Bioregional
Championing a
better way to live

# One Planet Living® Action Plan

## For the design, construction and management of new office space at Bonham Quay, Galway

**July 2020**

## Contents

# 1. One Planet Action Plan - Summary

This One Planet Action Plan (OPAP) is designed to ensure that the proposals for office development at Bonham Quay, Galway represent wholly sustainable development when measured against environmental, social and economic indicators at local, regional and global spheres of influence, as well as the One Planet Living Goals and Guidance[1].

Bonham Quay will comprise 269,098sq ft (26,000sq m) of grade A office space, alongside 20,505sq ft (1,905sq m) of retail and 91,439sq ft (8,495sq m) of landscaped space. In addition to aiming to achieve One Planet Living endorsement, the development will be targeting LEED gold standard as well as a WELL building standard rating and WIRED score.

The project team at Bonham Quay is using the One Planet Living framework to set and meet bold sustainability objectives, ensuring the scheme is as environmentally and socially sustainable as possible and supporting future workers to make sustainable choices when it comes to consumption.

The key sustainability commitments outlined in this OPAP are listed below:

| Principle | Approach |
|---|---|
| **Health and Happiness** | The scheme will look to improve the health and wellbeing of its users by promoting active travel and nutritional food, connecting with nature and providing space and facilities to support positive mental wellbeing. |
| **Equity and Local Economy** | The offices will support Galway's homegrown businesses and look to attract organisations who pride themselves on doing good. The scheme will provide space for small and micro businesses to grow and thrive. |
| **Culture and Community** | Sustainability will be celebrated and integrated into a thriving business community at Bonham Quay. Proposals are designed to attract businesses who care about people and the environment in which they work. |
| **Land and Nature** | Proposals will create an urban haven for wildlife and people to enjoy while they work. Sky gardens will be planted with native species, with areas for quiet reflection or after-work yoga. |
| **Sustainable Water** | Efficient use of water will be encouraged by installing low water-use taps, showers and toilets, and tenants will be helped to consider how they use water wisely. |
| **Local and Sustainable Food** | The aim is to ensure workers and visitors find it easy to eat sustainably at Bonham Quay. Low-impact, nutritionally rich and healthy options will be on offer, and we will explore how we can make the most of Galway's local delicacies. |
| **Travel and Transport** | Bonham Quay will help kick-start sustainable travel around Galway. The site is a short walk from the train station and has priority parking for green and shared vehicles along with 300 cycle parking spaces and a dedicated commuter centre. |
| **Materials and Products** | Management at Bonham Quay will encourage workplaces to be fit out using sustainable materials, and we will pilot new ideas for how businesses can save money and resources by working together. |
| **Zero Waste** | Bonham Quay will be a single-use plastic free site, and every business will encouraged to use resources meaningfully, with the ultimate aim of sending zero waste from site operations to landfill. |
| **Zero Carbon Energy** | Bonham Quay is aiming to achieve net-zero carbon emissions by 2025 through an A-rated energy efficiency, energy generation from roof-mounted solar photovoltaic panels, air source heat pumps for space heating and domestic hot water and certified renewable electricity supplied to tenants. |

[1] https://www.bioregional.com/resources/one-planet-living-goals-and-guidance-for-communities

## 2. Introduction

This sustainability strategy has been prepared by Bioregional, a sustainability charity with headquarters at BedZED in Surrey. Bioregional have nearly 25 years' experience advising on sustainable development across the world.

This One Planet Action Plan (OPAP) has been produced for the Bonham Quay scheme in Galway. Bioregional have been appointed by the developer, Edward Developments, to help them to provide low-impact workspace for sustainable businesses.

Bonham Quay will comprise 26,000sqm of grade A office space, alongside 1,905sqm of retail and 8,495sqm of landscaped space. In addition to aiming to achieve One Planet Living endorsement, the development will be targeting LEED gold standard as well as a WELL building standard rating and WIRED score.

## 3. One Planet Living

This gap analysis uses the One Planet Living framework to review the proposals for the Bonham Quay development, Galway, across all areas of sustainability.

The One Planet Living framework is made up of ten principles, which grew out of Bioregional's experience of developing the pioneering BedZED ecovillage in south London.

These principles allow a holistic and interconnected view which addresses social, economic and environmental aspects of sustainability and aims to make it easy and attractive for everyone to lead happy and healthy lives within the environmental limits of our planet.

### The Ten One Planet Living Principles

| | |
|---|---|
| **Health and happiness** | Encouraging active, social, meaningful lives to promote good health and wellbeing |
| **Equity and local economy** | Creating safe, equitable places to live and work which support local prosperity and international fair trade |
| **Culture and community** | Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living |
| **Land and 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 and sustainable food** | Promoting sustainable humane farming and healthy diets high in local, seasonal organic food and vegetable protein |
| **Travel and transport** | Reducing the need to travel, encouraging walking, cycling and low carbon transport |
| **Materials and 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 |

# 4. Methodology

This One Planet Action Plan has been developed after a thorough evaluation of local, city-wide and global sustainability issues that the scheme should look to respond to. It's also been informed by the Goals and Guidance for One Planet Living[2]. Bioregional has engaged and consulted with key members of the project team such as Edward Developments, BDP, Sisk Contractors, Cushman and Wakefield and Ivor Fitzpatrick & Company Solicitors.

