

Dublin City Council

# Annual Progress Report 2021/22

Climate Change Action Plan 2019-2024

Climate Action Team  
11-18-2022

# Annual Progress Report 2020/21

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## 1. Introduction

Dublin City Council's Climate Change Action Plan 2019-2024 (CCAP) was approved on May 13, 2019 in accordance with the National Adaptation Framework – Planning for a Climate Resilient Ireland 2018 (NAF). The Plan was also completed in accordance with the requirements of the Covenant of Mayors (COM) for Climate & Energy to which Dublin City Council (DCC) is a signatory.

The Plan sets out 4 key targets and 219 actions that the Council will undertake in the areas of energy & buildings, transport, flood resilience, nature-based solutions and resource management (Figure 1). The Plan has been developed by DCC in conjunction with the City of Dublin Energy Management Agency (Codema) and the Dublin Climate Action Regional Office (CARO). The Plan was subject to public consultation and Strategic Environmental Assessment processes. Annual progress reports are required as part of the National Adaptation Framework (NAF) and Covenant of Mayors (COM) processes. DCC has committed to reviewing and reporting on this Plan annually.

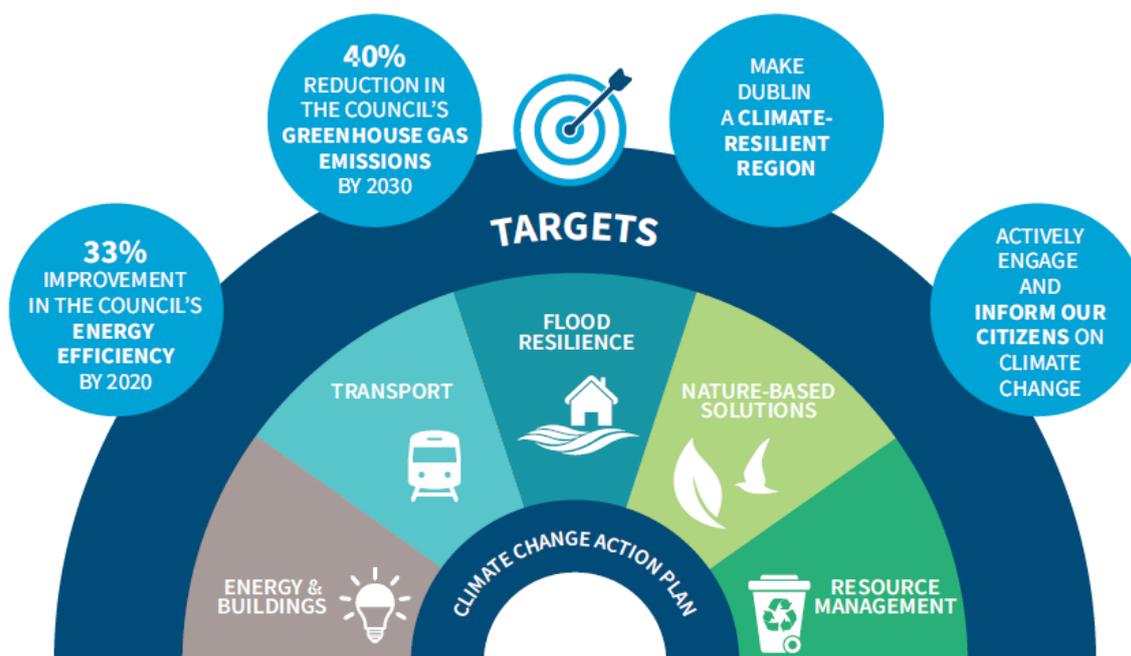


Figure 1 CCAP Targets and Action Areas

This second annual report covers the reporting period from 30th September 2020 to 30th September 2021. The report includes a discussion of policy changes within this period.

Through an ongoing process of review and refinement with teams responsible for the implementation of actions across thematic areas, the current number of actions in the CCAP is 199 actions (Figure 2). Of the 199 actions, 89.4% are ongoing, 8.5% have been completed, 6.0% have not been started and 7% are new. The high percentage of ongoing actions is due to actions being part of operations and service delivery, and timescales associated with actions, addressing this will be a focus for the next year. Appendix I provides additional detail on action progress. The overall change in number of actions is a reflection of the CCAP being a living and fluid document, responding to

changes in policies and circumstances as they arise. Over the course of the plan’s lifetime, this number will fluctuate.

