, healthy and sociable communities. The Garden City Principles are an indivisible and interlocking framework for their delivery, and include:

- Land value capture for the benefit of the community.
- Strong vision, leadership and community engagement.
- Community ownership of land and long-term stewardship of assets.
- Mixed-tenure homes and housing types that are genuinely affordable.
- A wide range of local jobs in the Garden City within easy commuting distance of homes.
- Beautifully and imaginatively designed homes with gardens, combining the best of town and country to create healthy communities, and including opportunities to grow food.
- Development that enhances the natural environment, providing a comprehensive green infrastructure network and net biodiversity gains, and that uses zero-carbon and energy-positive technology to ensure climate resilience.
- Strong cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.
- Integrated and accessible transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport.

5 *Urban Green Infrastructure*. POSTnote 448. Parliamentary Office of Science and Technology, Nov. 2013. **https://researchbriefings.parliament.uk/ResearchBriefing/Summary/POST-PN-448**

6 For more detailed information, see *Long-Term Stewardship*. Guide 9. Practical Guides for Creating Successful New Communities. TCPA, Dec. 2017. https://www.tcpa.org.uk/guidance-for-delivering-new-garden-cities

4 Green infrastructure – more important than ever?

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Improving health and wellbeing

The health and wellbeing benefits of green infrastructure are well known,[7] and during the PERFECT project the partnership has learnt much from the City of Amsterdam on effective ways that health and town planning can work together in major cities. The Dutch approach very much complements the TCPA's work on reuniting health with planning[8] to improve the lives of people housed in deprived areas in particular.

There are also important links to seeking to tackle social and health inequalities. Currently, in England, people living in the least-deprived areas of the country live around 20 years longer in good health than people in the most-deprived areas.[9] Those living in the most-deprived areas also generally have poor-quality environments around them:

> *'Alongside experiencing economic inequality, the poorest in society also have to live in some of the most degraded outdoor environments in the country. Poor environments compound the misery of poverty and directly contribute to low levels of health and wellbeing.'*[10]

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7 See, for example, E Gianferrara and J Boshoff: *Health, Wealth and Happiness – the Multiple Benefits of Green Infrastructure*. Expert Paper 1. PERFECT project. TCPA, Jun. 2018. **https://www.interregeurope.eu/perfect/news/news-article/3858/health-wealth-and-happiness-perfect-expert-paper/**

8 See the 'Health place-making' pages on the TCPA website, at **https://www.tcpa.org.uk/Pages/Category/health**

9 'Understanding health inequalities in England'. Public Health Matters blog entry. Public Health England, 13 Jul. 2017. **https://publichealthmatters.blog.gov.uk/2017/07/13/understanding-health-inequalities-in-england/**

10 I Bateman and S Zonneveld: *Building a Better Society: Net Environmental Gain from Housing and Infrastructure Developments as a Driver for Improved Social Wellbeing*. UK2070 Commission, Oct. 2019. **http://uk2070.org.uk/wp-content/uploads/2019/10/BATEMAN_ZONNEVELD_Net_Env_Gain.pdf**

How we plan and build places – including how we design and implement green infrastructure – therefore has the potential to help tackle inequalities. As recent guidance that emphasises the potential to create healthier new communities states:

> *'People living in the most deprived areas are less likely to live near good quality green spaces and so have fewer opportunities to benefit from them. To help reduce income-related health inequalities such as these, councils and developers should design and provide new places so that people of all ages, backgrounds and abilities have both equal provision of, and access to, good quality green infrastructure.'*[11]

The guidance goes on to specify a range of actions to support the delivery of integrated green infrastructure. In addition to formal and informal spaces being accessible for everyone, the actions include:

- developers, transport planners and landscape architects seeking to maximise the health benefits of green infrastructure by, for example, making sustainable drainage systems (SuDS) and flood water retention areas useable for recreation for most of the year;
- landscape architects and urban designers seeking to maximise the impact of green infrastructure through the use of green walls, the use air-purifying species in planting next to carriageways, and the use of planting to diffuse street lighting or noise in residential areas; and
- local authorities and developers agreeing at the earliest stages of planning on how the green infrastructure will be funded and managed in perpetuity, and establishing governance structures and long-term income streams to do this – ideally, this would involve the community in future management.

Mitigating and adapting to climate change

There is also increasing recognition among global decision-makers that climate change is the greatest challenge facing our society. Some leaders have been quicker to recognise the challenge than others, but over the last 12 months in the UK this greater awareness of the need for action has been translated into many local authorities declaring climate emergencies. The inclusion of green infrastructure in local plan policies, and as part of developments securing planning permission, must be one of a range of ways in which local planning authorities can make these declarations more meaningful. There is more detail about the case for such action in the PERFECT project Factsheet 3: *Green Infrastructure and Climate Change*.[12] However, the quality of that green infrastructure, in terms of both the quantity and also how it connects to existing green and blue spaces, will be crucial if it is to make a real impact.

The role of green, and blue, infrastructure in helping places adapt to and mitigate against the impacts of climate change was the focus of a former pan-European project led by the TCPA called GRaBS (Green and Blue Space Adaptation for Urban Areas and Eco Towns), which ran from 2009 to 2011. One method of working advocated as part of that project was the Green Space Factor (GSF),[13] a tool for calculating green infrastructure requirements for new developments. The GSF, which was successfully being used in Malmö, Sweden, aims to help local authorities better assess and understand the benefits of the green infrastructure being planned in specific developments.