This action plan is split into two sections; design and construction. The design-led actions and targets influence how the development will perform and be used when it is in-use, whereas the construction section focuses solely on how the development will be built.

## a. Measuring our impact

One Planet Living uses the concepts of Planetary Boundaries and ecological and carbon footprinting as headline indicators for environmental sustainability.

**Planetary Boundaries** is a set of nine Earth system processes the boundaries of which define a "safe operating space for humanity". The scientists behind the concept assert that once human activity has passed certain thresholds or tipping points, defined as "planetary boundaries", there is a risk of "irreversible and abrupt environmental change". For example, when greenhouse gas emissions in the atmosphere reach a certain level this will trigger new natural phenomena, such as the melting of permafrost, which will further increase the greenhouse gas emissions in the atmosphere.

**Ecological footprinting** is a way of accounting for humanity's wide range of demands on the Earth's productive land and sea. Globally the world's population is consuming the earth's natural resources at a rate 70% higher than the planet can replenish or absorb. Ecological footprinting shows that if everyone in the world consumed as many natural resources as the average person in Western Europe, three planets would be needed to support humanity.

**Carbon footprinting** measures $CO_2$ and other greenhouse gases emitted from human activity such as burning fossil fuels and agricultural practices. Well over half of our global ecological footprint comes from our carbon emissions. We know that humanity is warming the earth and changing the climate by putting carbon dioxide and other 'greenhouse gases' into the atmosphere, where they trap more and more heat as their concentrations build up. Scientists agree that we have to radically reduce our output of these gases if we are to limit the risks of dangerous changes in the climate.

At the Paris Climate Summit in 2015 world leaders agreed that the increase in global average temperatures should be kept well below 2°C from their pre-industrial levels, with a 1.5°C safety limit recognised as preferable. To avoid a two degree rise global greenhouse gas emissions need to be reduced by 50% from 1990 levels by 2050. In order for this to happen $CO_2$ emissions will have to be no more than 0.8 tonnes per person per annum by 2050.

## b. One Planet Communities Network

The Goals and Guidance (G&G) for One Planet Communities is a document produced by Bioregional which gives guidance to developers and architects on how to design, construct and manage a development that will enable residents to live One Planet lifestyles.

A global network of One Planet Communities has been developed using this guidance:

[2] https://www.bioregional.com/resources/one-planet-living-goals-and-guidance-for-communities

- These are mostly new-build residential-led developments that have committed to achieving the highest standards of sustainability across the 10 principles of One Planet Living.
- Sustainability strategies for these developments are assessed by Bioregional to check their alignment with the G&G for One Planet Communities.
- Once they have been reviewed, agreed and a management plan adopted the sustainability strategy can be published. Bioregional will create a page on the One Planet Living website and the project can announce that it is using the One Planet Principles.
- Communities that meet the highest levels of sustainability can be endorsed as National or Planetary Leaders and can use the One Planet Communities logo.

### C. Implementing, measuring and reporting

Developing a One Planet Action Plan is only the start of the journey. To achieve and communicate change it is important to monitor and report on progress in implementing it.

Key aspects of implementation will include a process for tracking progress (such as a monthly or quarterly meeting of the sustainable business forum), training the property management team and delegating tasks and actions and engaging with business and their staff.

The property managers of Bonham Quay will publish regular (ideally annual) progress reports, to demonstrate progress against the objectives and targets of One Planet Living.

Monitoring is important for two reasons:

1. For internal purposes, to learn what is and isn't working and to update the Action Plan based on learning

2. For external purposes, to communicate and report progress and the final outcomes for projects that have a discrete timeframe (such as a construction project) to stakeholders and the wider community

It will be important to track both:

- **Performance** – how is the development performing against the indicators and targets that have been set?

- **Progress** – have designers, builders and property managers implemented the actions in a timely fashion, and has anything been missed?

## 5. Sustainability objectives for Bonham Quay

| Principle | Sustainability Objective |
|---|---|
| **Health and Happiness** | To provide all workers and visitors to the development with the opportunity to access leading health facilities and initiatives which will positively contribute to their physical and mental wellbeing and aid work/life balance. |
| **Equity and Local Economy** | To provide world-leading office facilities which nurture local and sustainable businesses and provide them with the resources to become sector-leading in their market |
| **Culture and Community** | To create a business culture on-site which enables workers and visitors to connect and belong, and work together to create a One Planet community on-site |
| **Land and Nature** | To contribute to the greenery of Galway Bay by providing high quality greenspace and planting for use by both people and nature. Enhance and emphasise the interconnections and health benefits of nature to workers and visitors. |
| **Sustainable Water** | To deliver a development where water is consumed efficiently by businesses and visitors, with minimal risk of flooding and clean run-off to watercourses. |
| **Local and Sustainable Food** | Every worker and visitor has the opportunity to make more sustainable food choices, attractive and readily available to them within the development. |
| **Travel and Transport** | Promote clean, active ways to travel to work and contribute to a reduction in local congestion. |
| **Materials and Products** | To build a development using low-impact, healthy construction materials, which provides a space for sustainable, resource-efficient businesses to thrive. |
| **Zero Waste** | To minimise waste arisings from construction and operation by enabling all contractors and businesses to follow the waste hierarchy of reduce-reuse-recycle. Businesses will collaborate to significantly reduce packaging and single-use materials. |
| **Zero Carbon Energy** | The development will be net-zero carbon by 2025 and deliver non-polluting, energy efficient operations during use. |