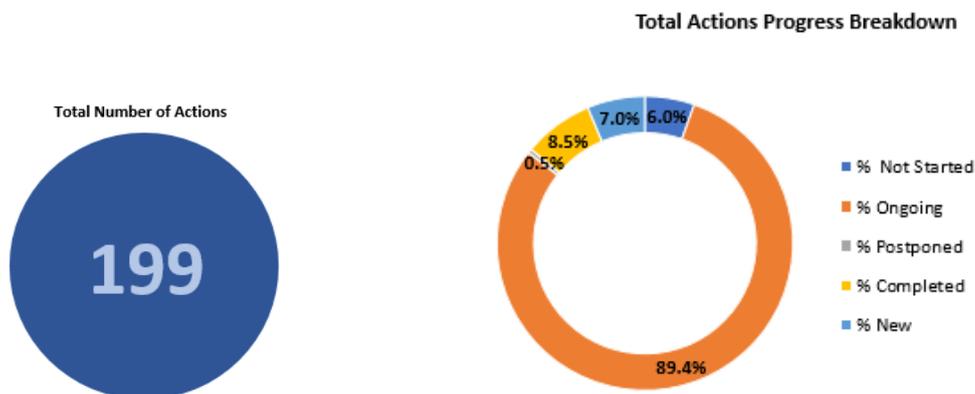


Figure 2 Actions and Progress

## 1.1 Climate Action Team Updates

### 100 Climate Neutral and Smart Cities

In January 2022, DCC submitted an expression of interest to join the EU Mission for 100 Climate Neutral and Smart Cities. On April 28<sup>th</sup> 2022 Dublin City and Cork City were announced as the two successful Irish cities. There are 112 cities across Europe that are part of the EU Mission led by Net Zero Cities (NZC). Together with these cities, Dublin City and Cork City will strive to reach climate neutrality by 2030.

### Four Mayors – Belfast, Dublin, Liverpool, Manchester

On March 30, 2022 the then Lord Mayor of Dublin, Alison Gilliland signed an agreement with the Mayors of Belfast, Liverpool and Manchester. The cooperative partnership agreement commits the four cities to cooperating and collaborating to reach net zero targets by exchanging knowledge, experience and best practices; and by connecting organisations and facilitating R&D, business and investment collaborations.

On foot of this partnership DCC and Belfast City Council submitted an application to the Shared Island Fund to undertake a feasibility study – A Connected Circular Economy.

### IURC – Seoul Partnership

In May 2021, DCC submitted an application to participate in the EU’s International Urban and Regional Cooperation (IURC) programme. The application was successful and DCC is one of three EU cities partnered with cities in South Korea. Participation in IURC is an opportunity for the development of novel ideas and approaches to achieve sustainable development and increase the resilience of the city and citizens to climate change.

Dublin's cooperation with Seoul is designed to foster dialogue and learning between cities and regions on various thematic areas such as urban planning, transport and greening through a series of bilateral meetings and study visits. In the past year there have been four bilaterals focused on sharing experiences with active travel specifically walking and cycle. In August the bilaterals culminated in a study visit to Seoul.

Based on the presentations and anticipated learning opportunities for the City Council's work in the areas of transport, and nature-based solutions a team was identified. Following approval from senior management a delegation of the three senior staff were sent: Brendan O'Brien, Head of Technical Services (Traffic), Christopher K. Manzira, Deputy Director for Active Travel Programme and Leslie Moore, Head of Parks, Biodiversity and Landscape Services.

### Public Sector Innovation Fund – Climate Ready Housing

In December 2021, DCC submitted an application to the Public Service Innovation Fund to utilise digital twins to investigate retrofit options for social housing. Initially the application was not successful, and we were placed on the reserve list. In June 2022 we were approved for €27,000 in funding to undertake our proposed project "Climate Ready Housing".

### Third Level Engagement

In recognition of the value of the students' work to progressing climate action, DCC intends to further develop partnerships with third level. In the past year DCC has considered models for engaging with third level and is currently reviewing how departments across the organisation are actively engaging with third level, who needs and wants to engage with third level, and where the opportunities are to engage with third level. This process is being led by a team in Human Resources.

