



# City Quays Gardens, Belfast Harbour One Planet Action Plan

March 2024

Rev 02





1 Introduction		3 Sustainability at City Quays Gardens	
1.1 Overview	4	3.1 Health and happiness	17
1.2 Bioregional and One Planet Living	5	3.2 Equity and local economy	19
1.3 Site location and description	6	3.3 Culture and community	21
1.4 Action Planning process and overview of needs analysis	8	3.4 Land and nature	23
		3.5 Sustainable water	25
2 Relevant planning policy and frameworks		3.6 Local and sustainable food	27
2.1 Relevant local policy	10	3.7 Travel and transport	29
2.2 Relevant frameworks	13	3.8 Materials and products	31
		3.9 Zero waste	33
		3.10 Zero carbon energy	35
		4 Overview of Sustainability Outcomes	37

# 1. Introduction



# 1.1 Overview

This One Planet Action Plan has been prepared by Bioregional, a purpose-led sustainability consultancy and charity with headquarters at County Hall in London. Bioregional has been advising on sustainable development across the world for almost 30 years.

Bioregional uses the One Planet Living framework and its ten principles to develop and communicate the sustainability objectives of development proposals, and measures proposed by the design and operational teams to meet these objectives.

Belfast Harbour wants to deliver a unique and flagship project for Northern Ireland (NI), and more importantly, one that will be delivered within the ecological boundaries of the one planet we share.

Bioregional has been appointed to lead the creation of a One Planet Action Plan that will be applied during procurement and construction (implementation) phases. The aspiration is that this action plan will be peer-reviewed with the goal of achieving One Planet Living [leadership recognition](#).

Sustainability considerations will extend throughout the design, construction and handover phases and as such may allow for modifications and changes in design where appropriate and practical.

The Plan will be used to communicate the sustainability aspirations both internally and externally and will showcase a truly sustainable project for the City of Belfast.

*“This development will transform the public space around City Quays to create a vibrant space that all communities can enjoy, and making Belfast Harbour an attractive place to live, work, visit and invest.*

*As a green developer, we want to ensure that City Quays Gardens considers the economic, social and environmental impacts and opportunities, from initial concept right through how it is managed and operated.”*

- Danielle McCluskey, Chartered Property Surveyor



[BedZED](#) eco-village in South London, a joint Bioregional and Peabody project





# 1.2 Bioregional and One Planet Living®

	Health & happiness	Encourage active, social, meaningful lives to promote good health and wellbeing
	Equity & local economy	Creating safe, equitable places to live and work which support local prosperity and international fair trade
	Culture & community	Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living
	Land & nature	Protecting and restoring land for the benefit of people and wildlife
	Sustainable Water	Using water efficiently, protecting local water resources and reducing flooding and drought
	Local & sustainable food	Promoting sustainable humane farming and healthy diets high in local, seasonal organic food and vegetable protein
	Travel & transport	Reducing the need to travel, encouraging walking, cycling and low carbon transport
	Materials & products	Using materials from sustainable sources and promoting products which help people reduce consumption
	Zero waste	Reducing consumption, re-using and recycling to achieve zero waste and zero pollution
	Zero carbon energy	Making buildings and manufacturing energy efficient and supplying all energy with renewables

Bioregional champions One Planet Living, which is a vision of the world where people live happy, healthy lifestyles within a fair share of the earth’s resources.

One Planet Living is rooted in ecological footprinting, which measures the consumption of natural resources that is required to meet humanity’s demands for goods and services and to absorb wastes and pollution, expressed in global hectares (gha) of land and sea.

Humanity’s collective global footprint now exceeds the world’s capacity to annually regenerate resources, by about 70%. If our demands on the planet continue at today’s rate, by 2030 we will need the equivalent of two planets to maintain our lifestyles. If everyone in the world lived like the average European, we would need three planets to support us.

In 2003, Bioregional and WWF developed the concept and framework of One Planet Living. One Planet Living is a set of 10 principles which can be used to plan, deliver and manage development that is sustainable according to the environmental limits of the planet and offers a good quality of life. The ten principles are designed to be accessible, user-friendly, and adaptable for application at a variety of different levels and sectors.

One Planet Living has been applied to roughly \$30 billion of development across the world. Bioregional has created Goals and Guidance for One Planet Communities, which advises developers looking to deliver schemes that enable residents to live One Planet lifestyles. The Goals and Guidance cover the design, construction and operation.

Bioregional maintains a network of One Planet Communities, developments which have successfully applied the Goals and Guidance, adopted the principles of One Planet Living, and published an action plan which has been peer reviewed and found to be a leader in its field or region. One Planet Communities aim to enable residents to live within a fair share of the earth’s resources (currently no more than 1.6gha per capita).

Figure 1.0 to the left outlines the overall goals of One Planet Communities, principle by principle. However, there is no one set way to deliver a One Planet Community. The Goals and Guidance encourage development teams to set sustainability objectives which are bespoke to the scheme’s location and context. These objectives arise from an evaluation of local ecological footprints and a thorough examination of environmental, social and economic needs at local, regional and global levels.

The development team has set unique sustainability objectives for the scheme, and measures to achieve these objectives are described in **section 3**.



## 1.3 Site location and description

City Quays Gardens (CQG) is the public space within the wider redevelopment of the City Quays area of the harbour. City Quays will include over 123,000 m<sup>2</sup> of office space, alongside small-scale retail, at least one café/restaurant, a 188-bed hotel, 120 homes, and open space. Several features are proposed outside the redline of this application including changes to some highways/junctions and an auditorium/events space.

CQG itself is a redevelopment of car parking and underused space into a public area that is proposed to eventually incorporate green space, foot and bike circulation routes, tourism, maritime leisure, play, dining, and outdoor office pods (in later phases).

Belfast Harbour Commissioners has set the redevelopment objectives, and the designs are being led by Gillespies with support from Studio Octopi, Turley, WH Stephens, AECOM, Consarc Design, Doran, StudioFractal, Semple McKillop and RPS Group.

Bioregional was appointed to create a One Planet Action Plan in order to identify and articulate how the City Quay Gardens project (phase one of four) can respond to the social, environmental and economic needs at a local, regional and planetary level and thus be in line with the goals of the 10 principles of the [One Planet Living](#) framework.

The project will undergo a formal review with a view to obtain leadership recognition in due course.



*Aerial image of City Quays*



## 1.3 Site location and description (continued...)

Influenced by site ownership, the City Quays Gardens project will be delivered within a phased sustainable development programme with each phase comprising a separate planning application.

### City Quays Gardens

City Quays Gardens is the first of multiple phases. City Quays Gardens will wrap around the listed Harbour Office and extend along Corporation Square. This new parkland will provide a richly planted and bio-diverse green setting to existing and planned commercial and historic buildings and will provide places for rest, relaxation and retreat.

