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Introduction

Brighton & Hove was one of the first councils to declare climate and biodiversity emergencies and commit to becoming carbon neutral by 2030 (Brighton & Hove Council, 2021). The Circular Economy is a term that covers a broad range of system changes that will support the council's response to these declarations and towards achieving its 2030 Carbon Neutral goals.

In line with our approach to combatting these emergencies, in 2018 we committed to creating a Circular Economy Routemap to 2035 as part of the Economic Strategy for Brighton & Hove.

Circular Economy principles move away from a linear 'take, make, consume and throw-away society', towards one that minimises waste and pollution, keeps products and materials in use for as long as possible and supports the regeneration and protection of natural resources.

Since making the commitment, we've been working to identify the challenges and opportunities that moving to a Circular Economy approach will create in the city.

The routemap will grow and evolve over time, shaped around new opportunities, learning

and collaboration as the city begins to unlock its potential and transition towards circular systems and ways of working – driving sustainable economic prosperity and protecting our communities and the environment.

Brighton & Hove City Council plays an important role in leading our city in this ambition and we can use this position to facilitate a move to circular principles through our own practice as well as introducing policies that support the whole city in becoming more circular. We have a clear ambition:

Mission

We want to empower the city to end linear wasteful practices, do more with less and achieve carbon neutrality and support the recovery of nature through facilitating a change to a circular mindset.

Vision

Our vision is for our city to become a national frontrunner where Circular Economy practices and principles are embraced by all, as a route

to address the climate and biodiversity emergency.

This mission and vision will be supported by a forthcoming Circular Economy Action Plan. We are committed to continually reviewing the action plan to support the transition towards circular practices across the city.

What is the Circular Economy?

A Circular Economy aims to redefine economic development, focusing on positive society-wide benefits. It separates economic activity from the consumption of finite resources and, through design, aims to minimise waste.

The circular model builds economic, natural, and social capital and is based on three principles:

- Minimising waste and pollution.
- Keeping products and materials sustainable, so that they are in use for as long as possible.
- Regenerating and protecting natural systems.

“We can grow sustainably by generating ‘less harm’ to the environment. In a Circular Economy, the main goal is ‘doing good’ to our ecosystems” - William McDonough (a Circular Economy architect and pioneer)

The Circular Economy around the world

Brighton & Hove is not the first authority to embrace Circular Economy principles.

The EU created its Circular Economy Action Plan in 2015 (European Commission, 2020) in response to the momentum of this new way of thinking, including measures aimed at moving Europe towards a Circular Economy and encouraging sustainable economic development.

The measures adopted included actions to:

- reduce the use of natural resources;
- reduce waste;
- adopt new economic strategies designed to incentivise reuse, refurbishment and remanufacturing.

This has led governments, regions and cities across the EU to develop new strategies to transition to a Circular Economy system, including Scotland, London, Peterborough, Glasgow, Bristol, Amsterdam and Prague.

Outside of the EU other cities that are leading the way in CE include Vancouver, Canada and Charlotte and Baltimore in the US.

Learning from others and from what we have already achieved in the city, the council is setting an ambition for Brighton & Hove, to create:

- A liveable city with reduced congestion, better air quality, improved health and well-being, elimination of waste, and reduced consumption of natural resources.
- A strong and sustainable local economy, supporting green skills development and green jobs.
- A resilient city, reducing reliance on raw materials by keeping products in use and balancing local production with global supply chains.

With a high concentration of resources, capital, data, and talent, Brighton & Hove is uniquely positioned to drive a rapid transition towards a Circular Economy.

The council’s commitment

In December 2018, Brighton & Hove City Council and the Brighton & Hove Economic Partnership launched ‘Productive, Inclusive, Transformative: An Economic Strategy for Brighton & Hove 2018 to 2023’ (Brighton & Hove Council, 2018).

One of the strategy’s five key themes is ‘A Sustainable City: a city which looks to the future, focusing on its economy, on sustainable solutions to future challenges in order to protect and enhance the health and wellbeing of its residents and act as a leader in developing a robust response to climate change’ (Brighton & Hove Council, 2018).

Priority Action 6 of the strategy is to: ‘Promote the development of a circular and sustainable economy to minimise waste and pollution by reducing, reusing and recycling’, and Supporting Action SC1 for the ‘A Sustainable City’ theme is: ‘Create a Circular Economy Framework, incorporating Sustainable Development Goals, to 2035, for priority sectors, for the Brighton & Hove City Region.’ (Brighton & Hove Council, 2018).

The routemap is the result of 18 months of research and targeted engagement working with local circular experts including Circular Brighton & Hove, University of Brighton,

University of Sussex and Circular Economy research and innovation practice, SOENECS Ltd. The council held workshops and conferences attended by over 200 council staff and stakeholders from across the city, taking them on the first steps of this journey.

