

MAG Principles

# Green and Blue Space as Multifunctional Infrastructure

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MINISTERIAL ADVISORY GROUP  
ARCHITECTURE AND THE BUILT ENVIRONMENT  
FOR NORTHERN IRELAND

# About this series

The Ministerial Advisory Group (MAG) is producing a series of short documents that examines our built environment and identifies important design issues that we need to address in making our cities, towns, villages and rural communities better places to live, work and play. How do we protect, conserve and create the best built environment? This document considers the role of urban and green and blue spaces in our built environment.

While opinions on style will vary, it is essential that we consider and understand the context in design decisions and how the resulting design contributes to our public spaces. Everyone needs to be involved in these decisions from home occupiers to developers, architects to engineers and planners to policy makers.

This document illustrates key principles that help create public spaces that are sustainable, support the economy and improve our well-being. To do this, MAG has documented three case studies considered successful by a broad range of design professionals.

These case studies are then used to illustrate practical design principles advocated by MAG.

**These documents are structured around three key themes:**

**Sustainability:** Reducing the environmental impact and carbon output when designing, building, refurbishing, and maintaining our built environment.

**Economy:** Supporting wealth-generating activity that attracts investment, provides meaningful employment for everyone and makes goods accessible.

**Well-being:** Creating a built environment that supports human health and happiness.

Good design is not enough. Great places to live require stewardship, which means that everyone from home occupiers to property managers need to contribute positively to creating vibrant, safe, beautiful, and practical places to live. Great design should facilitate these characteristics.



GBS: the network of natural and semi-natural features that connect people and nature across urban and rural areas (Connswater, Belfast)

Image: James Hennessey.

# Introduction

Northern Ireland's built environment professions have a crucial role to play in responding to the twin crises of climate change and public health. As rising flood risks, biodiversity loss and health inequalities shape how we plan and design our places, there is a vital need to first conserve and adapt the natural and historic landscapes we already rely on and second, to plan and design more sustainable places. GBS offer an integrated, evidence-based approach to address these challenges delivering climate resilience, ecological recovery and healthier communities.

GBS refers to the network of natural and semi-natural features that connect people and nature across urban and rural areas (parks, rivers, wetlands, woodlands, greenways, coastal zones, street trees, and sustainable drainage systems (SuDS)). When planned and managed as multifunctional infrastructure, GBS supports flood mitigation, improves air and water quality, enhances biodiversity, encourages active travel, conserves heritage and provides restorative and interesting places for people.

These Principles for GBS in Northern Ireland translate emerging evidence and policy commitments into practical guidance for architects, landscape architects, urban planners and designers. They provide a shared framework for embedding nature-based design and management at every scale, from individual sites to regional strategies.

The MAG Principles align with the Programme for Government Priorities and Missions, Green Growth Strategy (2023), Strategic Planning Policy Statement (Edition 2), Regional Development Strategy 2035, Living With Water in Belfast Plan (2021), and the Northern Ireland Climate Change Act (2022). Together, these policies recognise that green and blue infrastructure is essential, not optional, vital for delivering net-zero, restoring ecosystems and improving population health and well-being.

By applying these Principles, Northern Ireland’s design and planning professionals can champion a future where every community benefits from accessible, nature-rich and climate-resilient places, creating environments that sustain both people and planet.



Investment in green space (City Quays Gardens, Belfast)

Image: James Hennessey.

# Why GBS Matters

GBS are vital infrastructure for healthier, fairer and more sustainable places across Northern Ireland.

## Sustainability

As noted in the **UK Climate Change Committee (2022) UK Climate Risk Assessment – Northern Ireland Summary** Northern Ireland faces growing threats from flooding, urban heat, and biodiversity decline, all of which endanger community health and well-being. GBS, including wetlands, urban forests, and sustainable drainage systems, offer cost-effective, nature-based solutions that manage stormwater, restore habitats, and build climate resilience, while also reducing pollution, easing heat stress, and fostering healthier, more liveable communities.

## Economy

Much more than providing the setting for a development, GBS is an integral component of economic viability. Well-designed GBS delivers strong economic returns by reducing flood damage costs, raising property and land values, attracting inward investment and enhancing tourism and local enterprise.

## Wellbeing

Access to quality green space is strongly associated with improved mental wellbeing, increased physical activity and reduced health inequalities. Regular contact with nature lowers stress, improves social cohesion and can increase life expectancy. Yet, in Northern Ireland, an estimated one in five people (22%) live in areas with

limited or no access to usable green space within a 10-minute walk as noted in **Northern Ireland Multiple Deprivation Measure 2017 Northern Ireland Statistics and Research Agency**. Inequalities are most acute in deprived urban neighbourhoods, where environmental quality and health outcomes are poorest. Ensuring equitable access is therefore both a public health and social justice priority. Research shows that a 1% increase in green spaces, particularly in the most deprived areas, can have a 37-41% reduction in preventable deaths.