# 6. Sustainable Design & Operation

| Health and Happiness | |
|---|---|
| **Sustainability Objective:** | To provide all workers and visitors to the development with the opportunity to access leading health facilities and initiatives which will positively contribute to their physical and mental wellbeing and aid work/life balance. |
| **Sources:** | • Basis of Design Report 08<br>• Planting Schedule<br>• Design & Access Statement<br>• Consultation with project design team |
| **Proposed Targets:** | • 95% of workers rate the quality of the working environment as good, very good or excellent<br>• 95% of workers agree that the development a) helps them connect with nature, b) take positive time out from work and c) provides them the opportunity to participate in activities which benefit their mental health<br>• The development makes no adverse contribution to local air quality |
| **Features of development proposals:** | • 23% of the development will be landscaped. Planting will be chosen that helps address local issues with air quality. The development will comply with the WELL standard criteria for ventilation, air quality and pollution control.<br>• Sustainable, non-toxic construction materials will be specified during the build, in order to meet LEED (Materials and Resources section and Low-Emitting Materials credit under Indoor Environmental Quality section) and WELL criteria (Materials section).<br>• Extensive glazing will allow enhanced access to daylight and views of Galway Bay from every building.<br>• Driving to work will be disincentivised through a 0.05 ratio of car parking spaces to workers.<br>• The design of the outdoor social spaces, the sky gardens, central square and the public square to the north of the development, will provide the opportunity for interaction and individual reflection.<br>• 2,000 sqm of internal space is dedicated to leisure and wellbeing, including gym facilities, pilates studios, yoga classes and beauty rooms available to the whole city. Opportunities to offer subsidies for workers will be sought.<br>• Significant space and facilities will be provided for cycling and walking, including a dedicated commuter centre, bike storage and showers.<br>• The development will comply with the WELL standard criteria for water quality and management.<br>• The building / campus manager will encourage tenants to promote community and social events, a and will do likewise through the management of the community space. |
| **KPIs** | - Percentage of people who are satisfied with the development as a place to work.<br>- Percentage of people who are satisfied with (a) summer indoor air temperature, (b) winter indoor air temperature, (c) ventilation and air quality, (d) noise, (e) daylight and (f) artificial light in their building<br>- Percentage of physically active workers.<br>- Percentage of people utilising the wellness facilities.<br>- Percentage of people using zero carbon transport methods (cycling, walking, electric vehicles).<br>- Air quality inside/outside the building measured in PM2.5, $CO_2$ and VOC concentration. |
| | |

| Equity and Local Economy | |
|---|---|
| **Sustainability Objective:** | To provide world-leading office facilities which nurtures local and sustainable businesses and provides them with the resources to become sector-leading in their market. |
| **Sources:** | • Design & Access Statement<br>• Consultation with project property leasing team and client |
| **Proposed Targets:** | • At least 10% of commercial space will be affordable workspace, available at a discounted rent with priority given to local, sustainable small businesses<br>• The development will be 100% Living Wage buildings, where all suppliers to the building and employers will pay living wage to their employees. |
| **Features of development proposals:** | *Nurturing local and sustainable businesses:*<br><br>• Businesses within the development will be expected to demonstrate that they have a sustainability strategy/policy in place or to commit to producing one within one year of taking space.<br>• The property leasing team will look to attract the most responsible businesses to be located in the remaining tenanted areas, including those:<br>  ○ involved in the circular or low-carbon economy<br>  ○ registered as BCorps or similar<br>  ○ Those with the Planet Mark<br>  ○ with a profile in the Dow Jones Sustainability Index<br>  ○ with exemplary sustainability targets for their business<br>  ○ with a local link or working in the third sector<br><br>*Provides resources to allow business to be sector-leading:*<br><br>• Office space will be offered on a rental basis, currently prices in Galway are half the rental price of Dublin and one third of the price in London.<br>• The development offers world class accommodation to Galway providing significant discount to Dublin competitors attracting new enterprise to Galway and encouraging local business to avail of accommodation not currently available in Galway.<br>• The development will encourage all tenants to pay the Living Wage to their employees as a minimum we can encourage occupiers however can not enforce<br>• The 'Town Hall Space' will provide space for charities, third sector organisations and start-ups on flexible lease arrangements at low, affordable rates and the he building / campus manager will actively promote use of this space. |
| **KPIs** | • Economic value generated and distributed locally through delivery of project<br>• Quantity of space occupied by businesses supporting the transition to a low-carbon, resource- efficient economy<br>• Quantity of space occupied by businesses with local roots and SMEs |