The council also joined [BLUEPRINT to a Circular Economy](#), a three-year, 5.6 million euro project funded by the European Regional Development Fund to help local authorities in England and France implement a Circular Economy. The project will end in 2023 having delivered the [BLUEPRINT model](#) (a toolkit of strategies and case studies to enable and accelerate the transition to a circular economy), Circular Economy procurement guidance, a new monitoring and evaluation framework for local authorities, a training programme, and a series of public behaviour change campaigns.

Five Circular Approaches

Inspired by approaches adopted by other cities from around the world, we have chosen to focus on the following five approaches to help deliver our vision and prioritise actions and opportunities over the coming 13 years:

1. **Changing the approach to design** to embed circularity and change behaviour
2. **Extending product life** through systems across the city
3. Exploring **new business models**
4. Treating **waste as a resource**
5. The use of resources will prioritise **social, environmental and economic value**

1. Changing the approach to design

The way products, infrastructure and services are designed impacts their entire lifecycle. Therefore, if the focus shifts to one that uses new sustainable materials; reduces the use of materials; remanufactures during use; disassembly at end of life; and recycling as a last resort, there will be less damage done to the environment.

In 2019 a Sussex University graduate designed MarinaTex – a home compostable alternative to plastic film and created from fish waste and algae. The creator of MarinaTex has won international awards and has spoken at a UN panel on the potential for designing out plastic.

2. Extending product life

Good product design promotes reuse, sharing, redistributing, donating, repairing, and remanufacturing.

Recycled goods shops, repair and redistribution projects, community tool banks (tool lending), apps for sharing food, and resource sharing projects and businesses are all examples of organisations and initiatives supporting extending resource, material and product life.

We are working in partnership with Tech-Takeback and The ZeroNet to extend the product life of electricals within the city. The RevaluElectricals service is for residents and small businesses and collects from the doorstep, via an app, end of life electricals for data erasure, refurbishment, and reuse with local charities and digitally excluded families. We are also supporting thriving community reuse and repair projects across the city through the council's community grants programme and supporting them in building their capacity and reach.

3. Exploring new business models

Instead of the traditional consumption model of purchasing items, goods or capital, a move to offering products as a service, renting products, sharing, re-selling, or leasing could be better financially and environmentally over

the longer term, as it allows customers to purchase a desired result rather than the equipment that delivers that result.

For example, Brighton & Hove's [BTN BikeShare](#) provides users with the chance to pay for the miles cycled and not the bike itself.

4. Treating waste as a resource

Using waste products of any kind, as a source for a new product, saving waste from landfill, incineration, and closing the loop.

The Brighton Waste House is Europe's first permanent public building made from 90% post construction waste (University of Brighton, 2013). It was designed by Duncan Baker Brown, Senior Lecturer, School of Architecture and Design, University of Brighton with materials sourced via Freegle. Over 50 tonnes of waste that were destined for landfill have been used to build the University's headquarters for ongoing sustainable design research, whilst doubling up as a public exhibition and workshop space for green-themed events.

5. The use of resources will prioritise social, environmental and economic value.

We will prioritise the use of resources and products that are renewable, do not contain

any hazardous chemicals, are biodegradable, or have minimal packaging.

Windfarms, green roofs, local and organic farms, community gardens, restaurants who compost and serve seasonal, local foods provide a range of examples where social and environmental value is prioritised already within Brighton & Hove.

The Real Junk Food Project and Brighton & Hove Food Partnership are proving how approaches to food waste reduction within the city can result in multiple benefits for the community.

The Circular Economy and human prosperity

Our city can expect transformational changes over the coming decades in all aspects of city life including: how we work, the jobs that are on offer, how we move around our city, how information is shared, the homes and communities that we live in, our future food and energy security, and our overall environmental footprint.

The Circular Economy approach provides a real opportunity for the city in terms of nurturing local businesses, skills development

and enterprise. It contributes to keeping wealth local and prevents flows of materials, skills and investment from leaving the city by harnessing the wealth that exists locally. It is also an opportunity to facilitate a transition which 'builds back better' after the Covid pandemic and creates an inclusive economy focused on social aims, social justice, environmental sustainability, and prosperity.

It can do this through:

- **Creating new jobs and skills training** in the areas of material processing, repair, remanufacturing and logistics, where the nature of the work is more creative and fulfilling;
- **Reducing dependency on overseas manufacturing** as we shift to local remanufacturing, upcycling and designing out waste.
- **Creating more equitable access to valuable products**, as we shift from ownership toward product-as-a-service models;
- Reducing the amount of money that leaves the local economy, **creating a greater circulation of wealth locally**;
- **Growing resilience to global economic shocks**, as global supply

chains are replaced with local, circular supply chains;

- **Creating a healthier world**, as products bound for the UK are largely manufactured in countries with weaker controls on the emission of toxic substances harmful to human health; and
- **Reducing civil conflict** in countries where mining for minerals (found in smartphones, tablets, computers and electric vehicles) is largely controlled by armed groups.