**by Ngan TT et al**

# Guiding Principles

The following seven principles translate current evidence and policy into practical actions for project indicators, Local Councils, landowners, architects, landscape architects, urban designers and planners. They aim to embed GBS as essential infrastructure for climate resilience, biodiversity recovery and public well-being across Northern Ireland.

## Seven Principles of Multifunctional Green and Blue Spaces





Peacock Butterfly, Supporting nature

Image: James Hennessey

## 1. Integrate Green and Blue Networks at All Scales

### **Why it matters:**

Isolated parks and planting schemes deliver limited benefits. When connected as part of wider networks, GBS supports pollinators, biodiversity corridors, active travel, flood management amplifying ecological and social value, and supporting conservation.

### **What would help:**

- Integrate GBS networks into Local Development Plans policies and regeneration frameworks.
- Connect parks, open spaces and neighbourhoods with tree-lined streets, hedgerows and greenways.
- Restore, conserve and integrate existing corridors, be they rivers, canals, ponds or coastal edges for water management, or historic routes or railways for active travel.
- Combine SuDS features with public spaces for multifunctional benefits (e.g. amenity, drainage, habitat).
- Use mapping tools to identify and protect strategic green and blue corridors.



People's Park, People's Park, Portadown

Image: James Hennessey

## 2. Design for Ecological and Climate Resilience

### Why it matters:

Northern Ireland faces rising flood risk, biodiversity loss and growing urban heat stress. Designing with nature through restoration, reconnection, conservation and resilience offers a cost-effective and sustainable adaptation strategy.

### What would help:

- Restore rivers, wetlands and floodplains to manage flood risk naturally.
- Consider capacity to conserve canals, ponds and millraces.
- Maximise permeable surfaces and integrate SuDS (e.g. rain gardens, swales, ponds) to slow and clean run-off.
- Use native and climate-adapted planting to increase habitat value, carbon sequestration and longevity.
- Establish connected ecological corridors to enable species migration under changing climate conditions.
- Set and monitor tree canopy targets using **The Woodland Trust Equity Score**.



Strathfoyle Greenway, Derry, Londonderry

Image: Derry City and Strabane District Council

### 3. Design with Nature and Plan for Long-Term Stewardship

#### **Why it matters:**

Nature-based design delivers most when it is durable and cared for. Too often, projects decline due to unclear maintenance responsibilities or short-term funding. Stewardship should therefore be designed in from the outset.

#### **What would help:**

- Retain mature trees, hedgerows and natural river alignments wherever possible.
- Design for low input: native planting, drought tolerance, and naturalised drainage.
- Include enforceable maintenance and monitoring plans in planning conditions and design briefs.
- Support local “Friends of” or community stewardship groups to co-manage spaces.
- Secure long-term funding through Section 76 agreements, community trusts or endowments.



Sean Costello Street, Athlone

Image: James Hennessey

## 4. Embed Sustainability and Circular Economy Principles

### **Why it matters:**

GBS projects should exemplify sustainable construction, resource efficiency and low-carbon design. Embedding circular economy principles reduces environmental impact while strengthening local supply chains.

### **What would help:**

- Specify low-carbon, locally sourced, or reclaimed materials for landscape and infrastructure works.
- Reuse site-won soil, stone and vegetation to reduce waste and transport emissions.
- Incorporate rainwater harvesting and natural irrigation systems.
- Avoid synthetic turf, plastic planting and other non-biodegradable materials.
- Support local nurseries, growers and craftspeople to promote regional sustainability and employment.
- Re-use, restore and integrate historic buildings and structures.



## Group planting trees

Image: Paul Hogarth Company

## 5. Champion Collaboration and Knowledge Sharing

### **Why it matters:**

Delivering multifunctional GBS requires expertise and cross-disciplinary collaboration between planners, architects, landscape architects, ecologists, archaeologists, engineers, public health professionals and communities. Shared learning strengthens capacity and innovation across sectors.

### **What would help:**

- Embed collaborative working from project inception through to delivery and management.
- Grow GBS skills across the public and private sector workforce.
- Use Health Impact Assessments and Environmental Impact Assessments to align health, ecological and design outcomes.
- Monitor biodiversity, health and community use, and share findings regionally.
- Organise public workshops, walking audits and design reviews to build local ownership and insight.
- Advocate for GBS to be recognised, funded and maintained as critical public infrastructure within regional policy.



## SUDs, Glasgow

Image: James Hennessey

## 6. Ensure Equitable Access and Social Justice

### **Why it matters:**

Quality GBS should benefit everyone. Yet, low-income communities often have the least access to safe, high-quality outdoor environments. Targeted investment can help close these health and environmental gaps, ensuring fairness in how benefits are distributed.

### **What would help:**

- Map inequalities in access and prioritise investment in underserved communities.
- Involve under-represented groups including young people, older adults, ethnic minority communities, people with disabilities, in co-design and decision-making.
- Remove physical and social barriers: level paths, step-free access, clear signage and good lighting.
- Provide and promote free amenities such as benches, drinking fountains and inclusive play equipment and accessible toilet facilities.
- Legally protect community green spaces and design and enhance them to prevent gender-based exclusion and violence.