| Culture and Community | |
|---|---|
| **Sustainability Objective:** | To create a business culture on-site which enables workers and visitors to connect and belong, and work together to create a One Planet community on-site |
| **Sources:** | • Design & Access Statement<br>• Consultation with project design team and client |
| **Proposed Targets:** | • 75% of workers engaged with social events held within the development during the year. |
| **Features of development proposals:** | *Enable workers and visitors to belong*<br><br>• The development has been designed to reflect and complement the existing feel of Galway, with the street layout reflecting that of the existing streets in the medieval portion of the city centre, opening up into larger areas of public realm such as community squares.<br>• The historical link between this part of Galway and the Spanish Armada will be reflected in the names of the four buildings on the development; named after a Spanish Military Order. Subject to the approval of the planning authority<br>• We will endeavour to secure an independently operated café with space available for the local community to use. This will provide regular opportunities for Galway's local community groups, voluntary sector and charities to take part in art, cultural, knowledge sharing or leisure activities.<br><br>*Enable workers and visitors to connect and work together*<br><br>• There are plans for community engagement with local school children, community groups and special interest groups. The local community will be able to book spaces such as the community squares or sky garden areas within the development for events, such as concerts, pop-up cinema, workshops and celebrations. The building / campus manager will manage use of this space.<br>• Internal common areas will create relaxed spaces for workers to meet, socialise and connect both in and out of working hours<br><br>*Create a One Planet community*<br><br>• Workers will be engaged in sustainability at work, through events and behaviour change initiatives organised by a business forum.<br>• Businesses will be encouraged to share and engage on their environmental performance as part of their lease agreement . The building / campus manager will actively engage with tenants to encourage better environmental performance<br>• Local events will celebrate sustainability within the community and embed One Planet Living into the running of the event.<br>• Food and beverage providers will be encouraged to sign up to a sustainable food charter, focused on around local food, healthy food, packaging and waste.<br>• There is commitment to making Bonham Quay 'Single Use Plastic Free'. This aspiration and guidance on how to achieve it will be included within the Building User Guide/Tenant Handbook and through continued communication and promotion through the building / campus manager. |
| **KPIs** | • Number of workers who feel their employer is doing well on key sustainability issues<br>• Number of community events/initiatives and participation rates<br>• Percentage of employees who agree they have made sustainable behaviour changes since working at the site |

| Land and Nature | |
|---|---|
| **Sustainability Objective:** | To contribute to the greenery of Galway Bay by providing high quality greenspace and planting for use by both people and nature. Enhance and emphasise the interconnections and health benefits of nature to workers and visitors. |
| **Sources:** | • Design & Access Statement<br>• Planting Schedule<br>• Consultation with landscape architect |
| **Proposed Targets:** | • Net biodiversity gain from pre-development baseline |
| **Features of development proposals:** | *High quality greenspace and planting for people and nature:*<br><br>• 23% of the development will be landscaped (8,500 sqm), using extensive planting and greenery as an active design element, incorporating trees and plants into areas of public space, roof gardens and internal areas of the buildings.<br>• The landscaping plans will improve the ecological value of the site and the integration of native, resilient plant and tree species and wildflowers will benefit local biodiversity such as insects.<br>• Landscaping material will be peat-free and free from chemicals such as pesticides or fertilisers, which are harmful to the environment.<br>• Planted areas will be maintained and watered on a regular basis by a suitable irrigation system to ensure they thrive<br><br>*Emphasising the interconnections and health benefits of nature:*<br><br>• The human connection with nature will be a proactive focus, through providing accessible green areas to all, areas for quiet reflection amongst planted areas and community events celebrating nature.<br>• Workers will be actively encouraged to visit green space on their breaks. |
| **KPIs** | • Percentage increase in green space compared to existing land<br>• Proportion of workers engaged with and using greenspace |

| Sustainable Water | |
|---|---|
| **Sustainability Objective:** | To deliver a development where water is consumed efficiently by businesses and visitors, with minimal risk of flooding and clean run-off to watercourses. |
| **Sources:** | • Design & Access Statement<br>• Consultation with architect |
| **Proposed Targets:** | • Reduction in non-domestic water consumption by 50% (equivalent to 4 of 6 BREEAM credits) |
| **Features of development proposals:** | *Water efficient development:*<br>• Water-saving fittings and equipment will achieve water use of no more than 100L/person/day, including:<br>- Dual 4/2 L low flush WC's;<br>- Self-closing taps;<br>- Use of blending valves on all hot water outlets;<br>- Low flow showers<br>- Waterless urinals where appropriate.<br>• There will be water fountains and water bottle re-fill stations in public and private areas, at suitable locations.<br>• Water use will be metered via an on-line dashboard and monitored on a regular basis to check for water leaks.<br>• Tenants will be required to reduce or improve the efficiency of water consumption or discharge, and share water data, as part of their lease agreement.<br>*Reducing flooding and drought:*<br>• The development has been designed in accordance with the site's Flood Risk Assessment (FRA).<br>• The podium is designed to flood risk levels identified in the FRA plus 500mm extra to account for climate change, as a council planning requirement.<br>*Clean run-off to watercourses:*<br>• Drainage infrastructure will aid drainage of the site and ensure surface pollutants do not directly flow into the local watercourse. |
| **KPIs** | • Average per capita potable water consumption for workers (litres/person / year)<br>• Ratio of impermeable to permeable surface area that accommodates storm water infiltration |