City Quays Gardens comprises:

- Extensive planting and greening;
- Events lawns, amphitheatre style seating;
- Leisure & outdoor work spaces;
- Improved pedestrian & cycle connections & cycle parking, vehicle access minimised;
- Public Art Trail, Iconic ‘Nest’ to create landmark gateway;
- Feature lighting;
- A SMART place to work and relax with public 5G coverage and, in later phases, WiFi; and
- Relocation of listed Belfast Harbour Office railings.



*Concept Aerial views looking south towards the city centre*



## 1.4 Action Planning process and overview of needs analysis

The following process was followed and to develop this One Planet Action Plan. The aim is to create a holistic sustainability approach for the City Quays Gardens project. However, the needs analysis is relevant to all phases, and some of the resulting objectives and actions can also be applied to future phases.

### Review of sustainability needs and issues in context

Bioregional firstly reviewed a wide range of publicly available data to understand the needs and issues relevant to sustainability at this site. This includes local and regional data points ranging from public health, transport, water and energy, to local and regional carbon inventory breakdowns, biodiversity priorities, and inequalities. This also involves a review of key relevant policies and strategies for Belfast. We used the ten principles of One Planet Living to structure this exercise, to ensure a holistic analysis.

Where data at different scales was available, we compared the local performance to the regional and national performance to see where Belfast or the local neighbourhood is already doing well, and where it falls behind. We also compared local patterns to the global ecological footprint that the planet can sustain. The aim is to ensure that objectives and solutions relate to real issues in this context, not generic solutions that may not be appropriate locally. A summary of some of the key needs is as follows.

- **Decarbonise transport and energy:** Belfast, the UK and the planet are fast running out of 'carbon budget' that can be emitted to avoid catastrophic climate change.
- Belfast lags behind other NI regions in renewable energy per capita or household
- Transport emits 25% of Belfast's direct carbon dioxide emissions (NI-wide: 28%)
- Belfast has a great rate of walking for transport, and also has NI's highest rate of cycling (albeit still low) – but high rates of traffic injuries inhibits more cycling.
- **Enable cleaner air, more exercise, tranquillity, social interaction and jobs** for all ages, incomes and communities:
- The site lies in one of NI's 6% most deprived neighbourhoods – for reasons of health (including mental health), employment and income
- While 'younger' than NI, Belfast has an ageing population (implying future higher rates of disability). This is one of Belfast's local areas most at risk of loneliness
- Nearby roads are harming air quality, and lung problems are a main cause of death
- CQG lies <1 mile from a Peace Wall and should take care to ensure inclusivity.
- **Support wildlife onsite and nearby:** There is a global biodiversity emergency with dramatic falls in wildlife. This site is upstream from coastal areas designated as SSSI, Ramsar or SPA. It must be careful not to pollute these with litter, emissions, or light.

### Review of existing design proposals to identify gaps

During our needs analysis, we considered what a scheme of this type might be able to achieve towards these needs. We then reviewed the proposals to date to identify where they already perform well, where there might be problems or opportunities to create more sustainable outcomes with this scheme. This covers:

- Stage 2 Report, October 2020 (especially section 5.1 Clarendon Gardens, but also other sections that apply across all phases of CQG)
- Landscape General Arrangement Clarendon G and Ritchies Park
- Stage 2 Lighting Report
- Safer by Design Report Stage 1
- Visual Survey September 2020
- Drainage Strategy September 2020
- Conservation Statement September 2020
- Business Plan Final Report September 2020
- Brief Validation Report, March 2021.

We also compared key strategies and project documents to identify where and how each principle of One Planet Living might run through them: the Belfast Harbour Vision, the draft Belfast Harbour Sustainability Plan, and the City Quay Gardens design brief. We found that while some of the One Planet Living principles were well covered in the existing brief or strategies, some were not covered at all (local and sustainable food).

### Workshops and dialogue with design team

Design team workshops were held to present summaries of the identified needs, potential gaps and potential areas for future focus. These sessions were a two-way exchange with the team to share the sustainability insights, reality-check the findings, present initial draft objectives for the scheme, and generate ideas from the team about further opportunities to hone these objectives and take action to achieve them.

Further dialogue and interaction with the design team helped to understand the key actions, initiatives and commitments that are being developed to meet the scheme's sustainability objectives. In turn this has been pulled together into this action plan.



## 2. Relevant planning policy and frameworks



## 2.1 Relevant local policy

Within our sustainability needs analysis and gap analysis of emerging designs for City Quays Gardens, we reviewed several vital planning policy documents and Belfast-wide strategies. We here provide an overview of these to give context to how this One Planet Action Plan should contribute to Belfast's formally and democratically-developed aspirations for a better city.

### Belfast Local Plan

The draft local development plan (LDP) strategy sets out the framework for how the city should develop to 2035. Once this is approved at independent examination (now in progress), a set of more specific local plan policies will be developed by the city.

The diagram to the right illustrates the structure of the strategy. It intends to achieve four 'strategic aims' which supported by eight 'strategic policies' and a spatial strategy. Further detail is given in the topic-based policies.

City Quay Gardens can contribute to all four strategic aims, but the most relevant are:

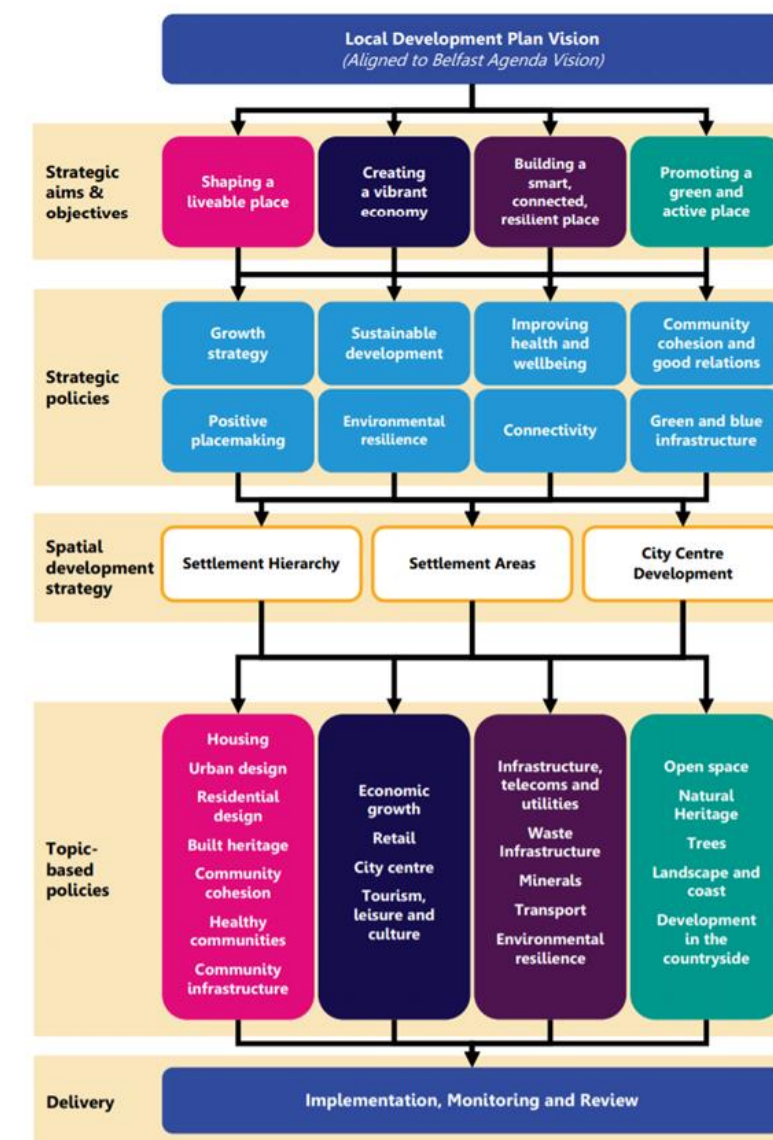
- **"Promoting a green and active place"**, which includes "reinforcing uniqueness and accessibility to all who live, work and enjoy the city".
- **"Shaping a liveable place"**, defined as "development that enhances the health and wellbeing of communities, neighbourhoods and places".

The aim of a 'connected, resilient place' is also relevant in that it covers climate adaptation and clean transport.

Of the strategic policies, the most relevant to City Quay Gardens are:

- **Policy SP2:** An overarching presumption in favour of sustainable development where it accords with the LDP, unless material considerations indicate otherwise. This includes development "which is environmentally attractive, highly accessible and is not demonstrably harmful in meeting its needs now and in future".
- **Policy SP3:** Support development that maximises opportunities to improve health and wellbeing. This includes "sustainable neighbourhoods [that] encourage walking and cycling" and "good quality green open space linked to a green and blue infrastructure network [that] improve air quality and provide respite beneficial for enhancing mental health", and development that "does not result in social exclusion or health inequalities". Active lifestyles, integrated transport, and food growing opportunities are noted as desirable.
- **Policy SP4:** Support development that maximises opportunities to build strong, cohesive communities and that makes a positive contribution to good relations", including an aim "to create and enhance shared space" and "inclusive growth to address social and economic inequalities in disadvantaged neighbourhoods".

- **Policy SP5:** Support development that maximises the core principles of good design and positive placemaking in the creation of successful and sustainable places.
- **Policy SP6:** Support development where it helps to reduce greenhouse gas emissions and is adaptable in a changing climate. As well as reducing carbon from transport and energy, this includes improving air quality and managing the risk to people and wildlife from extreme weather and flood.
- **Policy SP7:** Support connectivity to and within the city by sustainable transport modes, such as public transport, walking and cycling. This includes recognising that this is vital to social inclusiveness.
- **Policy SP8:** Support the development of a green and blue infrastructure network. This includes many kinds of green space and "high quality pedestrian, cycle routes and water ways ... to encourage an active lifestyle ... whilst [reducing] traffic congestion levels and air pollution". CQG lies at the nexus of two of the five primary green infrastructure axes shown in the plan.



Belfast Local Development Plan strategy flowchart



## 2.1 Relevant local policy (continued...)

### Belfast Local Plan

Many of the topic-based policy themes are also relevant to CQG, but the most relevant are:

- Open space
- Natural heritage:
- Trees:
- Landscape and coast:
- Urban design:
- Community cohesion:
- Environmental resilience:

**In summary, a new public space at City Quay Gardens has both a responsibility and the strong potential to contribute positively to all of the above policy aims.**

### Belfast Agenda

Published in 2017, this document for forming the city's first official community plan was created by a range of city partners, residents and community organisations along with the City Council.

To achieve this vision, the Belfast Agenda identifies five desired outcomes by 2035:

1. Everyone in Belfast benefits from a thriving and prosperous economy;
2. Belfast is a welcoming, safe, fair and inclusive city for all;
3. Everyone in Belfast fulfils their potential;
4. Everyone in Belfast experiences good health and wellbeing;
5. Belfast is a vibrant, attractive, connected and environmentally sustainable city.

**City Quay Gardens could support this vision both by creating public space that is physically accessible for all and promotes human and environmental wellbeing, and also by making conscious choices about economic and social inclusion in the construction and operation of the site – e.g. how construction and maintenance partners are procured, how training opportunities are provided, and how the space is used – e.g. cultural and community events.**

### Belfast City 'Bolder Vision'

This draft vision created in 2019 and approved in 2020 between Belfast City Council, the Department for Infrastructure and the Department for Communities, lays out a vision for how the city centre could and should be transformed between today and 2035. It addresses the city's unique challenges around wellbeing and disadvantage, while aligning with the aims of sustainable and inclusive economic growth, regeneration and accessibility expressed in the Regional Development Strategy, the Belfast Agenda and the Belfast City Centre Regeneration and Investment Strategy. It addresses challenges of climate emergency, traffic congestion, air quality and inclusive accessibility, aiming to make the city fit for its changing population and changing economy. From this, its four visioning principles are:

1. 'Creating a healthy, shared, vibrant and sustainable environment that promotes wellbeing for all, inclusive growth and innovation'
2. 'Fundamentally changing the centre of Belfast to prioritise integrated walking, cycling and public transport and end the dominance of the car'
3. 'Providing lively, safe and green streets linking inclusive shared spaces to promote resilience and enhance our built heritage.'
4. 'Removing severance and barriers to movement between the centre of Belfast and the surrounding communities to improve access for all.'

An action plan to support this vision is due to be finalised this year (2021).

**As a new piece of public space that regenerates an area of maritime heritage, City Quays Gardens clearly has great potential to help deliver on all of these themes.**



**A BOLDER VISION FOR BELFAST**  
Reimagining the Centre

## 2.1 Relevant local policy (continued...)

### Belfast Resilience Strategy

Launched in late 2020, this strategy consists of a resilience assessment, a set of ambitions to address issues identified, and will include a delivery plan to achieve this. Its aim is to safeguard Belfast against a range of shocks and stresses that could threaten its safety and stability over coming years and help deliver the Belfast Agenda (as above). Climate is the key focus – both in terms of mitigation (reducing emissions) and adaptation (getting ready for the ongoing and future changes to climate).