Green & Blue Spaces Researchers, Groundswell QUB

Image: Groundswell, QUB

## 7. Prioritise Health and Wellbeing

### **Why it matters:**

Access to quality green space supports both physical and mental health. Evidence shows that people living within 300-400m of usable green space are more active, less stressed, and experience lower rates of chronic illness, yet many Northern Ireland communities still lack this access.

### **What would help:**

- Ensure all residents have access to quality green space within a 5-minute walk (approx. 300-400m).
- Incorporate active travel routes, walking, wheeling and cycling, through greenways and parks.
- Use trees and planting to buffer noise and improve air quality near busy roads.
- Provide diverse spaces for different users: play areas, quiet gardens, community allotments and natural habitats.
- Design for safety and comfort with clear sightlines, lighting, and accessible amenities.
- Conservation and connectivity of heritage assets such as historic graveyards, canals, or publicly accessible historic parks or historic monuments.

# Putting the Principles into Practice

Applying these seven principles will help ensure that every development or improvement project in Northern Ireland contributes to a connected network of healthy, resilient and nature-rich places. GBS are not a “nice-to-have” feature - they are the foundation of sustainable design and the health and wellbeing of communities.

## Integrating the Principles for Multifunctional Value

The greatest impact of GBS arises when the seven principles are applied together, creating multi-functional spaces that deliver simultaneous health, social, environmental, economic and climate benefits. Designing holistically, rather than treating green and blue infrastructure as an afterthought, ensures that each intervention works harder for people, place and planet.

A park designed for flood management can also improve mental well-being, enhance biodiversity, support active travel and reduce urban heat. A restored river corridor can double as wildlife habitat, greenway and community gathering space. By embedding health, equity and ecological resilience in every stage of planning and design, GBS becomes an essential system of interconnected assets rather than isolated amenities.

Integrated, multifunctional design delivers a triple win: healthier people, a more resilient environment, and stronger local economies. It also ensures fairness so that every community, regardless of income or geography, benefits from access to safe, high-quality natural environments.

Embedding these seven principles across Northern Ireland's policies, development frameworks and design practice will create a legacy of climate-ready, inclusive and life-enhancing places that sustain both people and nature for generations to come.



Connswater Community Greenway, Victoria Park

Image: Eastside Partnership

## Case Study 1: Connswater Community Greenway East Belfast, Northern Ireland

The Connswater Community Greenway is a transformative urban regeneration project in east Belfast, Northern Ireland. Spanning 9 km of linear green space with 16 km of interconnected walking and cycling paths, it follows the courses of the Connswater, Knock, and Loop rivers. The Greenway connects communities, enhances flood resilience, and provides accessible recreational opportunities. Key features include C.S. Lewis Square, Victoria Park, and Orangefield Park. The project was delivered through a £40 million investment by EastSide Partnership, Belfast City Council and Northern Ireland's Rivers Agency. Data was collected before the Greenway was developed in 2010/2011, short-term outcomes after the Greenway had been opened for approximately 6-12 months in 2017/2018, and then long-term outcomes after the Greenway had been open for 5-6 years (2024/2025) by researchers at Queen's University Belfast.

### Evidence-Based Outcomes

- **Physical activity:** Physical activity increased by 153%. This is attributed to improved accessibility and the appeal of green spaces for walking and cycling.
- **Mental Wellbeing and Quality of Life:** Residents reported enhanced mental wellbeing and overall quality of life, likely due to increased opportunities for outdoor activities and community engagement.
- **Usage Statistics:** User engagement surged, with a 114% increase in overall use of the Greenway and a 349% rise in cyclists at C.S. Lewis Square, and 431% increase in cycling at Flora Street Walkway indicating the project's success in attracting diverse groups of users.

## Economic Evaluation

A Social Return on Investment (SROI) analysis estimated a benefit-cost ratio ranging from 1.34 to 1.56. This means that for every £1 invested, the community gains between £1.34 and £1.56 in social value. The net present value of the Greenway was calculated to be approximately £60 million, underscoring its economic and social value over a 40-year horizon.

## Conclusion

The Connswater Community Greenway exemplifies how urban green and blue infrastructure can deliver substantial health, social, and economic benefits. Through evidence-based planning and community involvement, it has become a vital asset for east Belfast, promoting active lifestyles, enhancing mental well-being, and providing measurable economic returns.

For further information about the research and other research findings:  
<https://groundswelluk.org/Projects/>

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## PROJECT DETAILS

**CLIENT:** Eastside Partnership / Belfast City Council / DFI Rivers Agency

**DESIGN TEAM:** The Paul Hogarth Company / AECOM / ARUP / McAdam Design

**DATE:** 2016

**BUDGET:** £40m

**FUNDING:** National Lottery Living Landmarks Award, DFI Rivers Agency, DfC



Connswater Community Greenway, Citizen science, Community events, Sport events  
Educational visits and Flora Street.

