



Greening the City

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Belfast Healthy Cities is a partnership organisation providing a platform for intersectoral collaboration to improve health and wellbeing for the Belfast population. Belfast has been a leading city within the World Health Organization (WHO) European Healthy Cities Network since 1988. A key role for Belfast Healthy Cities is to support partners in the city by providing evidence, capacity building and piloting new approaches and ways of working to improve health and wellbeing and reduce health inequalities. Belfast Healthy Cities programme on greening the city recognises the existing work in this area and will support a joined up and integrated approach that promotes stakeholder collaboration and community engagement in the design, delivery and use of these spaces. This will seek to create mutually beneficial relationships between citizens and the urban environment for improved physical and mental wellbeing.

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Foreword

As most of the global population now live in cities, it is more important now than ever that urban infrastructure is improved to support a higher quality of life for the growing populations in cities. Protecting the planet is one of the world's greatest priorities and the current COVID-19 experience is one of today's many global health challenges and comes on top of an even greater climate and environmental crisis. A prosperous economy and society can be achieved that also safeguards the common good, improving the quality of the air and stopping irreversible damage to the natural habitats on which protecting human health depends.

The World Health Organization (2017b) highlight that green spaces and other natural green and blue features can offer innovative solutions to increase the quality of urban settings, improve resilience, and promote sustainable lifestyles to deliver benefits to both the physical and mental health and wellbeing of residents. These features can help ensure that:

- **citizens have adequate opportunities for exposure to nature.**
- **nature is maintained, protected and enhanced.**
- **environmental hazards such as air pollution or noise are reduced, leading to reduced levels of asthma and improved mental well-being amongst the population, particularly amongst children.**
- **the impacts of extreme weather events such as heatwaves, extreme rainfall or flooding are mitigated.**
- **overall, the health and well-being of residents is improved.**

It is therefore important to ensure that these spaces and features are distributed fairly, and that everyone has access to them, particularly communities who experience inequalities.

The COVID-19 pandemic has provided a stark reminder of the importance of urban green and blue spaces, including parks, pocket parks, greenways, beaches, rivers and canals for population health and wellbeing. Cities can choose investments that can develop healthier, safer paths to be in a better place and hold on to the harmony this crisis has inspired.

Green and blue spaces and features are an integral part of the infrastructure of Belfast and opportunities exist to consider how these can be integrated across the city, to help improve people's health and wellbeing, and reduce health inequalities.

Increasing physical activity through increased availability and use of green space can have significant impact on many health issues, including obesity and can reduce long term associated health problems, including heart disease, diabetes, strokes and cancer.

Belfast Healthy Cities programme on greening the city recognises the existing work in this area and will support a joined up and integrated approach that promotes stakeholder collaboration and community engagement in the design, delivery and use of these spaces. This will seek to create mutually beneficial relationships between citizens and the urban environment for improved physical and mental wellbeing. We are very grateful to the partners and organisations who have informed the development of this programme and continue to support its delivery and we look forward to continuing to work with all partners.



Joan Devlin
Chief Executive

Introduction

Belfast Healthy Cities Strategic Plan sets out 'greening the city' as a key programme for the organisation during Phase VII (2020-2025) of the World Health Organization (WHO) European Healthy Cities Network, to support the themes of Place, Planet, Participation, People, Prosperity, and Peace. The overall goal of the programme is to create mutually beneficial relationships between citizens and the urban environment for improved physical and mental wellbeing.

Underpinning the overarching goal of the greening the city programme are four strategic objectives that Belfast Healthy Cities have committed to working towards. These are to:

1. **Promote inclusive green environments for all, increasing physical activity and mental wellbeing to reduce the risk of long term disease.**
2. **Encourage the greening of public spaces to mitigate the consequences of climate change, support bio-diversity, and increase recognition that trees and other vegetation are critical urban infrastructures.**
3. **Increase stakeholder collaboration and community engagement in the design of green spaces.**
4. **Promote green space interventions to reduce health inequalities.**

To aid in the development of this programme Belfast Healthy Cities undertook a scoping exercise. This sought to assess the current understanding and uptake of the greening the city agenda, and identify the priority actions for the organisation to consider taking forward. The scoping exercise involved a review of documents related to the greening the city programme, alongside discussions with a range of stakeholders in Belfast.

From these conversations, a reoccurring theme was the need to support the development and sharing of evidence that draws out the connections between greening the city, health and inequalities. To begin to address this gap, Belfast Healthy Cities have developed this evidence paper. It draws together documents published by the WHO and relevant local and regional policies and strategies.

The paper sets out what greening the city is, and the evidence that underpins each of the objectives of the programme. Summaries of the documents that have been reviewed are also provided in the appendix.



Overall, the greening the city evidence paper will help stakeholders across different sectors and disciplines to:

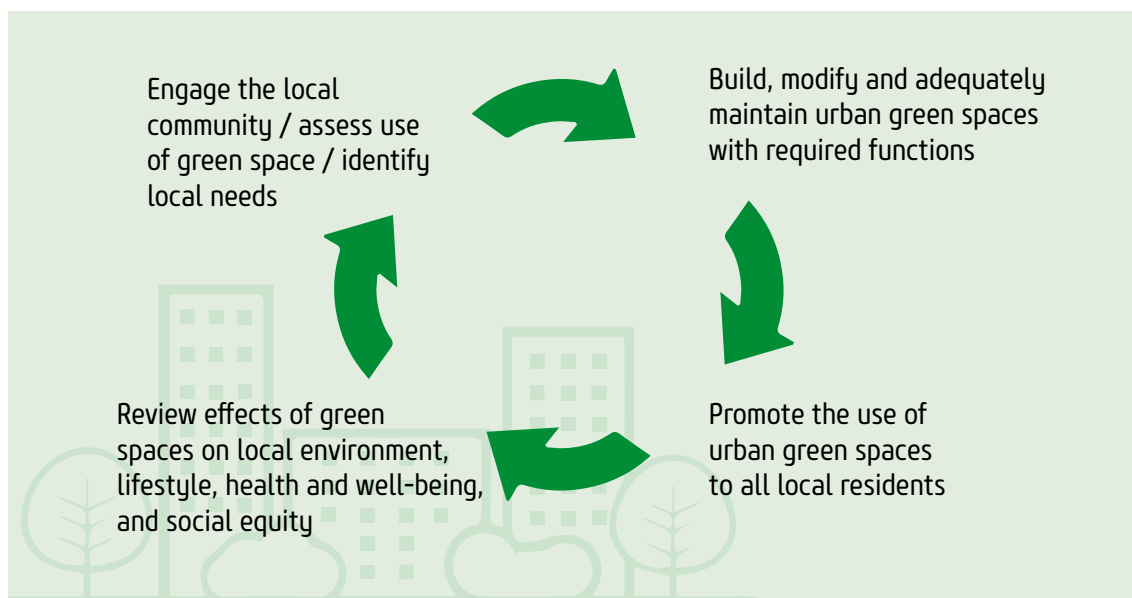
- Develop a common understanding of greening the city, and the links to health and wellbeing, and inequalities.
- Justify and improve actions, policies and strategies that support the provision, enhancement, and use of green and blue spaces and features in Belfast.

What is greening the city?

The WHO (2017b) sets out that green spaces are necessary features of a healthy place, and that the benefits of this infrastructure can be maximised through adequate planning, design and evaluation.

The WHO (2017b) provides an iterative cycle for green space actions. This involves engagement with the local community to assess the use of green spaces and identify local needs. Followed by actions to build, modify and adequately maintain green spaces, the promotion of its use to all residents, and a review of its effectiveness on health, wellbeing and social equity.

Figure 1: Green space action cycle (WHO,2017b)



How do we define greening the city?