The overarching goal is articulated as “to transition Belfast to an inclusive, net-zero emissions, climate-resilient economy in a generation”.

As a new public green space that generates trips and uses water and lighting, CQG has a role to play in minimising energy use, supercharging the use of sustainable transport, and creating a garden that remains usable in hotter, drier summers, and safe in wetter winters.

### Net Zero Carbon Roadmap for Belfast

Launched in 2020 alongside the Belfast Resilience Strategy, the Net Zero Carbon Roadmap was produced by the Belfast Climate Commission. It aims to look at by what means, and at what cost, the city could reduce its carbon emissions fast enough to pull its weight towards staying within a global carbon budget that would enable a relatively safe future climate. It found that if Belfast continues to emit carbon at the current rate, it will have used up its entire share of the global carbon budget within 10 years.

The most relevant measures for City Quay Gardens to take are:

- Making walking and cycling easy, convenient, secure and enjoyable to and through the site (including cycle parking)
- Providing electric vehicle charging in the nearby multi-story car park
- Using the most efficient public lighting
- Being restrained and efficient in the use of concrete and steel
- Sourcing timber only from forestry schemes that will replant the trees to an equal or larger amount.



**Belfast**  
City Council



**CITIES**  
**NETWORK**

**A NET-ZERO CARBON ROADMAP  
FOR BELFAST**



**BELFAST**  
**CLIMATE**  
**COMMISSION**



## 2.2 Relevant frameworks

### The Sustainable Development Goals

The Sustainable Development Goals (SDGs) are a set of 17 global aspirations set collaboratively by all United Nations member states. Finalised in 2015 and with a target year of 2030, they are a successor to the previous Millennium Development Goals.

Under each SDG there is a set of targets and indicators which form the components of that goal. Some are specific to a developing country context, but most are relevant to all nations.

While the goals are set by and for national governments primarily, the achievement of all goals is the responsibility of global society as a whole. More about each goal and its contents can be read online.

The most relevant SDGs at this scheme, based on a review of targets and indicators of each goal, are:

- Goal 11: Sustainable Cities and Communities
- Goal 8: Decent Work and Economic Growth
- Goal 7: Affordable and Clean Energy
- Goal 12: Sustainable Consumption and Production
- Goal 13: Climate Action
- Goal 3: Good Health and Wellbeing
- Goal 9: Innovation and Infrastructure
- Goal 14: Life below water
- Goal 15: Life on land



Other SDGs are impacted less strongly by the proposal although may become more relevant when operational strategies are detailed. A full overview of the SDGs and their icons is provided to the right.

## SUSTAINABLE DEVELOPMENT GOALS



The 17 Sustainable Development Goals

## 2.2 Relevant frameworks (continued...)

### Belfast Harbour's Vision and Sustainability Strategy

The vision for Belfast Harbour is to be a world-leading regional port, a key economic hub for the region and an iconic waterfront for Belfast. The vision comprises six key themes:

1. A key economic hub
2. A socially responsible port
3. A green port
4. A smart port
5. A world-leading regional port
6. An iconic waterfront for the city

To support this vision a **sustainability strategy** has been developed which organises the activities under five themes, all linked by the understanding that achieving the vision will require the Harbour to engage and inspire stakeholders.

1. Reduce carbon from Belfast Harbour operations & achieve net zero GHG emissions in our direct operations (Scope 1 & 2) by 2030
2. Improve air quality in and around the estate, aiming to achieve WHO air quality standards by 2035, and collaborate for clean water
3. Be recognised as most sustainable developer in NI, integrating sustainability into concept, design, construction, operation and maintenance, and extending green office practices to Belfast Harbour's tenants and customers
4. Increase efficient use and management of resources across the estate and operate sustainable purchasing practices, achieving zero waste to landfill
5. Protect, sustain, enhance and educate in biodiversity conservation, integrating nature-based solutions and achieving environmental accreditations.

To engage with key stakeholders (workforce, local residential and business community) the Harbour aims to:

- **Inform and educate in sustainability** – with all staff to be trained in carbon literacy, environmental and energy awareness.
- **Support and encourage others** so they are inspired to adopt sustainable actions,
- Collaborate through an integrated shared approach with others to transform our world for the better.

City Quays Gardens is a small initiative but it has an important role to play in laying out clearly how Belfast Harbour will be delivering these strategies, and particularly as a point of engagement with the wider stakeholder community.

Within this One Planet Action Plan we have cross-referenced the relevant SDGs, the 5 themes of the Belfast Harbour Vision (2035) and the 5 themes of the emerging Belfast Harbour sustainability strategy.

The aim is to show (at a high level) which of the SDGs and BH Vision/Sustainability Strategy themes are linked to each One Planet Living principle and supported by different elements of the development proposals.



*Belfast Harbour's strategy for developing a World-Leading Regional Port*



## 2.2 Relevant frameworks (continued...)

Overview of SDGs, Belfast Harbour Vision for 2035 and emerging Belfast Harbour Sustainability Strategy

### SUSTAINABLE DEVELOPMENT GOALS



### Belfast Harbour

#### 2035 Vision Themes



#### Sustainability Strategy Principles



# 3. Sustainability at City Quays Gardens

Viewed through One Planet Living®







One Planet Living®  
Principle

Cross-referenced  
elements

Outcomes for  
City Quay Gardens

Indicators

1



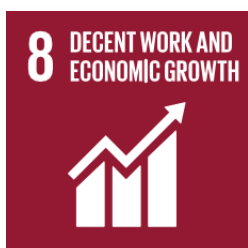
**Belfast  
Harbour**

2035 Vision  
Themes

Sustainability  
Strategy Principles



**SUSTAINABLE  
DEVELOPMENT GOALS**



1

Green Oasis that will  
provide a safe all-  
year-round  
destination for wider  
community of all  
ages

Survey of  
visitors

2

Minimise any  
potential air quality  
issues

Air quality  
monitoring

3

Encourage physical  
exercise both at the  
garden and in  
reaching the garden

Bike and  
pedestrian  
access  
statistics

Health and  
happiness

Encourage active,  
social, meaningful  
lives to promote  
good health and  
wellbeing



## Actions to achieve outcomes

1

Creating new public green space from car park; intent to activate this to increase people's contact with nature; COVID-safe intent.

Intending to design for 'Usability throughout the year - covered work spaces (NB these are not proposed for Phase 1, but the scheme will be future-proofed to allow for connection of work pods in future phases), areas of sun and shade, protection from the wind, lighting'; a sun and wind study have been informed where different activities take place e.g. seating in sheltered areas

Consultation on accessibility with the Department for Infrastructure has taken place through the planning process to ensure that the scheme meets local authority accessibility standards.