| Local and Sustainable Food | |
|---|---|
| **Sustainability Objective:** | Every worker and visitor has the opportunity to make more sustainable food choices, attractive and readily available to them within the development. |
| **Sources:** | • Consultation with project property leasing company and client |
| **Proposed Targets:** | • All workers have immediate access to attractive, healthy, low-impact food options<br>• 20% of workers report an improvement in diet whilst at work |
| **Features of development proposals:** | • Preference will be given to local and artisan food and beverage providers on the site.<br>• Food and beverage providers will adhere to the WELL standard on nourishment, including access to fresh food, fruit and vegetables, transparency, ingredients, sourcing, advertising and portion size.<br>• Food and beverage providers will sign up to a sustainable food charter whilst operating on-site, which address issues such as packaging and waste as well as providing easy access to sustainable food options.<br>• Rooftop gardens will incorporate a beekeeping area to provide local honey. |
| **KPIs** | • Quantity of food grown/produced locally (within 25 miles) which is sold on-site<br>• On-site food establishment(s) percentage offering (by value) of (a) vegetarian or vegan food, (b) sustainable fish, (c) local and/or seasonal and/or organic fruit and vegetables, (d) ethical meat, eggs and dairy and (e) Fairtrade-certified products |

| Travel and Transport | |
|---|---|
| **Sustainability Objective:** | Promote clean, active ways to travel to work and contribute to a reduction in local congestion. |
| **Sources:** | • Design & Access Statement<br>• Consultation with architect |
| **Proposed Targets:** | • 80% of workers get to work by foot, by bike or by public transport |
| **Features of development proposals:** | • The site is around a five-minute walk from Ceannt Station, which provides trains to and from Dublin and Limerick, with links to Cork and Tralee.<br>• There is a bus stop on Queen Street near the Methodist Church, providing a bus route along the coast from Galway to Rossaveel. Nearby Forster Street provides buses every 10-20 minutes to and from Galway's suburbs, such as Salthill, Ballybane and Ballybrit.<br>• The provision of the ramps will enable cyclist access to the podium level, allowing visitors to park bicycles at the door, while limited vehicular access is provided via the shared surface area to the north.<br>• There will be a commuter centre which is directly accessible by bicycle and will contain comfortable shower and storage facilities.<br>• There are 131 car parking spaces compared to the estimated workforce of 2,600 people, therefore workers will need to consider car alternatives to travel to work.<br>• There are 330 bicycle parking spaces and a commuter centre with showers, lockers and bike storage on the site, to incentivise cycling.<br>• At present there will be two electric car charging points provided during phase 1 of construction.<br>• During phase 2 of construction, further infrastructure will be installed to provide electric car charging points for 10% of total parking spaces.<br>• 5% of parking spaces will be allocated for green vehicles.<br>• 5% of parking spaces will be allocated for car-pooling, in compliance with LEED.<br>• The commuter centre will be actively managed to ensure it always presents well and is an attractive, safe, secure option for commuters to use.<br>• building documentation can highlight transport options to tenants / employees such as tax saver train tickets, LEAP cards etc |
| **KPIs** | • Proportion of journeys taken by different modes of transport (walking, cycling, car, bus, train, etc)<br>• Annual per capita transport $CO_2$ emission (kg $CO_2$e/person/year) |

| Materials and Products | |
|---|---|
| **Sustainability Objective:** | To build a development using low-impact, healthy construction materials, which provides a space for sustainable, resource-efficient businesses to thrive. |
| **Sources:** | • Design & Access Statement<br>• Consultation with architect<br>• WELL standard pre-assessment<br>• LEED pre-assessment<br>• Consultation with contractors |
| **Proposed Targets:** | • 100% of timber will be responsibly sourced with appropriate certification<br>• Materials specification to achieve LEED Silver, as a minimum<br>• Materials specification to achieve WELL standard, as a minimum |
| **Features of development proposals:** | *Low-impact, healthy construction materials:*<br><br>• Materials will comply with LEED Silver requirements, ensuring they are as low impact as possible<br>• Materials will comply with WELL requirements, ensuring they are as low impact and healthy as possible<br>• 100% of timber will be responsibly sourced with appropriate certification (e.g. FSC), in accordance with LEED<br>• All materials will be compliant with BES 6001<br>• A minimum average of 20% GGBS will be used in-situ concrete<br>• 100% of the steel used will be CARES Certified<br><br>*Provides a space for sustainable, resource-efficient businesses to thrive:*<br><br>• Tenanted space will be available for retail and food and beverage (2,000 sqm) and office-based businesses (26,000 sqm) and they will be required to show how they are carrying out at least one of the following:<br>  • Incorporate servicing or leasing products and materials rather than owning<br>  • Plan a sustainable end-of-life for materials and products<br>  • Reuse materials or products, on-site as a priority and if not, off-site<br>  • Offer material take-back schemes<br>  • Use reverse logistics<br>  • Have adaptable and flexible spaces designed for varying uses<br>• Management of an office products exchange system whereby companies can donate office goods to others in the building who might need them.<br>• The building manager / campus manager can ensure tenants are aware of options available for end of life options for office furniture etc<br>• Fit-out will be either be governed by BREEAM, LEED or SKA and will be significantly more resource efficient and achieve lower waste levels than traditional developments.<br>• Tenants will not be discouraged from carrying out any fit-out/re-fit activities which lowers the environmental performance of the building, in accordance with their lease agreement. |
| **KPIs** | • LEED certification<br>• WELL certification<br>• Percentage whole life embodied carbon reduction against estimated baseline<br>• Number of building/fit-out elements achieving A or A+ rating in BRE's Green Guide to Specification<br>• Proportion of fit-out elements adhering to the SKA assessment criteria (bronze, silver and gold)<br>• Proportion of materials (by weight or value) that are reclaimed or recycled (including hardstanding and infill)<br>• Proportion of workers/businesses involved in sharing or leasing equipment.<br>• Proportion of businesses directly involved with/contributing to the circular economy as their business function. |