The WHO (2016) recognises there is no one agreed definition of greening the city. It can include natural surfaces and settings, specific types of urban greenery, such as street trees, alongside blue spaces which represent water elements (WHO, 2016). The WHO (2016) highlight the most common definitions of green spaces in urban areas tend to involve areas used predominately for recreational purposes such as public parks, but may also include children's play areas, non-amenity areas such as road verges, woodlands, riverside footpaths, and private gardens. Ultimately, the WHO (2016) recognises that these definitions are nuanced and specific to context.



At the local level, the most inclusive interpretation of greening the city seems to be green and blue infrastructure. This involves all natural and semi natural land cover, including water (BCC 2020a). Belfast City Council's Green and Blue Infrastructure Plan 2020 (2020a) highlights the typologies included are the uplands, agricultural land, amenity green space, parks, playing fields and recreational space, woodlands and trees, gardens, greenways, sustainable urban drainage systems, waterways, water bodies and coastal waters.



This definition of green and blue infrastructure appears to be overarching. With a recognition that these spaces provide multiple functions, and have multiple benefits for the environment, society and the economy (BCC, 2020a). This includes places for people to enjoy and be active, spaces to support biodiversity and wildlife, areas to help reduce flood risk, improve air pollution, and mitigate and adapt to a changing climate, as well as places to encourage people to visit, live, spend money and invest (BCC, 2020a). As such, green and blue infrastructure is seen as vital for the effective functioning of urban areas and society (BCC, 2020a).



A sub section of green and blue infrastructure tends to be 'open', 'urban green' or 'green' spaces. These are areas that provide greater direct benefits to people. For example, Belfast City Council (2020b) defines open spaces as land which has a primary function that is related to its community and amenity value. This involves spaces that offer opportunities for play, recreation and sports, including greenways, in either public or private ownership (BCC, 2020b).

What indicators are used to measure greening?

Broadly speaking, there tends to be three overarching indicators that researchers and decision makers use to measure green spaces.

- The most common indicator is availability. This usually refers to the quantity of green space, and is considered as the proportion of an area covered by greenery or green spaces, or the amount of green space provided per person (WHO, 2016). This indicator can also be broken down into the availability of different typologies of green spaces.
- The second indicator tends to be how accessible green spaces are. This can be measured by whether a green space is available for public use, the distance between green spaces and where people live or work, and the perception from residents on the distance between them and nearby green spaces (WHO, 2016).
- The third tends to be the use of green spaces. This includes understanding how these spaces are used, when and by who (WHO, 2016).



Living with Water, Department for Infrastructure

There are also additional indicators that can be used to measure green spaces, such as the quality or its features (WHO, 2016). However, the WHO (2016) highlight these aspects have not been considered in the existing evidence that connects green spaces to health.

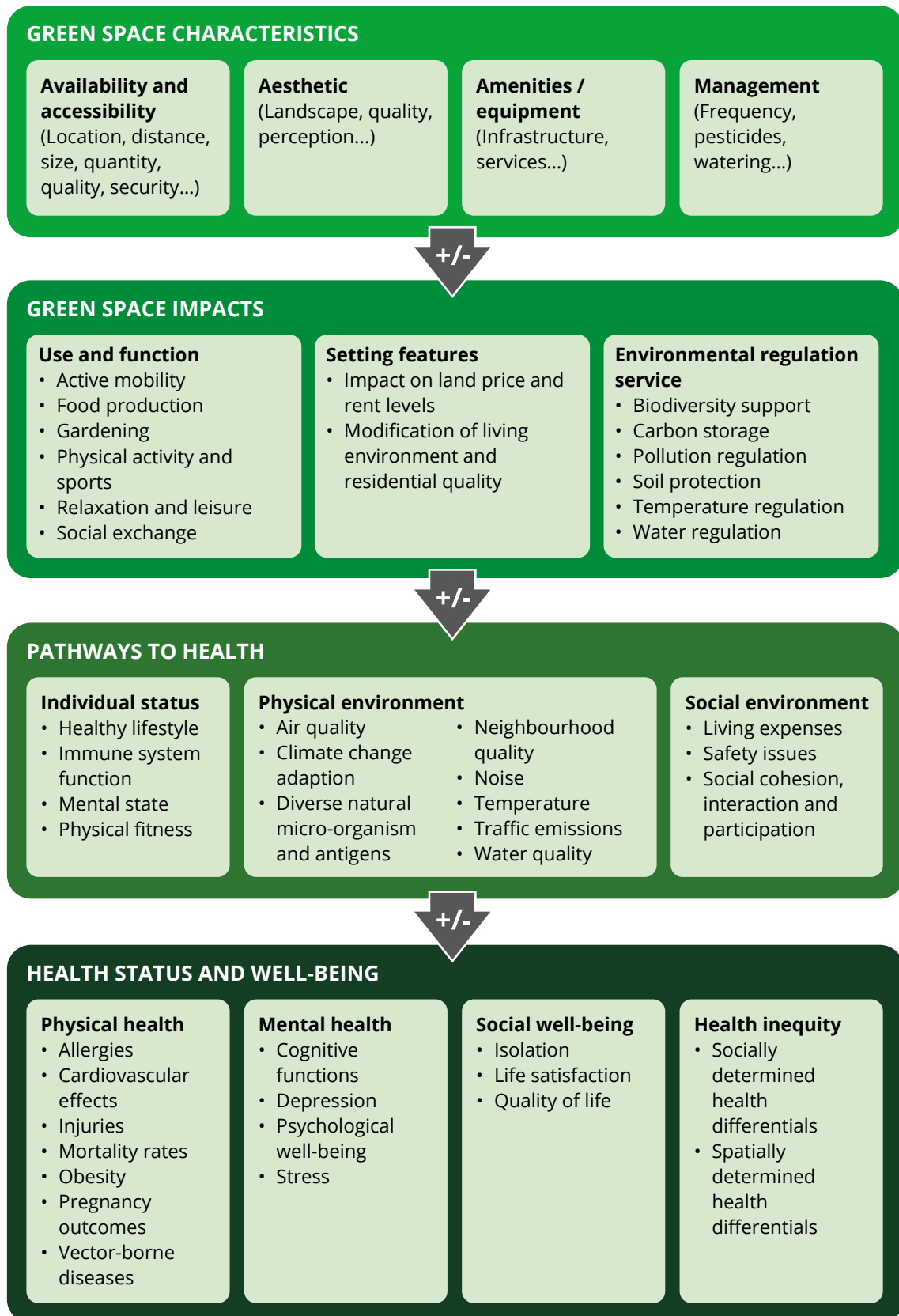
Overall, the successful provision of green spaces depends on local context and perspectives. For Belfast Healthy Cities, the greening the city programme focuses on delivering improvements to both physical and mental wellbeing, by creating mutually beneficial relationships between citizens and the urban environment. As such, for Belfast Healthy Cities, the definition of greening the city encompasses improving the provision and use of green and blue features and spaces to maximise the benefits to health and wellbeing, and reduce health inequalities across Belfast.

Why is greening the city important for health and wellbeing?

The WHO (2016) highlight some of the links between green space characteristics, green space impacts, pathways to health, health status and wellbeing. These connections are illustrated in the diagram on the next page.

The links between the four objectives of the greening the city programme and the evidence relating to improved health and wellbeing and reduced health inequalities are provided below; alongside relevant local and regional strategies.

Figure 2: A causal model of the impacts of urban green spaces on health and wellbeing (WHO, 2016)



Objective 1:

To promote inclusive green environments for all, increasing physical activity and mental wellbeing to reduce the risk of long term disease

The connections between the provision of green spaces and improvements to physical and mental wellbeing are supported by evidence, and are being realised by local and regional decision makers.