A wind study was carried out which found that the site is naturally windy due to its coastal location and tall waterfront buildings. However, the retention of mature trees, new evergreen hedges, low earth mounding, art screen and planting enclosures will help to mitigate wind across the gardens.

2

All cars will be kept to the outside edge of the site, with the interior planted. This will enable some degree of refuge from pollutants.

Air quality monitors have been installed in the surrounding Belfast Harbour estate and negotiations are under way to see if a meter can be placed with the gardens scheme. An air quality strategy is being prepared which will be informed by the CACHE project as well as the gardens' monitoring data.

Belfast Harbour has signed up to a clean air partnership – with the aspiration that people, who live in, work in and visit Belfast Harbour, should be able to enjoy an environment that is clean and safe, with air quality that is not harmful to human health.

Phase 1 includes c.30% coniferous and c.60% deciduous trees. Coniferous trees are considered the best pollution filters as they are evergreen and their dense needle-like leaves trap pollutants. Birch trees are also included in the scheme which are excellent air purifiers as their leaves help to trap pollution particles. Their foliage is also less dense so allowing for more air circulation.

3

Converting an existing car park to a public green space (thus making other modes of transport more competitive in comparison to driving, reducing the number of car trips that are attracted to this area).

Promotion of active travel via proposed bike sheds and new foot and cycle permeability.







One Planet Living®  
Principle

Cross-referenced  
elements

Outcomes for  
City Quay Gardens

Indicators

2



Equity & local  
economy

Creating safe,  
equitable places to  
live and work which  
support local  
prosperity and  
international fair  
trade

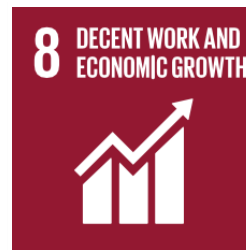
**Belfast  
Harbour**

2035 Vision  
Themes

Sustainability  
Strategy Principles



**SUSTAINABLE  
DEVELOPMENT GOALS**



1

Create a COVID  
secure, accessible  
pedestrian  
priority  
environment

Bike and  
pedestrian  
access  
statistics

2

Create an area  
which supports a  
vibrant local  
economy and  
particularly  
sustainable  
tourism

Visitor numbers  
  
Number of  
employees  
from local area/  
region  
(construction &  
operation)

Number of  
traineeships  
created

'Buy Social'  
value created



## Actions to achieve outcomes

1

Creation of new public green spaces from an existing car park with the intention to activate this and increase people's contact with nature. There is also an intention to create a COVID-safe environment (enabling outdoor working, outdoor events/socialising, and easy circulation).

The development will transform a private car park into an inviting public realm space with eight entry access points and a widened footpath. In addition, in line with the Belfast Maritime Consortium's CSR strategy, all CQG amenities will strive to be inclusive and accessible to all ward residents, particularly those from deprived or marginalised backgrounds.

2

The park and possible outdoor work pods (in post-phase 1) make the new office space an attractive place to work and do business; may attract more or better employers and jobs.

There is an intention to provide work pods which could be installed and used by local businesses/groups (NB these are not proposed for Phase 1, but the scheme will be future-proofed to allow for connection of work pods in future phases). Wifi and power in the pods would support equitable remote and flexible working if accessible to a wide range of users.

Belfast Harbour tender documents follow the Buy Social Procurement initiative. This addresses key quality of life indicators such as personal well-being, social cohesion and inclusion, equal opportunities and sustainable development.







One Planet Living®  
Principle

Cross-referenced  
elements

Outcomes for  
City Quay Gardens

Indicators

3



Culture &  
community

Nurturing local  
identity and  
heritage,  
empowering  
communities and  
promoting a culture  
of sustainable living

**Belfast  
Harbour**

2035 Vision  
Themes

Sustainability  
Strategy Principles



Inform,  
Inspire &  
Transform

**SUSTAINABLE  
DEVELOPMENT GOALS**



1

A green must-see  
location that connects  
Belfast Harbour's  
historic maritime  
assets and 21st  
Century City Quays  
regeneration

Visitor  
numbers

Visitor survey  
questions on  
enjoyment &  
meaning

2

Maximise the  
connection to key  
communities; North  
Belfast, student  
population

Physical  
connection

Visitor &  
worker  
numbers

3

Become the venue of  
choice for green events  
at any time of the year  
or day

Number of  
events

% events  
meeting  
green criteria



# One Planet Action Plan



## Actions to achieve outcomes

1

Creation of a new public green space from a former car park, with a strong placemaking focus to create key node in Maritime Mile; retention of historic railings and creation of wayfinding that links to heritage.

Intention and aspiration to use the lawn area for a rolling programme events (such as markets, ice rinks etc), as well as the permanent amphitheatre style seating on the South Lawn. There is also a wider intention to encourage eco-tourism through information boards highlighting the nature and biodiversity aspects of the scheme.

Public art will be incorporated throughout the gardens that will reflect the heritage of the area and form part of the wider Maritime Trail, including two sculptures and the Nest gateway structure.

2

The site will be inviting to active travel with the National Cycle Network route 93 passing through the centre of the gardens, as well as pedestrian permeability. The intention is that the gardens can become a rest-stop for NCN cyclists.

The scheme will provide good wayfinding signage at entrances to the site.

3

Incorporation of places where people can socialise eg groups of seating and benches.

The contractor has carried out sustainability training with a view to carrying out further training with staff. Senior management staff across Belfast Harbour are also undertaking training on carbon literacy which they will disseminate to teams with specific guidance on its application.

Events strategy to be created that ensures events target local residents.

Simple sustainability guidelines to be developed for events.







One Planet Living<sup>®</sup>  
Principle

Cross-referenced  
elements

Outcomes for  
City Quay Gardens

Indicators

4



Land &  
nature

Protecting and  
restoring land for the  
benefit of people  
and wildlife

**Belfast  
Harbour**

2035 Vision  
Themes



Sustainability  
Strategy Principles



**SUSTAINABLE  
DEVELOPMENT GOALS**



1

Create a garden that  
supports biodiversity  
and encourages  
visitors to connect  
with nature

% of species  
local  
Ongoing  
sighting of  
species



## Actions to achieve outcomes

1

Intention to retain majority of existing mature trees and some hedges. A mixture of new coniferous and deciduous trees will also be planted.

Creation of new green spaces to increase people's contact with nature. Building on urban brownfield reduces pressure on surrounding greenspaces.

Intent to use robust coastal species near waterfront in Phase 1. Intent to include flax planting in future phases – link to Belfast's heritage as a centre of linen production, also supports wildlife.