| Zero Waste | |
|---|---|
| **Sustainability Objective:** | To minimise waste arisings from construction and operation by enabling all contractors and businesses to follow the waste hierarchy of reduce-reuse-recycle. Businesses will collaborate to reduce packaging and single-use materials significantly. |
| **Sources:** | • Design & Access Statement<br>• Consultation with architect<br>• LEED pre-assessment |
| **Proposed Targets:** | • Tenants will reach 70% reuse, recycling, composting rates during occupation<br>• Tenants will send zero waste to landfill |
| **Features of development proposals:** | *Minimise waste arisings:*<br>• Businesses will be encouraged to participate in a sustainability forum to implement innovative models to reduce waste on the site.<br>• The forum will help businesses share resources, reuse and reclaim materials or products.<br>• The ethos of the site management will encourage tenants to share data on waste on a regular basis, to enable monitoring and reporting of performance.<br><br>*Maximising reuse and recycling:*<br>• The design of waste facilities and areas will ensure there is adequate room for the segregation of waste. This includes food waste from food and beverage outlets. The waste room located in the basement should also make waste transportation and segregation simple and easy for tenants and the area should be kept clean, tidy and low odour. The building / campus manager will ensure the waste storage area is actively managed, cleaned on a regular basis – this will form part of the cleaning contract for the building.<br><br>*Businesses will collaborate to reduce packaging and single-use materials significantly:*<br>• There is commitment to making Bonham Quay 'Single Use Plastic Free'. This aspiration and guidance on how to achieve it will be included within the Building User Guide/Tenant Handbook.<br>• All businesses on-site will eliminate single-use plastics from their product offer and use, including disposable coffee cups, plastic water bottles, stirrers, straws, disposable cutlery, cotton buds, plastic balloon sticks, single-use plates, oxo-degradable plastics and food containers and expanded polystyrene cups<br>• Businesses will collaborate together to provide the facilities and services to enable single-use materials to be removed from their operation, such as providing water refill stations and reusable food and beverage utensils and containers<br>• Businesses will be encouraged to work together to minimise their packaging and eliminate single-use packaging, for example, sharing or selling pallets between businesses, reusing cardboard boxes or shredding them to make packing materials and developing collaborative solutions to "hard to solve" packaging problems |
| **KPIs** | • Total waste a) disposed of to landfill b) recycled and c) composted (by weight/person and total percentage)<br>• Total waste produced (tonnes) and segregation/diversion from landfill (%) during construction<br>• Total number/weight of products given a second life on site via the sustainability forum |
| | |

| Zero Carbon Energy | |
|---|---|
| **Sustainability Objectives:** | The development will be net-zero carbon by 2025 and deliver non-polluting, energy efficient operations during use. |
| **Sources:** | • Design & Access Statement<br>• Basis of Design Report 08<br>• Consultation with architect<br>• LEED pre-assessment |
| **Proposed Targets:** | Net-zero carbon development by 2025 |
| **Features of development proposals:** | *Net-zero carbon by 2025:*<br>• Efficient design means energy usage and the associated carbon impact of the office development is estimated to be roughly half that of a typical new office development meeting the current Irish Building Regulations. The buildings within the development will be Nearly Zero-Energy Buildings (NZEB) compliant.<br>• There will be 200m$^2$ PV for Block A, 320m$^2$ for Block D, 100m$^2$ of PV on Block B and 200m$^2$ on Block C, providing approximately 2% of the development's electricity demand.<br>• The heating and cooling will be provided via Air Source Heat Pumps (4 pipe chillers). This system has an energy transfer capability whereby when it is in cooling mode, it will generate free heating medium and so energy can be transferred from one section of the building to the other (i.e. south façade is in cooling whilst north façade requires heating).<br>• There will be a full fresh air heat recovery system which utilises a thermal wheel to capture 80% of the exhausted air energy and transfer it to the supply air for free heating. There are two of these air handling units for each block; one for office and one for cores and changing room.<br>• There is a plan to phase out fossil fuels completely by 2025. Gas for the development will be used to heat hot water for showers and wash hand basins and for this we are using direct gas fired hot water heaters. The HVAC design is future proofed so that water to water heat pumps can be added to the system to generate this hot water demand without the use of fossil fuels and remove the need for gas.<br>• Tenants will be encouraged to purchase REGO certified renewable energy, where possible, as a minimum.<br><br>*Energy efficient operations:*<br>• All lighting will be LED with daylight and absence detection.<br>• Individual tenanted areas will be metered, they will be encouraged to share the data to enable regular monitoring of energy use In common areas a metering system with an on-line dashboard will be used to detect any unnecessary out of hours usage. |
| **KPIs** | • % energy consumed from on and off-site renewable sources<br>• Greenhouse gas emissions compared to city baseline (kg$CO_2$e/ person/year and kg$CO_2$e/m$^2$/year)<br>• Annual energy consumption per capita against local benchmark |