The WHO (2016) sets out the different pathways that link green spaces and improved physical and mental wellbeing. These are: improved relaxation and restoration, improved social capital, improved functioning of the immune system, enhanced physical activity, fitness and reduced obesity, reduced air pollution and urban heating effect, enhanced pro-environmental behaviours and optimised exposure to sunlight and improved sleep (WHO, 2016).



The WHO (2016) highlight specific health and wellbeing improvements that arise due to the provision and use of green spaces that have been supported by evidence are:

- Improved mental health, reduced stress, and improved cognitive function.
- Lower death rates, particularly from respiratory and cardiovascular diseases. This includes reduced risk of dying from stroke, and higher survival rates after ischemic stroke.
- Reduced prevalence of people with cardiovascular related illnesses. With evidence suggesting walking in a park has a greater effect on reducing heart rate and diastolic blood pressure than walking in a busy urban street.
- Reduced prevalence and chance of having type 2 diabetes.

The WHO (2016; 2017a) highlight in order for green space interventions to be most effective for improved health and wellbeing, a dual approach needs to be taken. This involves combining physical improvements to the urban environment, such as increasing the quantity of green spaces or improving quality and accessibility, with social engagement and participation that promotes the use of these spaces (2016; 2017a). The WHO (2017b) also set out this should occur alongside cross-sectoral collaboration, community engagement, and integrating green spaces into the whole urban planning process and wider green and blue infrastructure network.

Outdoor Recreation Northern Ireland (ORNI) (2021) undertook a survey to explore how people across Northern Ireland engage with the natural environment and the benefits they gain from it. The survey found the primary reason that motivated people to take part in outdoor recreation was a concern for their physical health (73%) (ORNI, 2021). This was followed by one or more factors relating to improving mental health and wellbeing (56%), and an opportunity to spend time in nature and/or enjoy scenery and wildlife (40%) (ORNI, 2021). In terms of outcomes, the majority of respondents reported visits to the outdoors made them feel calm, relaxed or revitalised (86%), or expressed pro-environment attitudes, with a third feeling closer to nature (32%) (ORNI, 2021).

The benefits of improving physical and mental health and wellbeing as a result of greening the city is also being realised by policy and decision makers. The WHO Brief for Action for Urban Green Spaces (2017b), Global Action Plan on Physical Activity (2018), and Manifesto for a Healthy and Green Recovery from COVID-19 (2021), highlight the need to strengthen access to good quality green spaces and networks for all.

This is reiterated within Belfast, as part of Belfast City Council's draft Local Development Plan (2018), A 'Bolder Vision' for Belfast (2019), Belfast Green and Blue Infrastructure Plan 2020 (2020a), and Belfast Open Spaces Strategy (2020b). The latter sets out a series of actions, including to focus on using green spaces to improve health and wellbeing, provide opportunities for informal and formal play, and encourage active recreation (BCC, 2020b). Most recently, the Executive Office (EO) (2021) has developed a COVID-19 Recovery Plan. This sets out Green Growth and Sustainability, and the Health of the Population are key focus areas to accelerate recovery in the short term, with both areas containing actions to further develop green infrastructure in towns and cities (EO, 2021). Similarly, RSPB (2020) highlighted the need to invest in nature to support healthier communities within 'A Green Recovery for Northern Ireland'.

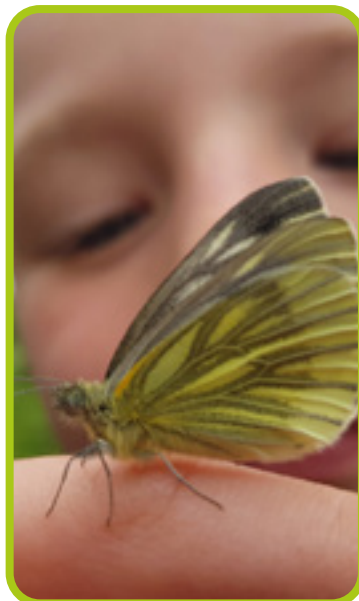
Objective 2:

To encourage the greening of public spaces to mitigate the consequences of climate change, support bio-diversity, and increase recognition that trees and other vegetation are critical urban infrastructures

There seems to be a clear recognition that green spaces, and all green and blue infrastructure are multi-functional and necessary to support the health and wellbeing of people.

The WHO (2016) highlights green spaces can regulate the environment to help address air pollution, climate change adaption, diversity of nature, neighbourhood quality and noise. This is further drawn out with a more recent emphasis from the WHO (2021) on the interconnections between nature, biodiversity and health. The WHO (2021) highlight nature provides the basic conditions for and helps protect human health. This involves managing air quality and mitigating extreme events (WHO, 2021). Conversely, the WHO (2021) also highlights that pressure on the natural environment can threaten the health of people, such as the increased frequency of natural disasters. As such, the WHO (2021) provides a series of recommendations for decision makers to take forward. These include to:

- Promote and enhance natural ecosystems.
- Embed nature based approaches into policy development.
- Build capacity to deliver integrated strategies for health and the environment (WHO, 2021).



Within Belfast, the important multi-functional benefits of green spaces and infrastructure are also being realised. The Belfast Green and Blue Infrastructure Plan 2020 (BCC, 2020a) sets an ambition to create a strategically planned, interconnected, integrated, well-designed and well-managed network of green and blue infrastructure. This includes supporting the development of multiple functions of the public realm, particularly as sustainable urban drainage systems, improving green and blue corridors and smaller assets, and enhancing biodiversity (BCC, 2020a). This is reiterated within the Belfast Open Spaces Strategy (BCC, 2020b), which seeks to follow key principles to increase resilience to climate change, and to protect and enhance the natural environment. The strategies are further supported by Belfast City Council's Climate Plan (2020c). This involves programmes to establish a sustainable district in the city, work with stakeholders to plant one million trees, promote Belfast as a playful city, and invest in public realm play spaces in the city centre (BCC, 2020c).

At a regional level, the need to prioritise the provision and enhancement of the multiple functions of public spaces is becoming increasingly recognised. Most prominent, is the need to provide a strategic urban drainage system to manage flood risk, which also provides multiple benefits to the community including walking and cycling routes (Department for Infrastructure, 2020). In addition, departments within the Northern Ireland Executive, such as the Department for Infrastructure (DfI), have been recognised as partner organisations seeking to make public land pollinator friendly (National Biodiversity Data Centre, 2021). The Department of Agriculture, Environment and Rural Affairs (DAERA) is also developing Northern Ireland's first 'all encompassing' draft Environment Strategy. This will include work to improve environmental quality, and will likely address air pollution, environmental noise, biodiversity, and land, water and neighbourhood quality (DAERA, 2019). There is also ongoing work to legislate a Climate Change Bill in Northern Ireland.



Objective 3:

To increase stakeholder collaboration and community engagement in the design of green space

There seems to be a clear recognition of the need for stakeholders and communities to collaboratively plan, design, deliver, manage, and evaluate the effectiveness of greening the city interventions.

The WHO (2017a; 2017b) highlights stakeholder collaboration and community engagement are important elements in realising the health and wellbeing benefits arising due to the provision of green spaces. This involves the creation of diverse, multi-disciplinary and cross-sector teams. The WHO (2017a; 2017b) identifies best practices for stakeholders include working together to develop a clear, integrated vision for green spaces, support key actors to advocate for improvements to these areas, secure leadership among decision-makers to deliver these interventions, and to work with academic institutions and others to aid the monitoring and evaluation of these projects.

Similarly, the WHO (2017a; 2017b) recognises best practice involves community engagement during the design, delivery and maintenance of green spaces. This can help to provide an understanding of the needs and demands of communities, including both users and non-users, and help support targeted interventions for specific groups of the population (WHO, 2017b). Suggestions include engaging early with user groups and local neighbourhood communities, providing adequate information and opportunities for participation, supporting local champions to advocate and promote the use of green spaces, and collaborate with local communities to run and maintain green spaces, such as urban gardening and allotments (WHO, 2017a; 2017b).