The role of the city council in creating a Circular Economy city

The council can be the facilitator of change, as a key stakeholder in regional and national partnerships, we will work in partnership to adopt circular approaches to the way we and others work.

We want to shape policy, deliver projects, maximise our assets and resources in a way that supports businesses to grow sustainably, to protect and generate jobs, and create a healthy environment for our citizens.

There are five roles that we have within our control:

Planning the future circular city

As a local planning authority, we can influence new development proposals to use the principles of circularity to minimise the use of new materials, avoid waste and support high recycling rates. We can encourage innovative building design and construction methods, designing for adaptability, flexibility and re-use.

Using our land and buildings to demonstrate circular solutions

As an owner and user of land, roads and buildings, we can identify and use public property for Circular Economy partnerships.

Procuring Circular Economy solutions

As a procurer of services, we can accelerate the introduction of Circular Economy goods and services.

Leading the city towards a circular future

As a convenor, we can promote knowledge sharing through accessible platforms for information and guidance. We can set the benchmark for others to follow through bold public initiatives and by spreading best practice.

As a stakeholder in the environment

Brighton & Hove City Council, alongside citizens, businesses, universities and other public sector bodies, is a stakeholder in the urban, rural and marine environment. We are proud to be the lead partner of UNESCO designated Biosphere Reserve called '[The Living Coast](#)' and can use this opportunity to work collaboratively with our biosphere partners in maximising circular opportunities across the wider Biosphere region. Collaboration is key to protecting our local environment.

"I believe it will be competing city states and regions that give us all hope, not governments preoccupied with numerous other 'big issues' before they can think of the climate emergency question. With over 50% of the world's population now residing in cities, and over 80% in the UK, cities are now the main driver for economic and system change and have the potential to power a successful Circular Economy." Duncan Baker-Brown, Senior Lecturer, School of Architecture and Design, University of Brighton

Priority areas

We will initially concentrate on two key sectors for the city: the built environment and Food & Drink, before expanding to look at other areas.

Built environment

The built environment was chosen as the first priority sector due to the level of impact on the environment and the fact that there is significant new build and re-development planned for Brighton & Hove over the next 13 years.

The sector is the highest user of raw materials in Brighton & Hove and has the biggest influence on CO2 emissions from construction, in use, through to demolition. It determines the city's character and the way people travel, work and live.

In England, according to DEFRA, the construction, excavation, demolition and deconstruction of built environment is responsible for:

- 36% of all carbon emissions (European Commission, 2011)
- 40% of energy consumption (European Commission, 2011)
- 50% of all raw material extraction (European Commission, 2011)

- 33% of all potable water usage (European Commission, 2011)
- 60% of all waste (DEFRA, 2021)

All aspects of the built environment can be adapted to fit into Circular Economy thinking. From how infrastructure is designed, to the materials used, the construction methodology, the way occupants use infrastructure and finally what happens at the end of the infrastructure's life.

Food & Drink

Pre-pandemic, the visitor economy in Brighton & Hove was worth £886 million, generated by over 11 million visitors annually, and it accounted for around 14% of all employment, equivalent to 21,000 direct jobs in the local economy (Brighton & Hove Council, 2018).

One major source of waste in the visitor economy is food. Every year, one third of all food produced for human consumption is lost or wasted. The prevention of food waste will be a key action area.

Food systems currently account for 21-37% of total GHGs. They also hold solutions to e.g. biodiversity loss, enduring hunger and malnutrition, and an escalating public health crisis.

A sustainable food system is where the growing, eating, and disposal of food benefits the economy, people, and the environment.

Brighton and Hove already has a strong foundation of networks and organisations involved in *'the collaborative and city-wide effort to create a healthy, sustainable, and fair food system'*. As a city awarded Gold Sustainable Food Places status and a signatory of the Glasgow Food and Climate declaration, we recognise that urgent action is required, at scale, to have an impact. We are therefore also progressing work to support the transition to a sustainable city-region food system.

Our Vision

Our vision is for our city to become a global frontrunner where Circular Economy practices and principles are embraced by all, as a route to fighting the climate and biodiversity emergency. How does this look in practice?

- By 2030, halve food waste in the city, in line with the target of the global Sustainable Development Goal 12.
- By 2030, reduce consumption of primary raw materials in the city (minerals, fossils, timber and metals) by 50% and replace with secondary raw materials.