This scheme will specify and use plant species that do not require artificial pest control or large amounts of artificial fertilisers. This will be included within procurement specifications and scopes.

A landscape management plan is being developed to detail how the garden will be managed for (15 or 30) years after construction, including specifications regarding the use of organic fertilizer. Bug hotels are also being explored as a form of natural pest control (eg encouraging ladybirds for aphid control).

Exploration into lighting will be considered to reduce impact on wildlife – this will be balanced with the need for perception (and reality) of safety.

The landscape specification commits to peat-free growing media (as peat extraction causes damage to sensitive ecosystems and release of carbon emissions).

The landscape specification will include a mixture of native and ornamental planting and will result in a biodiversity net gain across site. Belfast Harbour has commissioned an audit of the whole harbour estate by Ulster Wildlife Trust whose recommendations on local native species and habitats are informing landscape planting plans (eg the recommendation to use crocus and allium bulbs over tulips and daffodils).

Belfast Harbour are partnering with wildlife and nature organisations, RSPB and Ulster Wildlife trust, to create information and interpretation boards within the site to highlight key species and habitats present. In partnership with Ulster Wildlife Trust, Belfast Harbour has also installed an oyster nursery in the port to help restore the native population of the species, improve water quality and boost marine biodiversity.







One Planet Living<sup>®</sup>  
Principle

Cross-referenced  
elements

Outcomes for  
City Quay Gardens

Indicators

5



Sustainable  
water

Using water  
efficiently, protecting  
local water resources  
and reducing  
flooding and  
drought

**Belfast  
Harbour**

2035 Vision  
Themes



Sustainability  
Strategy Principles



**SUSTAINABLE  
DEVELOPMENT GOALS**



1

Address climate  
change and flood  
risk issues and  
integrate proposed  
flood alleviation  
proposals;

Capacity of  
scheme's  
proposed  
drainage / flood  
defences to  
deal with  
extreme events

2

No additional  
water use

Litres/year  
mains water  
use

3

Manage  
stormwater to  
enhance water  
quality within wet  
dock

Water quality  
measurement



## Actions to achieve outcomes

1

Glazed coastal flood alleviation barricades are proposed at Clarendon Dock as part of the Belfast Tidal Flood Alleviation Scheme being undertaken by DfI Rivers. This is a Belfast wide initiative, not just part of Phase 1. More info can be found here: <https://www.infrastructure-ni.gov.uk/articles/belfast-tidal-flood-alleviation-scheme#toc-7>.



2

Overarching brief for 'no additional water use' – achieved through the use of drought tolerant planting (perennials and grasses) and greywater irrigation system. A 26,000 litre attenuation tank will collect surface water to provide drip irrigation to trees and planting areas.



Any mains water consumption will be metered and the location of all services are recorded to ensure any maintenance can be completed with ease and minimal disruption.

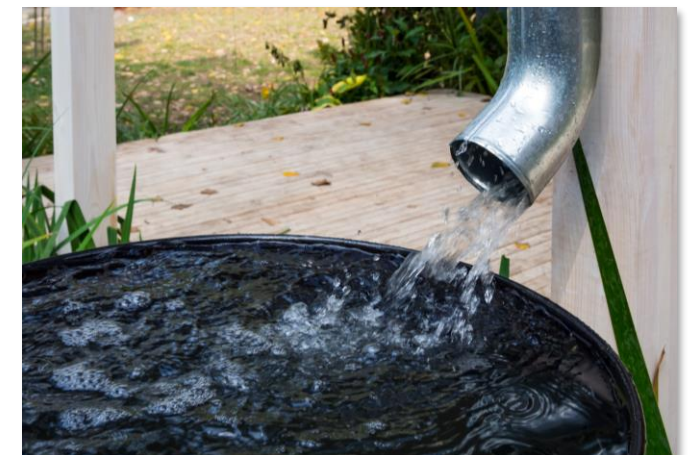
Planting within the scheme will be irrigated from the surface water drainage systems that can be topped up by a mains water connection if needed during very dry spells; also rainwater collection.

Landscape and planting specification will prioritise species that are drought tolerant and require less irrigation.

3

New green space will slow and reduce surface water runoff compared to current hardstanding; the design of drainage will follow the CIRIA SuDS manual. Permeable paving and rain garden areas will attenuate surface water run-off and contribute to sustainable drainage.

A Construction Environmental Management Plan (CEMP) has been submitted by the contractor ahead of works commencing on site as part of planning pre-commencement conditions; this considers pollution control from sources such as fuel spillages and dust.







One Planet Living®  
Principle

Cross-referenced  
elements

Outcomes for  
City Quay Gardens

Indicators

6



Local &  
sustainable  
food

Promoting  
sustainable humane  
farming and healthy  
diets high in local,  
seasonal organic  
food and vegetable  
protein

**Belfast  
Harbour**

2035 Vision  
Themes



Sustainability  
Strategy Principles



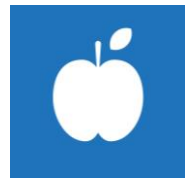
**SUSTAINABLE  
DEVELOPMENT GOALS**



1

Create a park  
that promotes  
healthy and  
sustainable diets  
and showcases  
local producers to  
all visitors

- % of vendors  
'healthy'
- % of vendors  
selling produce  
from within  
100 miles
- kg food waste  
arising per year
- Creation of a  
sustainable  
food charter for  
events +  
vendors



## Actions to achieve outcomes

1

Future phases of the City Quays Gardens scheme will incorporate edible planting and vertical growing systems within the landscape specification.

In future phases, Belfast Harbour will work with the Maritime Mile trust to explore showcasing of local and sustainable food suppliers as part of the overall events strategy.

Belfast Harbour will explore the development of a sustainable food charter as part of future phases - including phase 2 where the proposed Food Hall is planned.







One Planet Living®  
Principle

Cross-referenced  
elements

Outcomes for  
City Quay Gardens

Indicators

7



Travel &  
transport

Reducing the  
need to travel,  
encouraging  
walking, cycling  
and low carbon  
transport

**Belfast  
Harbour**

2035 Vision  
Themes



Sustainability  
Strategy Principles



**SUSTAINABLE  
DEVELOPMENT GOALS**



1

Unlock connectivity  
to the city centre  
and waterfront

Physical  
connection

Visitor  
numbers by  
transport  
mode

2

Encourage  
sustainable transport  
use through  
integration of public  
transport, and cycle  
and pedestrian  
facilities

Bike and  
pedestrian  
access  
statistics



## Actions to achieve outcomes

1

The site will be inviting to active travel with the National Cycle Network route 93 passing through the centre of the gardens, as well as pedestrian permeability. The intention is that the gardens can become a rest-stop for NCN cyclists and will link to future proposed foot and cycle bridge. The scheme will therefore provide good wayfinding signage at entrances to the site.