The importance of stakeholder collaboration and community engagement is recognised within Belfast. The Belfast Green and Blue Infrastructure Plan 2020 (BCC, 2020a) outlines an aim to work closely with communities including the involvement of representatives, groups and volunteers. Similarly, Belfast Open Spaces Strategy (BCC, 2020b) seeks to support and extend community involvement and engage users and non-users to help co-design and shape green space interventions.

Objective 4:

To promote green space interventions to reduce health inequalities

The effects of green spaces on people are not uniform. The WHO (2016) highlights there is evidence to suggest different health and wellbeing benefits for marginalised groups such as women, children, older adults, and deprived or minority groups.

- Providing women with access to serene green spaces have shown a more significant relationship to improved mental health and reduced stress when compared to the effects seen for men (WHO, 2016). Similarly, for pregnant women, studies have suggested positive associations between access to green spaces and reduced blood pressure and depression (WHO, 2016).
- For children, at the earliest stages of growth, during in utero development, the evidence suggests there is a positive link between a mother's exposure to green spaces and increased birth weights (WHO, 2016). In addition, providing children with increased exposure to green spaces can help stimulate cognitive, emotional, social and physical development (WHO, 2016). This can lead to improved health, alongside an increased ability for individuals to maintain healthier lifestyles in adulthood (WHO, 2016).
- For older adults, access to green space is also linked to stronger protective effects against sleep deficiencies and the promotion of social connections (WHO, 2016).
- For deprived and minority groups, the evidence suggests the strongest health benefits associated with access to green spaces are seen amongst these groups (WHO, 2016).





The differential health impacts of green space can be seen in Northern Ireland. Outdoor Recreation Northern Ireland (2021) highlight the benefits of being active in nature is unequal, with the frequency of participating in outdoor recreation reducing as poverty increases. A survey undertaken by the organisation indicates only 50% of those living in deprived neighbourhoods typically visit the outdoors once a week (ORNI, 2021). This is compared to 82% in the least deprived areas (ORNI, 2021). Similarly, the groups that took the fewest visits to outdoor spaces were those that identified as unemployed, without a car, in the least affluent social-economic groups, or with disabilities (ORNI, 2021).

In addition, the WHO (2021) recognises there tends to be an unfair distribution of environmental health risks alongside the unequal provision and use of green spaces, particularly amongst low income, minority and marginalised communities. Within the region, Outdoor Recreation Northern Ireland (2021) indicated women, unemployed individuals, those with disabilities, children and those in rural areas tended to have the lowest perceptions of green space quality and access, alongside the lowest ratings for local green spaces, paths and trails. Similarly, the survey highlights these groups, alongside women and older people also reported a reduction in time spent outdoors due to COVID-19 (ORNI, 2021).



Some of these links can be seen across Belfast. Belfast City Council (2020b) highlight there is a correlation between the areas that have the highest levels of health deprivation and the areas with the least access to parks and play areas. Similarly, the strategy also highlights an undersupply of play areas and other outdoors provisions such as multi-use games areas (BCC, 2020b).

This combination of the unfair distribution and use of green spaces, unequal exposure to environmental risks, and greater potential for marginalised groups to show more significant health improvements due to the provision and use of green spaces and green and blue infrastructure, suggests there is a need and an opportunity to focus on interventions within these communities. This is reiterated by the WHO's (2017b; 2018; 2020) continued emphasis on providing green spaces that are accessible to everyone, with a priority to reduce health inequalities.

At a regional level, there is some recognition of the need to ensure different groups have access to and use green spaces. The Children and Young People's Strategy 2020-2030 (NIE, 2021) seeks to provide opportunities for children and young people to access and interact with the natural environment at home, in school and in daily activities. Similarly, the draft New Sport and Physical Activity Strategy for Northern Ireland (DfC, 2021) seeks to provide everyone with access to inclusive, shared, welcoming and high quality sports and physical activity infrastructure. In addition, the Urban Village Initiative aims to develop thriving places where there has been a history of deprivation and community tension (EO, 2016a). Each of the urban village areas in Belfast contain strategic actions to connect with or incorporate green and blue infrastructure (EO, 2016a; 2016b; 2016c; 2016d).

At a local level, there is a recognition of the need to concentrate on green space interventions that reduce health inequalities in Belfast. The Belfast Open Spaces Strategy (BCC, 2020b) involves a series of actions to use open spaces to improve health and wellbeing. These include focusing on prioritising efforts in areas of health deprivation

and low open space accessibility; working together with the health and activity sectors to develop programmes in open spaces for at-risk groups; encouraging schools to use parks for active recreation, and to create opportunities for natural and informal play (BCC, 2020b). Belfast City Council's Green and Blue Infrastructure Plan 2020 (2020a) also highlights a desire to deliver well-designed and managed green and blue infrastructure, with spaces being welcoming, accessible, inclusive, easy to navigate, and safe.

Overall it is important to recognise the key links between health inequalities and the provision, access, and use of green spaces and green and blue infrastructure.

1. Green spaces and green and blue infrastructure tends to be distributed unfairly. With areas of higher health deprivation tending to have lower levels of green space provision and access. Some of these links can be seen across Belfast.
2. Marginalised groups, such as women, children, older adults, and deprived or minority groups, tend to use green spaces less. Decision makers may wish to involve these voices at the earliest stages of an initiative to understand why this may be the case, and what can be done to include and support these individuals.
3. Exposure to environmental risks to health, such as air pollution or climate change, and the associated poorer health outcomes, tends to be greater for marginalised groups.
4. The greatest direct and indirect benefits to health and wellbeing associated with the provision and use of green spaces and green and blue infrastructures, tend to be seen with marginalised groups.



Summary

Overall, the World Health Organization highlight there is evidence to demonstrate that greening the city interventions lead to improvements in physical and mental wellbeing and reduced health inequalities. In Belfast and Northern Ireland, decision makers recognise these links and are supporting policies and actions that provide, protect, enhance, and encourage the use of green spaces and green and blue infrastructure. This is occurring across different themes, such as promoting physical activity, improving physical and mental health and wellbeing, reducing health inequalities, addressing a changing climate, managing flood risk, reducing air pollution, protecting and enhancing biodiversity, encouraging green economic growth or recovering from the COVID-19 pandemic.

In order to realise the direct and indirect benefits to health and wellbeing, the evidence suggests a need to focus on ensuring everyone has equal access to, and is using, green spaces and green and blue features. With priority given to interventions that benefit marginalised groups, such as those that are socially or economically deprived, children, elderly people, those with disabilities, or women.

Looking forward, there are a number of strategies that positively support components of greening the city interventions in Belfast. These include Belfast Air Quality Action Plan (BCC, 2021a), Bolder Vision for Belfast (BCC, 2021b), Green Growth Strategy (DAERA, 2021a), Environment Strategy (DAERA, 2021b), and City Quays Gardens (Belfast Harbour, 2021).

The evidence provided within this paper will support stakeholders to justify and enhance the current and emerging strategies, policies and actions to utilise and enhance the provision and use of green and blue spaces and features, improve health and wellbeing, enhance community participation and empowerment and reduce health inequalities in Belfast.

To support this evidence paper a series of conversations between Belfast Healthy Cities and stakeholders took place to identify current activity in the area and to inform the way forward, a summary and analysis of these discussions can be found on Belfast Healthy Cities website: <https://www.belfasthealthycities.com/>

Appendix 1:

Summaries of Evidence

Evidence from the World Health Organization (WHO)

Urban green spaces and health: A review of the evidence (WHO, 2016)

The World Health Organization undertook a review of the evidence that links access to urban green spaces and health and wellbeing.