- By 2030, achieve a reuse and recycling rate of 50% for municipal materials.
- By 2030, have a net zero carbon city.
- By 2035, work with partners to attract investment of over £100 million in Circular Economy activity within the Greater Brighton area.
- By 2035, work with public sector partners to ensure that 75% of external, priority area, public sector spend will be on circular products and services, 50% of which with local suppliers.

At present we cannot track progress against this more detailed vision due to missing data. We welcome innovations in local-level data collection from research partners and industry representatives. To fill the monitoring and evaluation gap, the council is consulting with local leaders in the Circular Economy to determine which *enablers* we should monitor in the short and medium term.

Action plan

An action plan has been developed to deliver Circular Economy solutions in the Built Environment and Food & Drink sectors. It will evolve over time to include additional priority areas and adapt to changing contexts as they emerge.

The first iteration of the Action Plan has been published in full on the council's website at: [\[awaiting weblink\]](#). A few key actions have been pulled out to illustrate our Routemap to a Circular Economy (view images below).

Built environment Routemap

From **2022** undertake a Circular Economy opportunities assessment and evaluation of all council new build housing construction projects.

In **2022** develop ways of monitoring embodied carbon in new build developments to improve awareness of and encourage the adoption of low-carbon, circular construction practices in the private housing sector.

In **2023** review the existing Highways Asset Management Plan to reduce the environmental impact of highways maintenance and construction.

By **2024** develop and begin delivery of a sustainable drainage plan to protect highways and properties from surface water flooding and extreme weather events, protect the chalk aquifer, and provide natural habitat for local species.

By **2025** embed Circular Economy principles in the new City Plan with policies that identify the Circular Economy factors required to be incorporated in development proposals.

By **2030** specify in project briefs at least 60% of all materials used in a new development are recoverable at the end of life of the building on all new build housing projects.

Food Routemap

In **2022** deliver a targeted programme to support on-going circular economy learning and action in schools, to include a focus on food, and embed this within the wider 'whole school approach' to climate action.

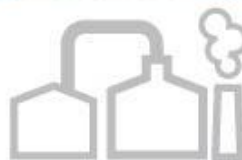


In **2023** develop and consult on options for the future delivery of refuse and recycling services, which includes a new food waste collection service.



By **2024** deliver an event showcasing local circular Food & Drink solutions and create opportunities for peer learning and exchange to help businesses better understand and implement Circular Economy principles in their day-to-day activities.

By **2030** halve food waste in the city, in line with the target of the global Sustainable Dev't Goal 12.



In **2027** aim for 50% of all priority area, internal and external public sector spend to be on circular products and services, with at least 55% supplied by local companies.

Next steps

An oversight board made up of council representatives and stakeholders has been created to drive, oversee and maintain progress against the first and future iterations of the council's forthcoming Circular Economy Action Plan.

The council and its partners also follow projects which embed circular principles, finding successes and overcoming problems, from which others can learn and take inspiration from. The council will join partners in communicating these projects and opportunities for residents and businesses to participate in the Circular Economy on its engagement site: climateconversationsbrighton.uk.engagementhq.com/the-circular-economy-in-brighton-hove.

We want all stakeholders to get involved in the Circular Economy and help our city transition to a Circular Future!

Get involved

A move to the Circular Economy must involve stakeholders across the city. Businesses operating locally can reduce waste and take advantage of new business models.

Universities can foster the development of new materials and enterprises. Schools can nurture circular thinking into young minds. Residents and communities can work together to share and re-use.

If you or your organisation would like to learn more about circular actions it can take, join the conversation at <https://climateconversationsbrighton.uk.engagementhq.com/the-circular-economy-in-brighton-hove>

If your organisation is *already* implementing Circular Economy solutions, be sure to join the city's [Circular Economy Map](#). The map already hosts over 100 organisations and initiatives contributing to a Circular Economy in Brighton & Hove.

Residents wishing to support a city-wide culture shift and education campaign in 2022

can register interest to [become a Circular Economy Champion](#) by emailing BLUEPRINT@brighton-hove.gov.uk with the subject line "Becoming a Circular Economy Champion".

Get inspired

The BLUEPRINT project identified a long list of Circular Economy solutions already in action in Brighton & Hove and its partner cities. To find inspiration for a new business idea or a potential circular collaboration, you can view these at <https://projectblueprint.eu/solutions>.

Case studies, such as the [Brighton Waste House](#), [RevaluElectricals](#), [MarinaTex](#), [Brighton Bike Share](#), and [The Brighton & Hove Food Partnership's community composting scheme](#) help bring opportunities to life and show the exciting work happening in the city. You can read the case studies or register a new initiative at https://climateconversationsbrighton.uk.engagementhq.com/the-circular-economy-in-brighton-hove?tool=brainstormer#tool_tab.

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