Image: Eastside Partnership



## Woodlands, Aberdeenshire

Image: OPENSspace

## Case Study 2: Two valuations of Scotland's Woods In and Around Town (WIAT) programme

Scottish Forestry's (previously Forestry Commission Scotland) Woods In and Around Town (WIAT) programme focuses on the expansion, management, protection and enhancement of urban and peri-urban woods to provide communities with health, social and economic benefits and to respond to climate and biodiversity crises. Since the establishment of the programme, significant successes have been achieved.

For example, between 2005 and 2021, Scottish Forestry made support available to:

- Bring almost 12,000 hectares of urban / peri-urban woodland into active management.
- Create nearly 2,000 hectares of new urban/peri-urban woodlands.
- Restore over 75 hectares of vacant and derelict land to woodland.
- Create or upgrade almost 600 km of paths.

Support during that period was delivered in a number of ways, including:

- Over £70 million targeted forestry grant funding, prioritising the most socially deprived urban communities.
- Partnership funding to support project development research and evaluation of delivery activities, including studies on woodland improvements in deprived communities and research on enhancing health through access to nature.

For further information about the research and other research findings: [Silveirinha de Oliveira, E et - https://bmjopen.bmj.com/content/3/8/e003648](https://bmjopen.bmj.com/content/3/8/e003648) and [Forestresearch.gov.uk](https://www.forestresearch.gov.uk) - **Evaluation of the Woodlands In And Around Towns Challenge Fund**

With 92% of Scotland's population living in towns and cities, the aim of the programme is to improve the quality of life of millions of people by providing accessible woods that they can use and enjoy.

WIAT interventions have included funding for active woodland management, capital improvement works, and community engagement activities. The programme also supports social initiatives such as Woods for All, Branching Out and Forest Kindergarten, focusing on improving access to urban woodlands.

### **Evaluation 1 by Forest Research**

A Forest Research evaluation of the WIAT Challenge Fund was conducted in 2012/13 to determine whether the expected outcomes of the WIAT programme were achieved by supported projects, provide an economic valuation of the outcomes and identify the key lessons learned in the implementation and delivery of WIAT projects.

### **Evidence-Based Outcomes**

#### **Perception and behaviour**

- Significant positive changes to the scores assigned to environmental quality and woodland quality.
- Overall, the number of visits to WIAT woodlands increased by 20-25% compared to the baseline.
- Between 2007 and 2012, for the 146 projects in the dataset, on average half a million additional visitors came to WIAT Challenge Fund sites.

## Economic valuation (All values at 2012 prices)

- Post intervention:
  - \* the recreational value of WIAT Challenge Fund woodlands was £13m per year.
  - \* the value of additional health benefits in WIAT Challenge Fund woodlands was £0.36m per year.
- Recreational and health benefits are independent and therefore can be summed to show that these are worth: £14m.

## Conclusion

Forest Research found that the WIAT Challenge Fund appears to have achieved the national WIAT Programme objectives in the way that the conceptual model suggested and represented a good return on public investment.

## Evaluation 2 by the University of Edinburgh

A University of Edinburgh evaluation between 2012/2017 involved initial studies using a small number of WIAT intervention sites matched with comparator, WIAT-eligible sites that had not received intervention. Subsequent evaluation studied a sample representative of the whole Scottish population over a 13-year period (2005-2018) and the results of this work will be published soon.

## Evidence-Based Outcomes

In three WIAT intervention sites matched with three non-intervention sites

- Physical Activity: a 1.8% increase in moderate-level physical activity was noted in participants in WIAT intervention sites, compared with a 1.4% decrease in participants in non-intervention sites.
- Social cohesion: this showed a significant increase in WIAT intervention sites, compared with participants in non-intervention sites.

- Visits to natural environments increased by 6% of the population in WIAT intervention sites, compared with participants in non-intervention sites.
- Connectedness to nature: awareness of local woods increased by 13% and connectedness to nature was significantly increased in WIAT intervention sites, compared with participants in non-intervention sites.

### Economic Evaluation

Cost-consequences analysis in three WIAT intervention sites matched with three non-intervention sites shows that the WIAT interventions are of low cost, based on the average investment of £12 per person, and have the potential to provide health and wellbeing benefits that are relatively cost-effective.

### Conclusion

The University of Edinburgh's study offers insights into how natural environment interventions might effectively be evaluated over time to support community health and wellbeing as well as wider environmental concerns. The costs of the WIAT interventions were modest but evidence based on the University's Scotland-wide sample provides strong evidence that changes in exposure to improved woodlands can make a positive difference to a person's mental health.