The paper recognises there is no universally accepted definition of urban green spaces, with regard to its health and wellbeing impacts. It highlights that definitions can include natural surfaces and settings, urban greenery such as street trees, and blue spaces and water elements.

The summary paper outlines 9 pathways that could link access to urban green spaces to improved health and wellbeing. These are:

1. Improved relaxation and restoration
2. Improved social capital
3. Improved functioning of the immune system
4. Enhanced physical activity, improved fitness, and reduced obesity
5. Noise buffering and production of natural sounds
6. Reduced air pollution
7. Reduction of the urban heat island effect
8. Enhanced pro-environmental behaviour
9. Optimised exposure to sunlight and improved sleep

Drawing together the findings from multiple research papers, the study summarises the demonstrable links between access to urban green spaces, the associated health benefits, and the degree to which these are supported by research and evidence. These are:

- Improved mental health, reduced stress, and improved cognitive function – these links were supported by relatively stronger evidence.
- Reduced cardiovascular morbidity - the evidence highlighted some correlation between low quantities of green space and elevated risk of circulatory disease. There also seems to be a significant association between a more intense use of green space and reduced risk of cardiovascular disease, with evidence suggesting walking in a park has a greater effect on reducing heart rate and diastolic blood pressure than walking in a busy urban street.
- Reduced prevalence of type 2 diabetes - the evidence suggests significant associations between neighbourhood greenness and reduced chances of having type 2 diabetes and reduced insulin resistance in adolescence.
- Reduced Mortality - evidence suggests areas with a higher proportion of green space are associated with reduced levels of mortality, particularly from respiratory and cardiovascular diseases. Studies have also suggested proximity to green space has been associated with reduced risk of stroke mortality, and higher survival rates after ischemic stroke.

In addition to these links, the paper highlighted the differential health benefits of green spaces for specific population groups.

- For women - the evidence has suggested a more significant relationship between access to serene green space and improved mental health, and lower rates of hypocortisolemia (an indicator of stress). For pregnant women, studies have also suggested positive associations between access to green space and reduced blood pressure, and reduced depression; with stronger effects of the latter seen in more disadvantaged groups.
- For children and adolescents - the evidence demonstrates exposure to green spaces during pregnancy has beneficial effects on in-utero development, including increased birth weights. Exposure to green space can also help stimulate cognitive, emotional, social, and physical development in children, and may lead to better health and the ability to maintain healthier lifestyles in adulthood.
- For older adults - access to green space is also linked to a stronger protective effect against sleep deficiencies, and promotion of social connections.
- For deprived subpopulations and minority groups – the evidence suggests health benefits associated with access to green space are the strongest amongst these groups.

The paper also highlighted some of the potential adverse health impacts associated with the provision of green space. These were increased exposure to air pollutants, risk of allergies and asthma, exposure to pesticides and herbicides, exposure to disease vectors and zoonotic infections, accidental injuries, excessive exposure to UV radiation, and vulnerability to crime. The evidence supporting these links was relatively scarcer, inconclusive, and/or the risk was reduced with improved design and maintenance of the urban green areas.

The paper also recognises the different ways that urban green spaces are measured. It sets out three defining features. Measurements of availability tend to focus on the quantity of neighbourhood green space. This could involve measuring how much live and green vegetation is present in an area, measuring the density of green space area per person or proportion of an area covered in green space, or measuring street trees and other streetscape greenery. Measurements of accessibility tend to include proximity to a green space, proportion of green space within a certain distance from residents, perceived distance to green spaces, and whether the green space is available for public use. The third measurement is usage. This can include the perspectives from population via surveys or from individuals via detailed assessments of how they use green spaces.

Urban Green Space Effectiveness and Health: A review of impacts and effectiveness (WHO, 2017a)

Building on the review of the evidence linking health impacts to access to urban green spaces, the WHO undertook another review to explore the most effective ways to deliver these benefits. This consisted of three components.

Section 1 provided a review of available research evidence on urban green space interventions and their impacts. This derived the following good practices:

- Early engagement with user groups and the local neighbourhood community helps to assess needs and demands (and to potentially inform evaluation procedures).
- Targeting interventions to specific population groups (such as children, elderly people, or people with different cultural backgrounds) or urban areas can be very relevant, but requires good knowledge on what specific community groups need.
- A multidisciplinary team is needed for adequate designing, planning, and managing of the urban green space interventions.
- Important to encourage a dual approach, which includes both physical changes to urban environment and promotional/engagement activities.
- As urban green spaces develop overtime, long-term perspectives are needed for both maintenance and management, and the respective funding.

Section 2 provides a review of case studies and lessons learnt from local green space intervention. This highlighted the need for:

- **A dual approach to the provision of green space** - the creation of new, or improvements in existing, green spaces should be accompanied by social changes such as activities and programmes that support the intervention. Examples were community participation in the design, implementation, and post-implementation phases; facilitated activities such as family days, festivals, and smaller-scale group activities such as guided walks which are particularly effective for engaging underrepresented groups; the promotion of improvements through park website and onsite signs.
- **Stakeholder collaboration** - the creation of diverse, multi-disciplinary, and cross-sectoral collaboration. Examples of how this could be achieved were to, work with the community to develop a clear vision for the green space that is supported by all stakeholders; support key actors within local organisations and sectors to advocate for improvements to green spaces; secure leadership among decision-makers for green space interventions; and work with academic institutions to aid the monitoring and evaluation of the intervention.
- **Community engagement** - adequate green space should be provided for all residents. Community engagement can inform decisions on the needs of the community and how best to design and deliver green spaces. The suggested steps were to engage with the intended users during the design and delivery phases, providing adequate information and opportunities to participate. Support local champions to advocate for and promote urban green spaces, and also engage with the local communities.
- **Place making and identity** - ensuring the design of green spaces acknowledges local identity, culture, and heritage, as well as opportunities for multiple activities.
- **Long term perspective** - continue promoting, developing and improving green spaces after it has been delivered.
- **Planning and design** - create many green spaces throughout the city and establish connectivity between them and with other points of interest. Avoid trees that are known to produce allergic pollen or block cross ventilation. Provide practical design of green spaces, with enhanced and visible access points, and use features such as resting areas, trash bins, and orientation signs. Consider wider ecosystem services, such as flood mitigation, improving air pollution, and adaption to climate change; as well as how the seasons affect the use of green space. And be diverse with the provision and rehabilitation of green spaces in urban areas.
- **Accessible** - urban green spaces should be physically accessible within a short distance from residents, have well-positioned entrances with safe and pleasant access routes, and be designed for universal access.

- **Maintenance** - this involves managing vegetation to ensure clear and safe walking routes, regular upkeep of bins and rubbish, and incorporate anti-vandalism and crime prevention measures.

Section 3 provided an overview of how to integrate health and health equity into the planning, implementation, and evaluation phases.

Urban Green Spaces: A brief for action (WHO, 2017b)

Building on previous evidence papers, and discussions between urban health and green space experts, the World Health Organization developed a brief for action to aid local decision-makers, practitioners, and civil society organisations in the design and delivery of urban green spaces.

Types and Pathways to improving Health and Wellbeing

The paper sets out eight different types of green space interventions. These were roadside greenery and vegetation barriers along streets and rail tracks, small urban green spaces such as gardens and pocket parks, green roofs and facades, parks and urban meadows, greenways and corridors, coastal, riverside and lakeside trails, recreational and urban gardening facilities and access to urban woodland and natural wildlife areas. The brief for action also provides a causal model of the impacts of urban green space on health and well-being, shown on page 12.