# 7. Sustainable Construction

| Health and Happiness | |
|---|---|
| **Sustainability Objective:** | A construction site that protects and supports the health and happiness of site operatives and the public |
| **Sources:** | • LEED V4<br>• WELL Standard<br>• Sisk Environmental and Sustainability Policy<br>• Sisk Occupational Health and Safety Policy<br>• H&S reporting requirements<br>• Considerate Constructors Scheme |
| **Proposed Targets:** | • Considerate Constructors Scheme (CCS) Score target of 37<br>• Medical check to be conducted on site – 70% of operatives on site at that time to attend – Construction Workers Health Trust (CWHT)<br>• Zero LTI's / reportable accidents and zero dangerous occurrences. |
| **Commitments:** | • To be monitor all KPIs below and report twice annually on progress<br>• Construction Workers Health Trust to attend site to perform health checks<br>• Daily wash downs to control dust arisings<br>• Daily visual inspections<br>• No noisy working past 6pm at night unless agreed with council and notification made to local residents<br>• Offer free fruit in the canteen<br>• Issue high number of green tickets for the Behavioural Code<br>• Promotion and SISK Wellbeing Calendar<br>• Record and respond to complaints and enquiries from the public<br>• All workers using RPE (respiratory protection equipment) to have received face fit testing<br>• Adhere to the site's Contractor Responsibilities for WELL and LEED |
| **KPIs** | - Overall CCS score<br>- % site operatives attend medical check – CWHT<br>- Reporting LTI's / reportable accidents, and zero dangerous occurrences. |

| Equity and Local Economy | |
|---|---|
| **Sustainability Objective:** | The project team will favour local businesses and SMEs, employ local people and pay the National Living Wage to all. |
| **Sources:** | • Responsible Procurement Policy |
| **Proposed Targets:** | • At least 50% of construction companies and suppliers will be local during construction, to enable job creation and economic benefits to the local community<br>• At least 50% of direct Sisk suppliers expenditure will be with SMEs to support small and growing business in the industry<br>• Aim for 75% of the workforce employed from within a 50-mile radius.<br>• Every Subcontractor that works on-site will pay at least the Living Wage to its entire workforce |
| **Commitments:** | • To be monitor all KPIs below and report twice annually on progress<br>• Paying the Living Wage is one measure to counteract Modern Slavery and tackle 'working poverty'.<br>• Sisk will participate in a guest lecture series on organisational best practice in relation to sustainability in the construction sector in Ireland. Presenting on the sustainability practices at Sisk and how we embed sustainability in our operation<br>• Collaboration with Galway-Mayo Institute of Technology (GMIT) and the Environmental Protection Agency (EPA), using Sisk practices on site as a case study for an EPA funded GMIT project 'Build360' the main aim of which is the preparation of a Resource Efficiency and Material Circularity Protocol for the Irish Construction Sector.<br>• This site will be made available to local 2nd and 3rd level students for introduction to the construction industry |
| **KPIs** | - % operatives living within 50 miles<br>- Spend with SMEs<br>- % Local businesses and contractors<br>- Proportion of organisations within the supply chain paying the Living Wage |

| Culture and Community | |
|---|---|
| **Sustainability Objective:** | The site will form strong links with the community and support operatives to think about their own impacts. |
| **Sources:** | • Internal Social Value Portal<br>• CCS |
| **Proposed Targets:** | • 2 Visits by Number of School / College per year<br>• A score of >8 in the community section of the CCS |
| **Commitments:** | • To be monitor all KPIs below and report twice annually on progress<br>• The site will form strong links with the local community by engaging with groups and charities.<br>• Conduct community feedback questionnaire<br>• Dedicated CCS Champion on site<br>• SISK will support Bioregional and Edward Development with a One Planet Living series of event at the Galway City of Culture programme in 2020.<br>• SISK to provide employee site inductions to One Planet Living |
| **KPIs** | - Score in the community section of the CCS<br>- Number of School / College Visits |

| Land and Nature | |
|---|---|
| **Sustainability Objective:** | The site will demonstrate commitment to conservation by scoring at least a 7 in the CCS Environment Category. |
| **Sources:** | • CCS Report, CCS Action Plan / CCS Evidence workbook<br>• HSE Plan<br>• Aspects Register |
| **Proposed Targets:** | • A score of at least 7 will be achieved under the CCS relating to protecting the environment<br>• Zero reportable Environmental incidents |
| **Commitments:** | • To be monitor all KPIs below and report twice annually on progress<br>• Assess environmental risk through Aspects Register and HSE Plan.<br>• Inductions to include environmental requirements<br>• Dedicated Environmental Champion on site<br>• Adhere to the site's Contractor Responsibilities for WELL and LEED |
| **KPIs** | - Score Environmental Section of CCS Visit<br>- Environmental incidents recorded |