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#### PROJECT DETAILS

**CLIENT:** Forestry Commission Scotland  
(now (since 2019) Scottish Forestry)

**DESIGN TEAM:** Forestry Commission Scotland  
(now Scottish Forestry)

**DATE:** Initially, 2005-2015 but ongoing under  
Scottish Forestry

**BUDGET:** Over £70 million 2005-2015

**FUNDING:** Forestry Commission Scotland  
(now Scottish Forestry)



## Community Engagement

Image: Forestry Commission Scotland



## Urban canopy, Glasgow

Image: Adobe Stock image



## Path Improvements, Linwood

Image: OPENSspace



## Path Improvements, Linwood

Image: OPENSspace



A place of community

Image: Jamie Anderson, Manchester University



## West Gorton Park, Future resilience

Image: Jamie Anderson, Manchester University

## Case Study 3: West Gorton Park Manchester, England

The West Gorton Community Park in Manchester was developed through the GrowGreen EU Horizon 2020 Research and Innovation Programme. This 1.4-hectare “sponge park” was designed to absorb rainwater and reduce flood risk, using sustainable features such as rain gardens, permeable surfaces, and native planting.

The project transformed low-quality brownfield and parkland into a climate-resilient, multifunctional green space. It was co-designed with residents in one of England’s most deprived neighbourhoods to include features that support health and well-being.

### Evidence - Based Outcomes

- **Physical Activity:** Observed walking in the park more than tripled 15 months after completion. Resident surveys showed a 47% increase in regular use of outdoor spaces - around twice the increase seen in comparable control areas.
- **Social Interactions:** Observed social interactions increased more than fivefold, highlighting the park’s role in strengthening community cohesion.
- **Inclusivity:** The proportion of non-white visitors increased by 22%, suggesting the park became more representative of the local population.

More information on these evidence-based outcomes can be found in **Anderson et al., (2024)**

## Environmental Benefits

- **Flood Risk Management:** The park's green infrastructure now diverts 6,665 m<sup>3</sup> of rainwater from the sewer system each year. During Storm Christoph (2021), all rainfall was contained and absorbed within two days.
- **Environmental Cooling:** Average ground temperature fell by around 5°C, with peak reductions of up to 24°C.
- **Biodiversity Net Gain:** The park now supports over 50 new wildflower and grass species and 13 tree species.
- **Water Quality:** Swales (shallow, planted channels that absorb rainwater) and the rain garden reduced heavy metal concentrations in surface water.

## Economic Evaluation

A cost-benefit analysis estimated a benefit-cost ratio of 2.5, meaning that for every £1 invested, the community gains approximately £2.50 in social value. Key benefits included:

- £1.64 million in increased nearby property values.
- £123,000 per year in healthcare savings due to higher physical activity.
- £3.34 million in total health-related economic gains.

## Conclusion

West Gorton Community Park shows how nature-based solutions can deliver substantial health, social, environmental, and economic benefits in deprived urban areas. It highlights the value of co-designing green infrastructure with local residents to ensure it meets community needs.

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## PROJECT DETAILS

**CLIENT:** Manchester City Council

**DESIGN TEAM:** BDP (Building Design Partnership) and Arup

**DATE:** Opened in May 2020

**BUDGET:** The total estimated cost of the intervention and 25-year ongoing maintenance was approximately £1.96 million (excluding VAT)