Planning Phase

During the planning phase, the paper suggests policymakers and practitioners should consider developing clear objectives of green spaces including the type, size, main functions, maintenance, and intended users. Similarly, providers of urban green space should make use of the local planning context. This involves maintaining connections to the long-term visions to green a city and region, and integrating green infrastructure into masterplans and wider infrastructure projects, such as those relating to housing, transport, or community and health facilities. In addition, the paper recommends decision-makers take a long-term and flexible approach to the provision and use of green spaces, and consider the provision of green space as public health and social investments.

Design Phase

During the design phase, the paper suggests policymakers and practitioners should place green spaces close to people. This involves the provision of street greenery, gardens, green trails, and public open space; with a suggested level of provision for 0.5-1 hectare's public green space within 300m of a home. These should also be designed for universal access. In addition, the paper recommends utilising opportunities in other sectors such as greening schools, businesses, shopping centres, housing estates, and private green areas. Similarly, the paper suggests green spaces should be designed in ways that plan for a diversity of typologies. This involves the consideration of different sizes, levels of biodiversity, and the number of activities. The paper also recommends encouraging designs that are simple and can be maintained.

Stakeholder collaboration and community engagement

The paper suggests using green space to target specific user groups. This could be achieved through consideration of local data outlining the quantity and quality of green spaces throughout the city and in disadvantaged areas, and targeting the functions of green space towards different user groups. In addition, the paper highlights the importance of ensuring community participation is integrated in the planning, design, and maintenances of green spaces, and wider collaboration with stakeholders and other sectors is undertaken.

The paper also recommends that all urban green spaces should apply a dual approach, with the provision and improvement of green spaces being accompanied by the promotion of social activities that encourage the use of these spaces. This can include promotion of urban green spaces through websites or brochures; facilitated activities and public events; small-scale group activities such as guided walks and outdoor gyms; promoting the use of green spaces by local champions and celebrities; and collaborating with local communities to run and maintain green spaces, such as urban gardening allotments.

Monitoring and Evaluation

The paper provides best practice advice to monitor and evaluate urban green space interventions to assess whether the intended benefits are delivered, and how certain population groups have been affected. Suggestions include giving consideration to the monitoring of impacts at the start of the project, assessing the impacts on both users and non-users, using a combination of quantitative and qualitative measurements, and considering environmental, ecological, lifestyle, and equity impacts.

Managing potential challenges

The paper offers guidance to best prevent and manage the potential challenges that may arise during the design and delivery of urban green spaces. Advice is provided on how to manage potential conflicts between users, minimise degradation of urban green space due to overuse, address community dissatisfaction with urban green space features, and how to consider safety issues, gentrification, increased health risks associated with green spaces, and uncertain or reduced budgets for maintenance.

[Global Action Plan on Physical Activity 2018-2030: More Active People for a Healthier World \(WHO, 2018\)](#)

In 2018, the World Health Organization set out its vision for a more healthy and active world, with a mission to:

'Ensure that all people have access to safe and enabling environments and to diverse opportunities to be physically active in their daily lives, as a means of improving individual and community health and contributing to the social, cultural and economic development of all nations.'

To help deliver this mission, the WHO recommends 20 evidence-based policy actions to take forward. This includes a policy action to:

'strengthen access to good-quality public and green open spaces, green networks, recreational spaces (including river and coastal areas) and sports amenities by all people, of all ages and of diverse abilities in urban, peri-urban and rural communities, ensuring design is consistent with these principles of safe, universal, age-friendly and equitable access with a priority being to reduce inequalities'

WHO Manifesto for a Healthy and Green Recovery from COVID-19 (WHO, 2020)

Reiterating the importance of access to green space in the context of a healthy and green recovery from COVID-19, the WHO set out another action to:

'improve access to good-quality public and green open spaces for people of all ages and abilities including accessible and safe play areas and recreational spaces for children and young people'.

Nature, Biodiversity and Health: an overview of interconnections (WHO, 2021)

Most recently, in 2021, the WHO provided an overview of the connections between natural environments, biodiversity, and human health. The report sets out three key messages. Firstly, nature provides the basic conditions for human health. Examples include purifying water, regulating air quality, and providing inspiration and settings for healthy lifestyles and social contact. Secondly, the natural environment protects human health, such as helping to mitigate extreme events and limiting human exposure to pathogens. Finally, pressure on natural environments threatens human health, including increased frequencies of natural disasters, changes to food systems, and conflict and displacement of people, with consequential health impacts.

The report goes on to highlight the uneven distribution of access to nature and ecosystem services. It states exposure to environmental health risks is typically disproportionately high among low-income, minority, and marginalised communities, and similarly, the opportunities for health benefits such as access to nature and the associated ecosystem services, are also distributed unfairly.

In addition, the report recognises the importance of having access to natural, high-quality green and blue spaces for improving physical and mental well-being. It highlights exposure to green spaces has been associated with indicators of good health such as lower cortisol and blood pressure, better self-reported health, lower risks of specific health conditions, such as pre-term birth, low birth weight, and type 2 diabetes, and reduced risk of death from all causes. In particular, increased exposure and access to nature are associated with various indicators of good physical and mental health, promotion and support of physically active lifestyles, reductions in the risk of death, and higher levels of life satisfaction.

The report concluded with a series of priority areas and actions for decision-makers to take forward. Of particular relevance are the needs to:

- Protect biodiversity and natural ecosystems.
- Embed nature-based approaches into policy development and making this the norm.
- Take action across sectors in line with the one health, and planetary health approaches.
- Build capacity at all levels to deliver integrated health and environment strategies.
- Seek no regret and co-benefit solutions for social and environmental challenges. And,
- Educate people of all ages on the links between nature and health, and promotion of sustainable behaviours.

Outdoor recreation: People, Nature and Health (Outdoor Recreation Northern Ireland, 2021)

The paper aims to provide systematic and population wide research on how people in Northern Ireland engage with the natural environment, the benefits they gain from it, and the barriers they face trying to access it. The research found that:

- Concerns for physical health was the primary motivation for taking part in outdoor recreation amongst respondents (approximately 73%).
- There was a clear link between mental health and wellbeing and engagement with the outdoors. 56 % of respondents stated they were motivated to visit the outdoors due to one or more factors relating to improving mental health and well-being. Similarly, 86 % of respondents reported visits taken to the outdoors made them feel calm, relaxed and revitalised. There is also a link between people walking more frequently and higher levels of life satisfaction.
- A greater care and concern for the natural environment is seen for individuals that visit the outdoors more. Approximately 40% of respondents were motivated to visit the outdoors due to opportunities to spend time in nature and/or enjoy scenery and wildlife. In a third of visits, respondents, particularly younger children, felt closer to nature as a result of the outdoor experience.
- The benefits of being active in nature are not enjoyed equally. The frequency of participation in outdoor recreation decreases as levels of deprivation increase. Only 50% of those living in the most deprived neighbourhoods typically took

visits at least once a week, compared to 82% of those in the least deprived areas. Similarly, respondents that identified as unemployed, with no car, in the least affluent socio-economic groups and with disabilities took the fewest visits to outdoor spaces. These groups, alongside women and older people, also reported a reduction in the time spent outdoors due to COVID-19.

- The provision of green space and off road trails is also unequal. 29% of people stated they do not have green spaces within easy walking distance. With women, unemployed people, people with disabilities, primary age children and residents in rural areas providing the lowest rating for local green spaces, paths and trails, including lowest perceptions of quality and accessibility.
- Respondents highlighted the most preferred improvements to green space and off road trails are, more control of dogs and dog fouling, more dedicated cycle routes, more paths and trails away from roads, improved access and rights of way, better facilities and maintenance on paths, and more access to open green spaces and parks.

Strategic Policies and Plans

Belfast Agenda (BCC, 2017)

The Belfast community plan highlights the need to maximise the benefit of Belfast's natural and built environment. This involves a commitment to work strategically to maximise the benefits of the city's open and green spaces, rivers, and hills to achieve better health and well-being outcomes, and working with partners to deliver an open space strategy and neighbourhood attractiveness programme.