### Climate Newsletter

In January 2021, the first issue of the DCC Climate Newsletter was published. In 2022, 3 issues were produced that continued to highlight actions from the DCC Climate Action Plan, as well as raising general awareness of climate actions we can all take as individuals, such as reducing waste and minimising plastic use.

We also looked at the participation of DCC in collaborative international climate initiatives such as the IURC programme and the EU 100 Climate Neutral and Smart Cities project.

The newsletter is circulated to staff and shared via the Public Participation Network to community groups around Dublin. Amongst the news features in 2022 were the Eat the Streets! Festival, the 'Climate Campaigners' app launch, circular economy, active travel and health. Issue 4 will take a look back at key events throughout the year and offer some tips for a low waste Christmas. The newsletter has been well received and we are continuing to incrementally expand the circulation list.

### Events

#### DCAW22

The four Dublin local authorities in conjunction with Codema and CARO organised 'Dublin Climate Action Week' in September 2022. The overall vision of Dublin Climate Action Week 2022 was – 'to

highlight Dublin's climate action progress to its citizens and demonstrate the leadership role of the four local authorities in conjunction with other partners'.

A steering group chaired by South Dublin County Council worked together to devise a programme of events and promotional material to showcase the shared objectives of the initiative which were to:

- Demonstrate progress on the implementation of the four Dublin local authority Climate Change Action Plans, and a regional approach to climate action;
- Engage with a full range of partners to share knowledge on efforts and innovation across sectors;
- Make climate action a 'reality' allowing citizens to see what climate action looks like;
- Promote this initiative so as to fully engage with EU and international cities and our climate peers; and
- Create a legacy so that this initiative can carry forward to subsequent years in a variety of ways.

The website [www.dublinclimateactionweek.ie](http://www.dublinclimateactionweek.ie) was established as a portal for information and booking of events. In total over 50 in-person and on-line events were delivered across the CCAP theme areas of Energy & Buildings, Transport, Flood Resilience, Nature Based Solutions, Resource Management and Citizen Engagement. The website continues to be a repository of information containing recordings of events and links to local authority work in the area of climate action. In addition to the website, the handle #DCAW22 was used in conjunction with regional and local videos and various media to promote and highlight the activities during the week both locally, nationally and internationally.

#### *Eat the Streets 2022*

Eat the Streets! explored Dublin's rich food history by asking people, young and old to join us on a journey to Grow! Cook! Create! And Discover! In 2022 Eat the Streets! was a one-day festival, held in the National Museum of Ireland at Collins Barracks. It featured sustainable vendors, after lunch chats, cook alongs, activities for children, museum tours and cycle courses. The programme was designed to educate and encourage participation in food growing, as well as a creating a greater awareness of food waste. The After Lunch Chats included discussions on the topics of "Green and Edible Cities: Can We Eat Our Streets?", "Innovating for a Circular Food System" and "We heART What We Eat". As part of Dublin Climate Action Week, we had two 'appetizer' After Dinner Chats, that explored "A Healthy Planet from the Ground Up!" and "Building Communities at the Dinner Table.

# Eat the Streets Festival!

National Museum of Ireland  
Collins Barracks, Dublin 7

Sat 17 Sep 2022 12-5pm

Bringing together families, farmers, urban growers  
and neighbourhoods to celebrate Dublin's food!



Figure 3 Eat the Streets Festival!

## Climate Campaigners Launch

On September 15<sup>th</sup>, DCC and 13 other cities around the world launched the Climate Campaigners App. Residents of Dublin & Milan & Lahti & Izmir & Linz & Grenoble & Malmö & Freistadt & Vilnius & Pesaro & Skopelos & Trois-Rivières & La Libertad & Cape Town, can use the app to take up climate challenges to change climate change together. Residents of Dublin can contribute to our 2030 vision for Dublin, a city: that is on-track to achieving a transition to a competitive, low carbon, climate resilient and environmentally sustainable economy.

We marked the launch a series of walks around the city – green paths – that informed residents who participated about various climate action projects in the city. The walks were along the River Dodder, River Santry and River Liffey. In the new year we will look at small events to encourage people to sign up to the app.