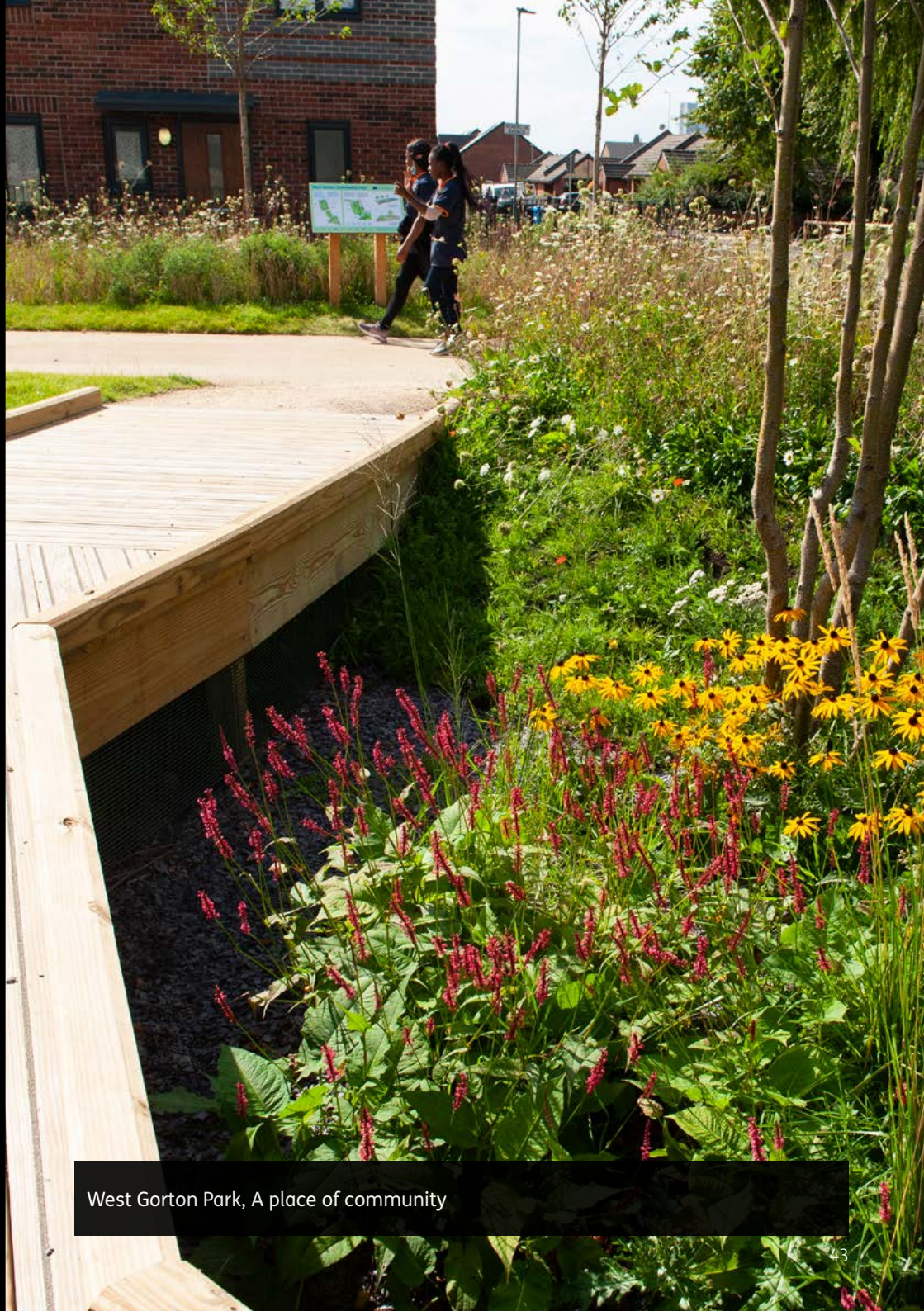
**FUNDING:** The majority of this was funded by the EU Horizon 2020 Grow Green project, with a contribution from Manchester City Council



West Gorton Park, A place of community



Image: Jamie Anderson, Manchester University



West Gorton Park, A place of community

# Conclusion

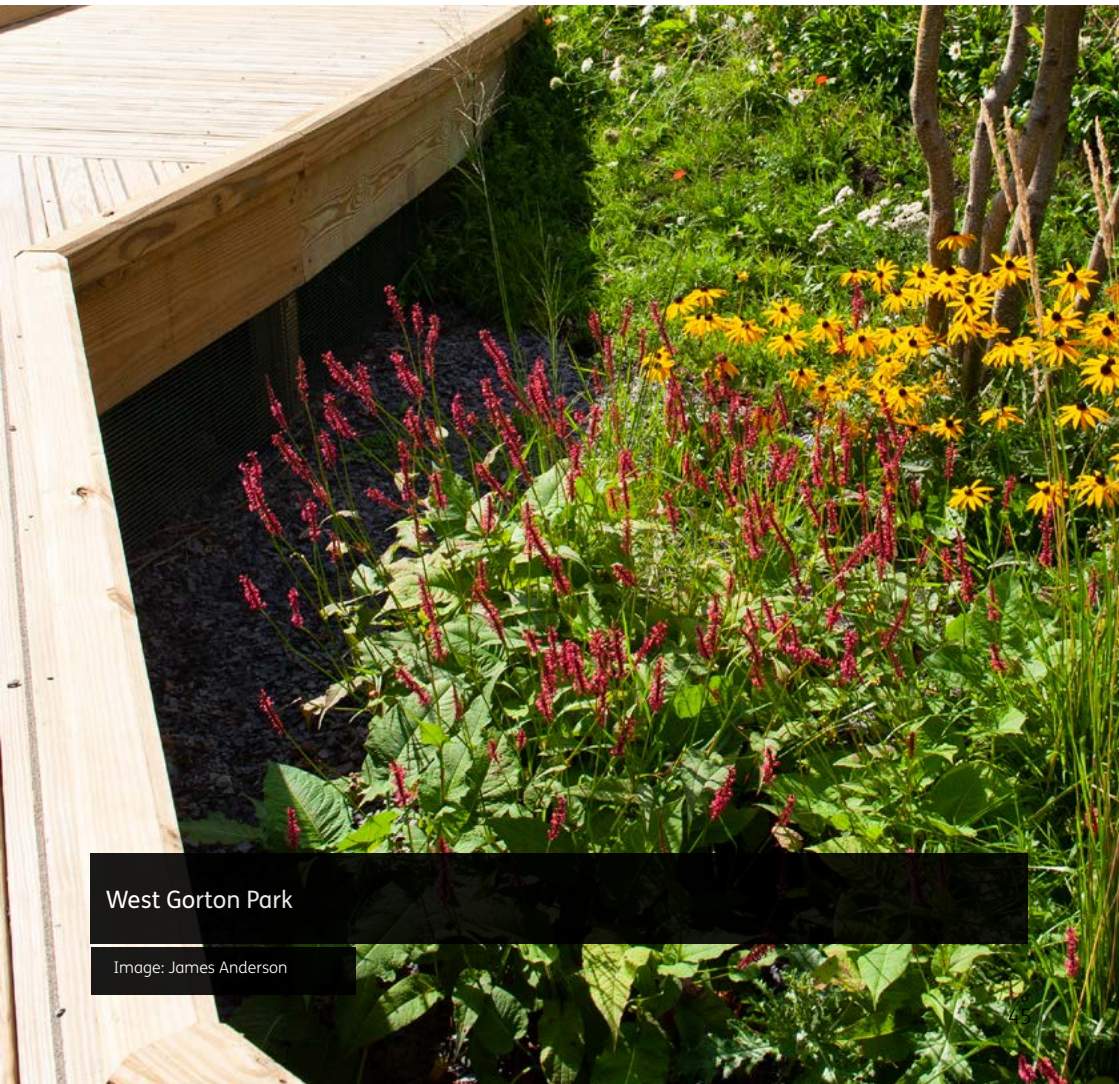
GBS are essential infrastructure for the future of Northern Ireland's towns and cities. They are not 'nice to haves' but vital systems that sustain public health, social connection, biodiversity, and climate resilience. When designed and managed as multifunctional spaces, GBS can simultaneously reduce flood risk, cool urban areas, support active travel, conserve heritage assets, improve mental well-being and enhance the character and identity of place.