Belfast Local Development Plan: Draft Plan Strategy 2035 (BCC, 2018)

The Local Development Plan provides a spatial representation of the Belfast Agenda and sets out the strategic and operational approach as to how Belfast can achieve sustainable development up to 2035.

Of particular relevance are the policies contained within the chapter 'Promoting a Green and Active Place'. These policies seek to protect and enhance the city's green and blue infrastructure network, including open spaces and playing pitches. Support the provision of new and well-designed open spaces, and sports and outdoor recreation facilities. Ensure new developments contribute to the provision of onsite open space. And, promote the protection and enhancement of natural heritage, biodiversity, landscapes and trees, including the provision of net gains.

Additional policies are also contained across the chapters in the draft strategy. Those supporting the provision and enhancement of green and blue infrastructures include:

- **Policy DES1 Principles of Urban Design.** This seeks to support new developments by creating adaptable and well connected public realm that supports welcoming pedestrian environments; fostering inclusive design that promotes accessibility, supports safe communities and the natural surveillance of public spaces to reduce the opportunity for crime and anti-social behaviour; promoting healthy environments and sustainable development that support and encourage walking, cycling and access to public transport that maximises connections to the city's network of green and blue infrastructure
- **Policy CGR2 Meanwhile Uses in Interface Areas.** This seeks to encourage normalisation of contested community spaces at interface locations, stating planning permission will be granted for shared meanwhile uses such as community environmental projects including passive green open space, community gardens, allotments, community woodlands, energy crops, and rain gardens.
- **Policy ENV3 Adapting to Environmental Change.** This highlights planning permission will be granted for development that incorporates measures to adapt to environmental change. This includes protecting and enhancing a green and blue infrastructure network in the city, including enhancing biodiversity and ecosystem services.
- **Policy ENV5 Sustainable Drainage System.** This recommends developers consider green roofs, open areas, ponds, wetland, trees, and landscape as sustainable drainage measures to assist in minimising flood risk.

[A Bolder Vision for Belfast: reimagining the Centre \(BCC, 2019\)](#)

The Bolder Vision for Belfast sets out a vision to transform the centre of the city by 2035. It has been collectively developed by Belfast City Council, the Department for Infrastructure, and the Department for Communities. The vision includes a principle to provide lively, safe and green streets that link shared spaces and promotes resilience and built heritage.

Belfast Green and Blue Infrastructure Plan 2020 (BCC, 2020a)

The Plan sets out a 15 year vision for Belfast to have green and blue infrastructure that is strategically planned to enhance ecosystem services that benefits everyone living, working in and visiting the city.

It defines green infrastructure as a wide range of natural and semi natural land cover and blue infrastructure as water bodies. Typologies of green and blue infrastructures are uplands, agricultural land, amenity green space, parks, playing fields and recreation space, woodlands and trees, gardens, greenways, sustainable urban drainage systems, waterways and water bodies, and coastal waters.

Supporting the delivery of this mission are five guiding principles.

1. Enhancing biodiversity.

This involves increasing the current supply of environmental data, protecting important sites via planning policies, seeking a biodiversity net gain in new developments, creating and enhancing habitats in parks and amenity spaces, and de-cultivating waterways.

2. A planned and interconnected green and blue infrastructure network.

This involves seeking to improve smaller green and blue assets and rethinking the contributions of urbanised public realms. Utilising the River Lagan, rejuvenating the waterfront, and opening up smaller waterways. Developing strategic green and blue connections. The North to South route involves integrating the Lagan Valley, the Lagan, the Lough, and the city centre. The East to West route seeks to extend the existing greenway network to better connect the Belfast and Castlereagh Hills via the city centre. These will be supported by the extension of greenway routes that provide opportunities for walking and cycling to support active travel across the city, and the safe movement of biodiversity.

3. Integrate Green and Blue Infrastructure into the urban environment.

This involves supporting the development of a multiple functions public realm, particularly as a sustainable urban drainage system. Opportunities for integrating green and blue infrastructure into the public realms are to green streets, green the city centre along the river corridor and a tree lined boulevard along Great Victoria Street and Dunbar Link, open up water ways, manage parks, playing fields and golf courses, encourage permeable surfaces in car parks, introduce planning policies supporting the provision of green space, and manage the Uplands. Opportunities for building integrated green and blue infrastructure are to incorporate these into the design of new developments, such as green roofs and walls, greening air quality management areas, and greening front and back gardens.

4. Well designed and managed green and blue infrastructure.

These would aim to deliver multiple societal benefits of place making, social cohesions and safety, attracting investment, promoting health and wellbeing, and supporting tourism and visitor spending. These spaces should be welcoming, accessible and inclusive, easy to navigate, encourage safety by design, promote native and species rich vegetation, reflect local contexts, be easily manageable and resource efficient, integrate play and health, and be multifunctional and adaptable.

5. Appropriately funded.

This involves drawing support from the Physical Investment Programme, developer contributions, commercial arrangements, independent funding bodies, cross departmental funding, and payment for ecosystem services.

To aid in the delivery of the plan, the priorities are to review and create supporting policies and strategies, including an Open Space Strategy, Local Biodiversity Action Plan and a Local Development Plan. Create plans for each of the working group areas. Work closely with communities including community representatives, groups and volunteers, and prepare for the long term changes such as population growth and environmental change.

Belfast Open Spaces Strategy (BCC, 2020b)

The strategy sets out the provision of open space across the city. This is considered in terms of the different types, supply and distribution, accessibility, ownership and quality.

It defines open spaces as land where the primary function is related to its community/ amenity value, offering opportunities for play, recreation and sports in either public or private ownership. Open spaces typologies are parks, playing fields, play areas, amenity open space, civic space, growing spaces, and cemeteries. The strategy also acknowledges the role of greenways.

The paper highlights open spaces are of relatively good quality. In terms of the quantity of open space per person, the strategy indicates Belfast has a sufficient supply of parks, playing fields, and amenity green space, and an undersupply of play areas and other outdoor provision, such as multi-use games areas; as well as a need to meet additional demands for open space, due to population growth.

The strategy sets out a vision by 2035 for Belfast to have a well-connected network of high quality open spaces that are recognised for the value and benefits they provide to everyone who lives, works in and visits the city. To achieve this, the strategy is supported by seven guiding principles.

1. Provide welcoming shared spaces.

This involves protecting and improving existing open spaces via the Local Development Plan, leveraging growth and development, and securing other sources of investment funding. Targeting areas of inaccessibility by providing new, and improving access to existing, open spaces in and around these areas. Creating temporary or meanwhile uses, including pocket parks across the city. Building stronger communities and increasing confidence to use and develop shared spaces and services; and improving safety and security.

2. Improve connectivity.

This involves better connecting open spaces. Reducing interface barriers by supporting the removal of peace lines to release land for open space development. Improving access to existing parks and play areas. Enhancing and extending the greenway network that segregates and strengthens walking and cycling routes. Improving connections to the countryside, public access and wildlife provision and connections.

3. Improve health and wellbeing.

This involves targeting areas which have the highest health deprivation and lowest access to parks and play areas. Providing and investing in outdoor sports facilities. Promoting use of open spaces and programmes that support this. Encouraging partnerships with the health sector and others to create active spaces and promote activities for at risk groups. Supporting growing activities in local neighbourhoods and communities, and using open space and vegetation to reduce air pollution.