A totem map will be placed at the two major entrances into the gardens providing illustrative directions to all public transport hubs and walking times.

2

Cars will be kept to outside of the development.

Belfast Bikes hire scheme will be included, with space for expansion within the Phase 1 works.

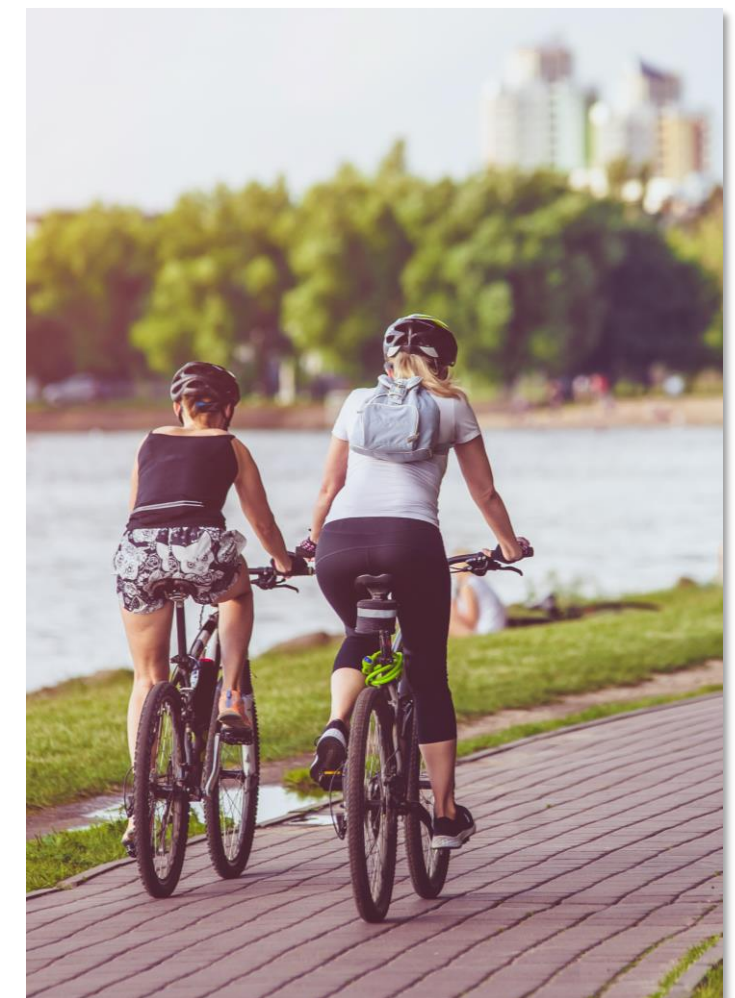
Raised walls and bollards have been incorporated into the scheme along Corporation Square as anti-terror measures to provide crowd protection for events on the lawns and within the plaza spaces.

The scheme will not provide EV charging points, however they are already provided in ground floor of the multistorey car park which is the centralised car parking facility for the full scheme.

A wind study has been undertaken to help locate trees for wind baffling and to locate seating areas, in order to maximise cyclist and pedestrian comfort.

Cycle parking in the form of covered Sheffield stands will be included, with an intercom to Belfast Harbour Police, internal CCTV coverage and lighting. A bike repair station is also being explored.

Local cycling and pedestrian organisations were contacted through the planning application to influence designs where applicable, however no comments were received.







One Planet Living<sup>®</sup>  
Principle

Cross-referenced  
elements

Outcomes for  
City Quay Gardens

Indicators

8



Materials &  
products

Using materials  
from sustainable  
sources and  
promoting  
products which  
help people reduce  
consumption

**Belfast  
Harbour**

2035 Vision  
Themes



Sustainability  
Strategy Principles



**SUSTAINABLE  
DEVELOPMENT GOALS**



1

Minimise the  
embodied carbon  
of construction  
through reuse of  
materials, and  
responsibly and  
sustainably sourced  
materials.

Embodied  
energy  
calculation –  
tonnes CO<sup>2</sup>  
equivalent

2

Create a park that  
promotes the  
circular economy

Creation of  
event  
sustainability  
guidelines  
that include  
circularity  
criteria



## Actions to achieve outcomes

1

Existing granite cobbles will be lifted and re-laid in the traditional fantail pattern on the central shared pedestrian/cycle route.

Durable elements to be used wherever possible e.g. granite slabs, setts and walls; blue limestone flag paving; naturally very durable hardwood seats and tables.

The pre-qualification questionnaire process for selection of contractors included a requirement for the contractor to hold ISO 14001 Environmental Management Systems accreditation. The contractor also submitted a responsible sourcing policy statement which covers sustainable resource use and supply chain practices.

The design reuses existing stone on site and includes locally-sourced Irish and Carlow Blue limestone, minimising transport emissions.

The landscape specification ensures that only PFC/FSC certified timber and peat-free compost are used.

2

Simple sustainability guidelines will be developed for events to minimise waste and maximise use of recycled content in event materials.







One Planet Living<sup>®</sup>  
Principle

Cross-referenced  
elements

Outcomes for  
City Quay Gardens

Indicators

9



Zero waste

Reducing  
consumption, re-  
using and recycling  
to achieve zero  
waste and zero  
pollution

**Belfast  
Harbour**

2035 Vision  
Themes



Sustainability  
Strategy Principles



**SUSTAINABLE  
DEVELOPMENT GOALS**



1

Minimise waste in  
construction and  
operation

Total waste  
(tonnes in  
construction;  
tonnes per  
annum in  
operation)