The seven principles set out in this document provide a practical, evidence-based framework for embedding GBS in every scale of development from neighbourhood streets to regional masterplans. They call on project initiators, designers, planners, engineers and policymakers to work collaboratively, ensuring that every project contributes to a connected, nature-rich network of spaces that serve people and ecosystems alike.

By integrating nature into the heart of urban design, Northern Ireland can create healthier, fairer and more climate-resilient communities.

Investment in GBS is an investment in long-term public value supporting well-being, reducing costs, attracting sustainable growth, and enhancing quality of life for all.

Through leadership, collaboration and creativity, Northern Ireland's built environment professionals can ensure that nature becomes the foundation, not the fringe, of future urban living.



West Gorton Park

Image: James Anderson

# Case Study Awards and Practice Recognition

## Case Study 1: Connswater Community Greenway

- Edmund Hambly Medal, Institute of Civil Engineering, 2025
- Winner - Great Place Award, Academy of Urbanism, 2020
- Winner - President's Award, Irish Landscape Institute, 2018
- Winner - Community Thriving Places Award, Urban Villages, 2018
- Winner - UK Rivers Prize, River Restoration Centre, 2018
- Winner - Social / Community Construction, CEF Construction Excellence, 2017
- Winner - Partnership, The Waterways Renaissance Awards, BURA, 2009
- Winner - Sustainable Planning Awards, RTPI / RSPB, 2008

## Case Study 3: West Gorton Park

- Winner - Public Space, The Pineapples Awards (Design Council), 2021
- Winner - Excellence in Flood and Water Management, Landscape Institute Awards, 2021

# Bibliography

## Why GBS Matters

Climate Change Committee (2022) UK Climate Risk Assessment 2022: Northern Ireland technical summary. London: Climate Change Committee. Available at: <https://www.ukclimaterisk.org/>

**Natural Capital Committee (2020)** Natural Capital Committee End of Term Report. London: Department for Environment, Food & Rural Affairs. Available at: <https://www.gov.uk/government/publications/natural-capital-committees-end-of-term-report>

Tate, C. et al. (2023) 'The social return on investment of an urban regeneration project using real-world data: the Connswater Community Greenway, Belfast, UK', *Cities & Health*, 7(5), pp. 699–718. <https://doi.org/10.1080/23748834.2023.2211226>

World Health Organization (2017) *Urban green spaces and health*. Copenhagen: WHO Regional Office for Europe.

Hunter, R.F. et al. (2019) 'Greenspace interventions for health: A review of impacts and effectiveness', *Journal of Epidemiology and Community Health*, 73(10), pp. 971–976. **Urban green space interventions and health: A review of impacts and effectiveness. Full report - Queen's University Belfast**

World Health Organization (2016). Global report on urban health: equitable healthier cities for sustainable development. Geneva: World Health Organization. Available at: <https://www.who.int/publications/item/9789241565271>

Ngan, T.T. et al. (2025) 'Inequality in green space distribution and its association with preventable deaths across urban neighbourhoods in the UK, stratified by Index of Multiple Deprivation', *Journal of Epidemiology and Community Health*, 79(2), pp. 102–109. <https://doi.org/10.1136/jech-2024-222485>

Northern Ireland Statistics and Research Agency (2017) Northern Ireland Multiple Deprivation Measure 2017. Belfast: NISRA. Available at: <https://www.nisra.gov.uk/statistics/deprivation>