| Sustainable Water | |
|---|---|
| **Sustainability Objective:** | The site will minimise consumption of potable water and collect rainwater for use. |
| **Sources:** | • Sisk Sustainability Policy<br>• HSE Plan |
| **Proposed Targets:** | • <6m3 / €100,000 project spend |
| **Commitments:** | • To monitor all KPIs below and report twice annually on progress<br>• Install water meter<br>• Utilise rainwater harvesting unit<br>• Push taps in site accommodation |
| **KPIs** | - Water usage / €100,000 project spend<br>- Amount of rainwater harvested/used on-site |

| Local and Sustainable Food | |
|---|---|
| **Sustainability Objective:** | Utilise local store for canteen consumables |
| **Sources:** | n/a |
| **Proposed Targets:** | n/a |
| **Commitments:** | • To monitor all KPIs below and report twice annually on progress<br>• Canteen consumables to be purchased from local supplier<br>• Fresh fruit to be provided to site – aim for locally grown |
| **KPIs** | n/a |

| Travel and Transport | |
|---|---|
| **Sustainability Objective:** | To reduce exhaust emissions and local congestion as a result of site operations |
| **Sources:** | • Green Travel Plan<br>• Logistic Plan<br>• Traffic Management Plan<br>• Smartwaste<br>• Site Waste Management Plan |
| **Proposed Targets:** | • 25% of personnel use green travel – Bus/Train, Walk, Cycle<br>• Achieve lower than average commercial vehicle movements for construction sites - 18.1/£100k (UK equivalent)<br>• Record Carbon emissions from site deliveries |
| **Commitments:** | • To be monitor all KPIs below and report twice annually on progress<br>• Monthly log of transport methods to site<br>• Green travel plan to be produced<br>• Logistics Plan and Traffic Management Plan in place for deliveries<br>• Introduce an electric vehicle charging point on-site and transfer car leases to electric vehicles as they expire and where mileage allows<br>• Adhere to the site's Contractor Responsibilities for WELL and LEED |
| **KPIs** | - Percentage of personnel using green travel methods<br>- Carbon emissions from site deliveries (tonnes $CO_2$)<br>- Carbon emissions from removal of waste (tonnes $CO_2$) |

| Materials and Products | |
|---|---|
| **Sustainability Objective:** | Use of local, recycled and sustainable materials will be prioritised. |
| **Sources:** | • Sisk Responsible Procurement Policy |
| **Proposed Targets:** | • 100% FSC timber procured for permanently installed timber<br>• A minimum average of 20% GGBS to be used in in-situ concrete<br>• 100% Steel used to be CARES Certified |
| **Commitments:** | • To be monitor all KPIs below and report twice annually on progress<br>• All timber to be purchased from Chain of Custody (CoC) certified sources, where possible.<br>• GGBS to be used in in-situ concrete – subject to design / curing times<br>• Materials to be compliant with BES 6001<br>• SISK will participate in an EPA funded project called 'Build360', the main aim of which is the preparation of a Resource Efficiency and Material Circularity Protocol for the Irish Construction Sector.<br>• Adhere to the site's Contractor Responsibilities for WELL and LEED |
| **KPIs** | - FSC timber procured for permanent use<br>- Overall GGBS % in Concrete and cement saved (tonnes) |

| Zero Waste | |
|---|---|
| **Sustainability Objective:** | At least 90% of waste will be reclaimed and recycled |
| **Sources:** | • LEED V4<br>• Sisk Sustainability Policy<br>• HSE Plan<br>• Smartwaste<br>• Waste Management plan |
| **Proposed Targets:** | • >2.5t Construction waste / €100,000 project spend<br>• 90% of construction waste to be diverted from landfill (LEED Target 75%) |
| **Commitments:** | • To monitor all KPIs below and report twice annually on progress<br>• To segregate where possible – metals, plastics, plasterboard, clean dry recyclables, canteen, hazardous waste etc.<br>• Application of the Site Waste Management Plan<br>• Partnership with local recycling firm<br>• Explore takeback schemes<br>• Adhere to the site's Contractor Responsibilities for WELL and LEED |
| **KPIs** | - Tonnes Construction waste / €100,000 project spend<br>- % of waste to be diverted from landfill |

| Zero Carbon Energy | |
|---|---|
| **Sustainability Objective:** | Minimise the amount of energy consumed in site operations and procure green fuel where we can |
| **Sources:** | • Energy Management System<br>• Energy Policy |
| **Proposed Targets:** | • <1,500kg $CO_2e$ / €100,000 project spend for energy use on site |
| **Commitments:** | • To monitor all KPIs below and report twice annually on progress<br>• Early connections to mains electricity<br>• Select efficient plant and materials to aid energy efficiencies in procurement<br>• Use of energy efficiencies on site, i.e. door closers, LED lighting, switch-off policy, etc<br>• Offset of site electricity with reputable fund.<br>• Record energy usage on site |
| **KPIs** | - $CO_2e$ / €100,000 project spend for energy use on site |