% reused,  
recycled or  
composted



## Actions to achieve outcomes

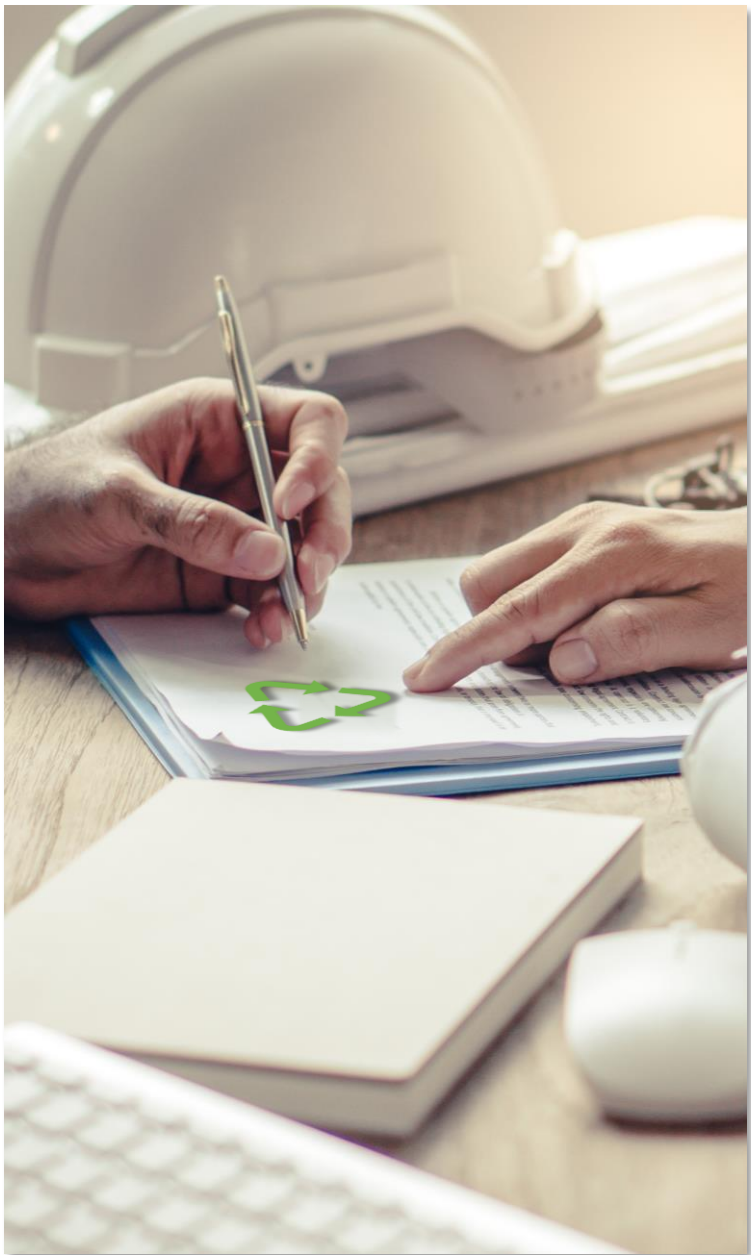
1

The existing granite floor cobbles will be retained and reused in the new garden design. This will help to minimise construction and demolition waste.

The contractor was selected following a pre-qualification questionnaire process which scored the contractor’s environmental credentials. Requirement to minimise construction and demolition waste is included in contracts and specifications. For example, the contractor has produced a Site Waste Management Plan to ensure the reuse and recycling of demolition and construction waste is maximised. The contractor is also registered with the Considerate Constructors’ scheme which has specific requirements around waste management.

Recycling bins will be provided onsite. Any outlets onsite will need to meet the Belfast Harbour sustainability guidelines.

A water fountain will be provided for re-filling of water bottles, thereby reducing the incentive to buy plastic bottles.







One Planet Living®  
Principle

Cross-referenced  
elements

Outcomes for  
City Quay Gardens

Indicators

10 

Zero carbon  
energy

Making buildings  
and  
manufacturing  
energy efficient  
and supplying all  
energy with  
renewables

**Belfast  
Harbour**

2035 Vision  
Themes



Sustainability  
Strategy Principles



**SUSTAINABLE  
DEVELOPMENT GOALS**



1

Net zero  
carbon in  
future  
operation

kWh/year

2

100%  
renewable  
energy

% renewables in  
the supply

kWp of solar  
generation  
installed

kWh of solar  
electricity  
generated per year



## Actions to achieve outcomes

1

The long-term aim of the gardens is to be net zero carbon in operation. This will be met through efficient design (such as LED lighting) and future proposed PV on garden infrastructure. Until then, energy will be procured from 100% renewable energy tariffs through a REGO arrangement.

High efficiency LED lighting are specified in lieu of existing lower efficiency lighting. Automated controls are specified to prevent lights operating during daylight hours and outside agreed hours of operation to reduce energy demand.

2

In future phases of the scheme, PV is planned to be added to the roofs of cycle stand shelters and any future buildings (such as work pods). Infrastructure will be put in place within the gardens to allow for future connection.





# 4. Overview of Sustainability Outcomes






# 4 Overview of Sustainability Outcomes

City Quays Gardens incorporates measures to meet social, economic and environmental principles of sustainability. It has been demonstrated using the One Planet Living framework how the scheme responds to local planning requirements and other key frameworks in regards to sustainability, and the proposed actions that will be incorporated to deliver the sustainability objectives.






To summarise, the sustainability objectives are as follows:

 Health & happiness	<ul style="list-style-type: none"><li>1. Green Oasis that will provide a safe all-year-round destination for wider community of all ages</li><li>2. Minimise any potential air quality issues</li><li>3. Encourage physical exercise both at the garden and in reaching the garden</li></ul>
 Equity & local economy	<ul style="list-style-type: none"><li>1. Create a COVID secure, accessible pedestrian priority environment;</li><li>2. Create an area which supports a vibrant local economy and particularly sustainable tourism</li></ul>
 Culture & community	<ul style="list-style-type: none"><li>1. A green must-see location that connects Belfast Harbour's historic maritime assets and 21st Century City Quays regeneration;</li><li>2. Maximise the connection to key communities; North Belfast, student population</li><li>3. Become the venue of choice for green events at any time of the year or day</li></ul>
 Land & Nature	<ul style="list-style-type: none"><li>1. Create a garden that supports biodiversity and encourages visitors to connect with nature</li></ul>
 Sustainable water	<ul style="list-style-type: none"><li>1. Address climate change and flood risk issues and integrate proposed flood alleviation proposals</li><li>2. No additional water use</li><li>3. Manage stormwater to enhance water quality within wet dock</li></ul>





# 4 Overview of Sustainability Outcomes (continued...)

 Local & sustainable food	<ul style="list-style-type: none"><li>1. Create a park that promotes healthy and sustainable diets and showcases local producers to all visitors</li></ul>
 Travel & transport	<ul style="list-style-type: none"><li>1. Unlock connectivity to the city centre and waterfront</li><li>2. Encourage sustainable transport use through integration of public transport, and cycle and pedestrian facilities</li></ul>
 Materials & products	<ul style="list-style-type: none"><li>1. Minimise the embodied carbon of construction</li><li>2. Create a park that promotes the circular economy</li></ul>
 Zero waste	<ul style="list-style-type: none"><li>1. Minimise waste in construction and operation</li></ul>
 Zero carbon energy	<ul style="list-style-type: none"><li>1. Net zero carbon in future operation</li><li>2. 100% renewable energy</li></ul>



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Bioregional champions a better, more  
sustainable way to live.

We work with partners to create places  
which enable people to live, work and  
do business within the natural limits of  
the planet. We call this One Planet  
Living.

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