This is supported by a series of actions underway or planned between 2019 and 2023. These are to:

- **Develop an ongoing programme of activity focused on using open spaces to improve health and wellbeing, prioritising efforts in areas of health deprivation with the lowest open space accessibility.**
- **Identify and create opportunities for natural and informal play.**
- **Continue to encourage passive recreation by providing appropriate facilities across the open space network, such as seating.**
- **Continue to support investment in sports facilities.**
- **Continue to encourage active recreation in open spaces, such as walking, running, cycling, outdoors gyms, growing food, and outdoor play.**
- **Encourage schools to use parks for active recreation and provide greater public access to sports facilities in schools.**
- **Continue to work with the health and activity sector to develop programmes in open spaces for at risk groups.**
- **Target urban greening to help improve air quality in the city.**

4. Support place making and enhance the built environment.

This involves greening the city centre with a tree lined boulevard and supporting three Business Improvement Districts. Improving the image of derelict and vacant spaces by seeking opportunities, promoting active and animated open spaces, and valuing heritage and historic features.

5. Increase resilience to climate change.

This involves integrating drainage relief into urban design, providing storm water storage, incorporating change management practices and behaviours, and protection from extreme weather events.

6. Protect and enhance the natural environment.

This involves protecting and enhancing areas of ecological importance. Enhancing habitats across the open space network. Enabling greening of vacant land. Managing habitats for biodiversity value. And supporting the interpretation, exploration and learning of nature with children and families; particularly as children and young people have less of a connection with nature, resulting in reduced physical and mental wellbeing, such as 'nature deficit disorder'.

7. Be celebrated and support learning.

This involves creating 'smart' open spaces. Supporting and extending community involvement and engaging users and non-users to help co-design and shape interventions. Encouraging outdoor learning, working with partners and the education sector to encourage use of parks and open spaces as outdoor classrooms. Promoting local value and heritage, and develop volunteering and training programs that promote lifelong learning.

Belfast Resilience Ambitions: A climate plan for Belfast (BCC, 2020c)

The climate plan outlines the goal to transition Belfast to an inclusive, net-zero emissions, climate resilience economy in a generation. To deliver this vision, the Plan sets out 30 programmes to be delivered by city partners across the next ten years. Of most relevance are programmes to:

- Establish a sustainable district in Belfast - including new approaches to public realm that reduces car dependency and increases cycling and walking and improves air quality.
- One million trees - working with public, private and voluntary sectors to plant one million trees in Belfast by 2035.
- Sustainability and food – examining climate impacts and opportunities for healthy and sustainable foods.
- Quality of urban childhood – putting in place a series of indicators to measure the quality of urban childhood, including time spent outdoors, contact with nature, and independent movement.
- A playful city - working to establish Belfast as a ‘playful city’ by 2023.
- City centre public realm play spaces – investing in a network of permanent and temporary city centre public realm play spaces.
- Sustainable drainage – via the development and delivery of a sustainable drainage infrastructure plan.
- Sustainable tourism –working towards a goal for Belfast to become a more regenerative, flourishing and sustainable place to visit, meet and thrive.

National Strategies

[Environment Strategy for Northern Ireland: Public Discussion Document \(DAERA, 2019\)](#)

The draft document recognises Northern Ireland has never had an all-encompassing environment strategy and that there is now a need to develop one, due to environmental challenges, climate change, Brexit, and knowledge gaps.

The draft strategy sets out four themes for the department to consider working towards. Environmental Engagement, Environmental Prosperity, Environmental Efficiencies and Environmental Quality. The latter theme is likely to involve improving air quality, environmental noise, biodiversity, land and water quality, and neighbourhood quality.

This is intended to become Northern Ireland's first Environment Improvement Plan, and be in line with the provisions set out in the Environment Bill that will extend to Northern Ireland.

[Environmental Plans, Principles and Governance for Northern Ireland Public Discussion Document \(DAERA, 2020\)](#)

The Environment Bill seeks to make provisions for targets, plans and policies to improve the natural environment across the United Kingdom. Some of the provisions have an option to extend to Northern Ireland. These options include to extend the jurisdiction of an Office for Environmental Protection to Northern Ireland, embed environmental principles into policy decisions of NI Departments, and prepare and publish environmental improvement plans.

The document sets out the Northern Ireland Assembly will continue to develop a final version of the Environment Strategy for Northern Ireland, and a set of draft Environmental Principles for the region.

[Living with Water in Belfast Plan \(DfI, 2021\)](#)

The document sets out the strategic drainage infrastructure plan for the Greater Belfast Area. The plan recognises the importance of green and blue infrastructure in managing surface water flood risk, as well as multiple benefits to communities, such as routes for walking and cycling. The provision of green and blue Infrastructure is considered an integral part of the urban drainage system that should be protected and enhanced.

All-Ireland Pollinator Plan 2021-2025 (National Biodiversity Data Centre, 2021)

The plan sets out six objectives to bring about landscapes where pollinators can flourish across Ireland and Northern Ireland. These are to make farmland, public land and private land pollinator friendly, support honey bees and conserve rare pollinators and strategically coordinate the plan.

Children and Young People Strategy 2020-2030 (Northern Ireland Executive, 2021)

The strategy highlights the importance for young people and children to have an understanding of, and respect for, the environment, access to the natural environment, and live in environments which promote their health and wellbeing. This involves a commitment to:

'Seek to build on the interest that children and young people already have in the environment and provide opportunities for them to access and interact with the natural environment at home, in school and in daily activities; and work to improve and enhance the quality of the environments in which they live, learn and play.'

A New Sport and Physical Activity Strategy for Northern Ireland, Consultation Document (Department for Communities, 2021)

The draft strategy aims to provide a flexible strategic framework for cross departmental promotion of participation and excellence in sport and physical activity.

Relevant goals include:

- Improved physical and mental health and wellbeing.
- Sports and physical activity to be inclusive, safe, diverse, shared, and offers equality of opportunity to participate for all.
- Children and young people are given the best start in life through sport and physical activity opportunities.
- Everyone to have access to inclusive, shared, welcoming and high quality sports and physical activity infrastructure.
- Increased awareness of the benefits of participating in sport and physical activities, with an association positive attitude and behavioural change.
- An improved evidence base supported by enhanced research about the benefits of sport and physical activity to local communities.

Urban Villages Initiative (Executive Office, 2016a; 2016b; 2016c; 2016d)

The initiative is designed to improve good relation outcomes and develop thriving places where there has been a history of deprivation and community tension. It aims to foster positive community identities, build community capacity, and improve the physical environment. There are four urban village initiatives in Belfast, each with connections to incorporation of green and blue infrastructures.

EastSide Urban Village (East Belfast)

Strategic actions for the East Side Urban Village area include to nurture community growing, planting along Newtownards road. Encourage healthy and resilient communities. Optimise local green spaces such as the Connswater Community Greenway. Transform vacant and derelict spaces. Revitalise and introduce civic spaces. Continue to enhance the public realm. Develop and promote positive cultural identities. Sustain generational cross and intra community programmes, and address the challenges of interfaces.

Ardoyne and Marrowbone (North Belfast)

Strategic actions for the Ardoyne and Marrowbone Urban Village include to create positive places. Improve access to surrounding sports and leisure facilities. Encourage stronger physical and mental corridors. Addressing the challenges of interfaces. Make places feel and be safer. Additional parks and trees, and greater health and wellbeing.

Sandy Row, Donegall Pass and the Markets (South Belfast)

Strategic actions for the Sandy Row, Donegall Pass and the Markets Urban Village include to enhance and upgrade the area. Improve and increase green open spaces and linking them together. Addressing imbalance of traffic and parking impacts on communities. And, improving health, happiness and well-being.

Colin Urban Village (West Belfast)

Strategic actions for the Colin Urban Village include to align and improve services in the heart of Colin such as a community hub. Provide high quality parks, streets and squares that promote year round events in the area. Create indoor and outdoor spaces where young people are welcome. Promote meanwhile uses. Encourage walking and cycling and getting active. Improve the mental health and wellbeing of residents, and encouraging more growing spaces.

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