## **Prioritise Health and Wellbeing**

World Health Organization Regional Office for Europe (2016) Urban green spaces and health: A review of evidence. Copenhagen: WHO Regional Office for Europe. Available at: <https://apps.who.int/iris/handle/10665/345751>

## **Case Study 1: Connswater Community Greenway**

Hunter, R.F. et al. (2025) 'Investigating the long-term public health and co-benefit impacts of an urban greenway intervention in the UK: a natural experiment evaluation (study protocol)', *BMJ Open*, 15(7), e097530. <https://doi.org/10.1136/bmjopen-2024-097530>

Hunter, R.F. et al. (2021) 'Investigating the physical activity, health, wellbeing, social and environmental effects of a new urban greenway: a natural experiment (the PARC study)', International Journal of Behavioural Nutrition and Physical Activity, 18(1), 142. <https://doi.org/10.1186/s12966-021-01213-9>

Queen's University Belfast (2026) Investing in green space to support healthier communities: An evaluation of physical activity and green space use following the Connswater Community Greenway. Belfast: Queen's University Belfast. <https://groundswelluk.orgProjects-TheConnswaterCommunityGreenway15YearsofResearchPartnershipandImpact/Publications/proceval/>

Tate, C., O'Neill, C., Tran, N., Heron, L., Kee, F., Tully, M.A., Dallat, M. and Hunter, R.F. (2023) The social return on investment of an urban regeneration project using real world data: the Connswater Community Greenway, Belfast, UK. Cities & Health, 7(5), pp. 699–718. <https://www.tandfonline.com/doi/full/10.1080/23748834.2023.2211226>

## **Case Study 2: Two valuations of Scotland's Woods In and Around Town (WIAT) programme**

Forest Research (2014) An evaluation of the Woods In and Around Towns (WIAT) Challenge Fund: Changing use patterns, the value of recreation and health benefits, and lessons learned. Farnham: Forest Research. Available at: [https://cdn.forestresearch.gov.uk/2014/01/fr\\_ambroseoji\\_wiat\\_evaluation\\_summary\\_2014.pdf](https://cdn.forestresearch.gov.uk/2014/01/fr_ambroseoji_wiat_evaluation_summary_2014.pdf)

Silveirinha de Oliveira, E. et al. (2013) 'How effective is the Forestry Commission Scotland's "Woods In and Around Towns" (WIAT) programme at improving psychological wellbeing in deprived urban communities? A quasi-experimental study', *BMJ Open*, 3(8), e003648. <https://doi.org/10.1136/bmjopen-2013-003648>

Catharine Ward Thompson , Eva Silveirinha de Oliveira , Sara Tilley, Aldo Elizalde, Willings Botha , Andrew Briggs, Steven Cummins, Alastair H Leyland, Jenny J Roe , Peter Aspinall, Katherine Brookfield , Richard Mitchell (2019) Health impacts of environmental and social interventions designed to increase deprived communities' access to urban woodlands: a mixed methods study. Southampton: NIHR Journals Library. <https://pubmed.ncbi.nlm.nih.gov/30620516/>

OPENSspace (n.d.) Woods In and Around Towns (WIAT) programme. Available at: <https://www.openspace.eca.ed.ac.uk/projects/woods-in-and-around-towns-wiat2/>

Scottish Forestry (2022) Scotland's Forestry Strategy 2019–2029: Parliamentary progress report (April 2019 – March 2022). Edinburgh: Scottish Government. Available at: <https://www.forestry.gov.scot>

Scottish Government (2016) Scottish Government Urban Rural Classification 2016. Edinburgh: Scottish Government. Available at: <https://www.gov.scot/publications/scottish-government-urban-rural-classification-2016>

### **Case Study 3: West Gorton Park**

Anderson, J., Benton, J.S., Ye, J., Barker, E., Macintyre, V.G., Wilkinson, J., Rothwell, J., Dennis, M. and French, D.P. (2024) 'Large walking and wellbeing behaviour benefits of co designed sustainable park improvements: A natural experimental study in a UK deprived urban area', *Environment International*, 187, 108669. <https://doi.org/10.1016/j.envint.2024.108669>

Groundwork Greater Manchester (2022) West Gorton Community Park: Two years later [Video]. Available at: <https://www.youtube.com/watch?v=YNNIEi7hAiM>

Tommis, M., Sheil, S. and Oddy, M. (2022) *GrowGreen intervention conclusions: Manchester*. Manchester: Manchester City Council / GrowGreen Project. Available at: <https://oppla.eu/resource/growgreen-report-intervention-conclusions-manchester>

## Key Contacts

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## Policy

MAG is here to implement and develop the Architecture + Built Environment Policy. All input from MAG will be aligned to current policy and emerging best practice.

## Well-being, Sustainability and the Economy

The built environment is fundamental to the way we live our lives. Northern Ireland must confront a series of challenges in our built environment to help address the well-being of our people, the climate emergency and support of the regional economy. These challenges are not mutually exclusive and will be important underlying issues in the design review process.