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11 *Putting Health into Place: Principles 4-8 Design, Deliver and Manage*. TCPA/The King's Fund/Young Foundation/Public Health England, for NHS England, Sept. 2019. **https://www.england.nhs.uk/publication/putting-health-into-place-principles-4-8-design-deliver-and-manage/**

12 *Green Infrastructure and Climate Change*. Factsheet 3. PERFECT project. TCPA, 2019. **https://www.interregeurope.eu/perfect/library/**

13 A Kruuse: *The Green Space Factor and the Green Points System*. GRaBS Expert Paper 6. GRaBS project. TCPA, Apr. 2011. **https://www.tcpa.org.uk/Handlers/Download.ashx?IDMF=c6ecd8bc-a066-435f-80d6-d58e47ab39a7**

The UK Government's 25 Year Environment Plan,[14] published in 2018, set out a commitment to develop a national framework of green infrastructure standards. The emphasis here is on both green space in new developments *and* existing areas with little or no existing green space; it is expected that the framework will be launched in 2020.

While the benefits of green infrastructure in relation to climate change are clear, good-quality green space and infrastructure will provide *multiple* benefits to the environment and the local community. But, as noted above, agreeing and securing a mechanism to enable the long-term management of the green infrastructure will be crucial to its success. The City of Medicina case study which features in the *Rethinking Green Infrastructure*[15] handbook produced by the PERFECT partner the Municipality of Ferrara demonstrates how green and blue infrastructure can be used to help adapt an area to climate change (see Box 2).

Box 2

Retrofitting green infrastructure in the Emilia-Romagna region in Italy – participation and stakeholder involvement

Historically, the Medicina canal, crossing the city of Medicina from south to north, has been a strategic element in city development, supplying water for agricultural purposes and to mills and other industries. Owing to hygiene and sanitary problems, in 1930 the urban section of the canal was culverted, but it still acted as an unofficial sewer, with unauthorised and inappropriate connections.

In 2018 the City of Medicina initiated an urban and strategic planning project, 'Along the Canal of Medicina', in response to a call for urban regeneration within the Emilia-Romagna region of Italy. The strategy behind the project is to create a system of public spaces and green and blue infrastructure along the entire canal that will help to adapt the area to the impact of climate change. The project has two strategic objectives:

- To reclaim and secure the canal and its waters, to redevelop the banks and public spaces that overlook it for a length of about 2 kilometres, and to start a process of public debate with local residents.
- To regenerate public spaces in the northern derelict area of the city, and to initiate participation processes for the community, private companies and the authorities.

The municipality acquired resources to focus on urban planning and environmental schemes, starting with water reclamation. As part of such action it regenerated about 40 hectares of public spaces and areas along the canal. From the outset, the municipality developed processes for community involvement and participation in drawing up the strategy and to create an interface with the authorities responsible for the canal. Owners of the land and buildings, the residents and the administrative bodies undertook a co-design exercise, involving the City Planning and Public Works Office, the Renana Reclamation Consortium (the canal management body), the CON.Ami Consortium (the infrastructure owner) and Hera SpA (the sewer system management company), together with experts in urban planning, architecture, landscape, hydraulic and environmental design, and social innovation and participation. The 3.5 million euro project was developed in just two months thanks to this co-design process.

14 *A Green Future: Our 25 Year Plan to Improve the Environment*. HM Government, Jan. 2018. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

15 E Farnè: *Rethinking Green Infrastructure: Handbook for Decision Makers and Technicians*. PERFECT project. Municipality of Ferrara, Apr. 2019. https://www.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1570549393.pdf

5 Conclusions

Green infrastructure as part of new and renewed places remains as important as ever as we seek to tackle housing, health, climate and biodiversity crises. The trend in England over the last decade has been for policy to focus on the number of new homes, with insufficient value being placed on place-making. Focusing on place-making, with green infrastructure as a crucial part of that, should be the priority.

In planning and implementing new green infrastructure, consideration must, however, also be given to long-term maintenance if its multiple benefits are to be maximised. Too often we have seen green infrastructure included in a development but not well managed in the long term. We must learn from from the past and from current good practice and make sure that mechanisms for managing community assets, including green spaces, are planned early, to guarantee that places and communities are able to thrive.

Green infrastructure in Welwyn Garden City

PERFECT

a European partnership...

The PERFECT project will demonstrate how the multiple uses of green infrastructure can provide social, economic and environmental benefits; and it will raise awareness of this potential, to influence the policy-making process and to encourage greater investment in green infrastructure.

PERFECT aims to:

- spread awareness of the value of green infrastructure for the jobs and growth agenda among a wider audience;
- identify transferable good practice;
- improve investment and stewardship by engaging managing authorities and increasing the professional capacity of key stakeholders in delivering new projects; and
- help make places more economically, socially and environmentally viable by developing action plans to take advantage of the multiple benefits of strategic investment in green infrastructure.

The PERFECT project will work to identify the multiple benefits of green infrastructure investment through EU Structural Funds Operational Programmes and other policy instruments, in order to help formulate holistic and integrated approaches to the protection and development of the natural heritage.

The PERFECT partners are: Provincial Government of Styria, Department for Environment and Spatial Planning (Austria); Social Ascention of Somogy Development, Communication and Education Nonprofit Ltd (Hungary); Municipality of Ferrara (Italy); City of Amsterdam (Netherlands); Bratislava Karlova Ves Municipality (Slovakia); Regional Development Agency of the Ljubljana Urban Region (Slovenia); Cornwall Council (UK); the Town and Country Planning Association (UK).

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