Figure 4 Climate Campaigners Launch, Herbert Park

## 1.2 Climate Impacts 2022

According to Met Eireann's Climate Statement, the winter of 2021/22 was the sixth mildest of 123 winters on record, and was the seventh consecutive winter where temperatures were above the long-term average (Met Eireann, 2022). February saw three consecutive storms: Storm Dudley on February 16<sup>th</sup>, Storm Eunice on February 18<sup>th</sup> and Storm Franklin on February 20<sup>th</sup> and 21<sup>st</sup>.

Spring 2022 was dry and mild with all three months having mostly above average temperatures and below average rainfall. Summer 2022 was the fifth consecutive season where every station recorded above average mean temperatures. June was wetter than average and mild. July and August were also very dry months with, new high maximum daily temperature records being set. This was due to the Azores high pressure building up over Ireland on a several times bringing warmer and drier conditions. Between Sunday 17<sup>th</sup> and Tuesday 19<sup>th</sup> of July, an exceptionally hot tropical continental air mass moved over Ireland and the UK from the south-southeast, bringing record high maximum daily temperatures at nine synoptic stations (Figure 6). Further, heatwave conditions in August between Tuesday 9<sup>th</sup> and Sunday 14<sup>th</sup> saw another record-breaking spell, with eleven synoptic stations breaking their August maximum daily temperature records including a new all-time record maximum daily temperature for August.

It is evident that in recent years the frequency and intensity of weather events are increasing (Appendix II). The need to adapt and prepare for future events is no longer a 'what if' but 'when, how intense, and what will be the cascading impacts'.

Provisional Gridded Rainfall 2022 (83 % of 1981-2010 LTA)

Saturday 1 January 2022 and Wednesday 31 August 2022 inclusive

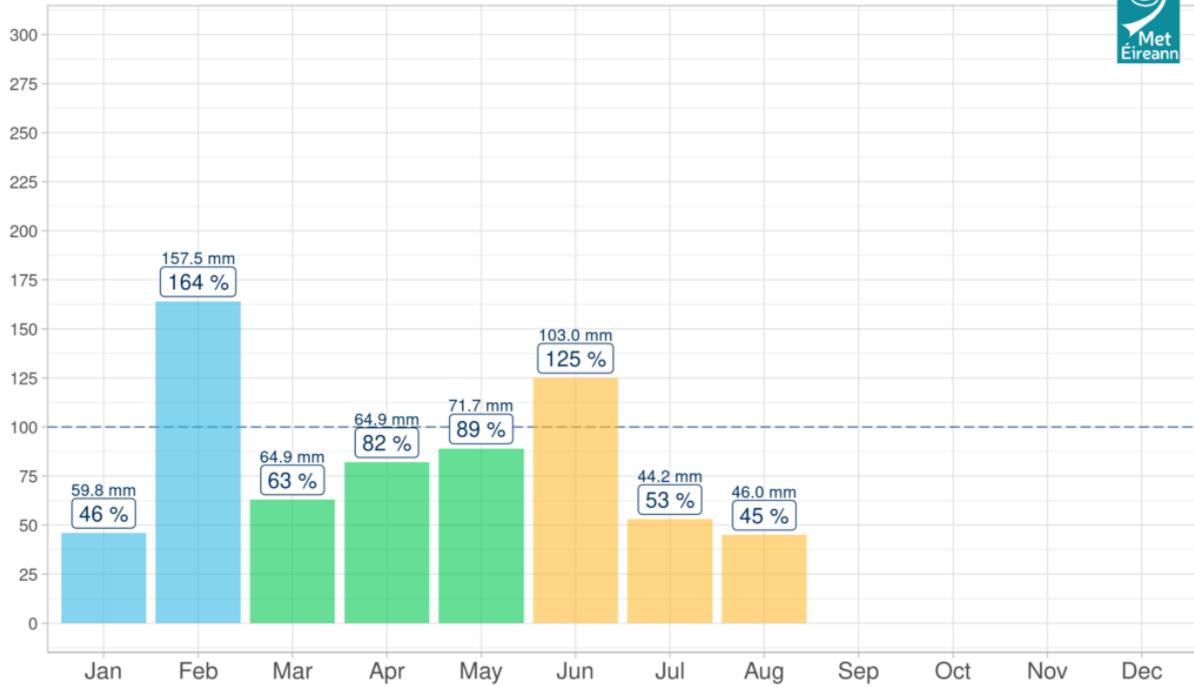


Figure 5 Met Eireann 2022 Rainfall vs Long Term Average

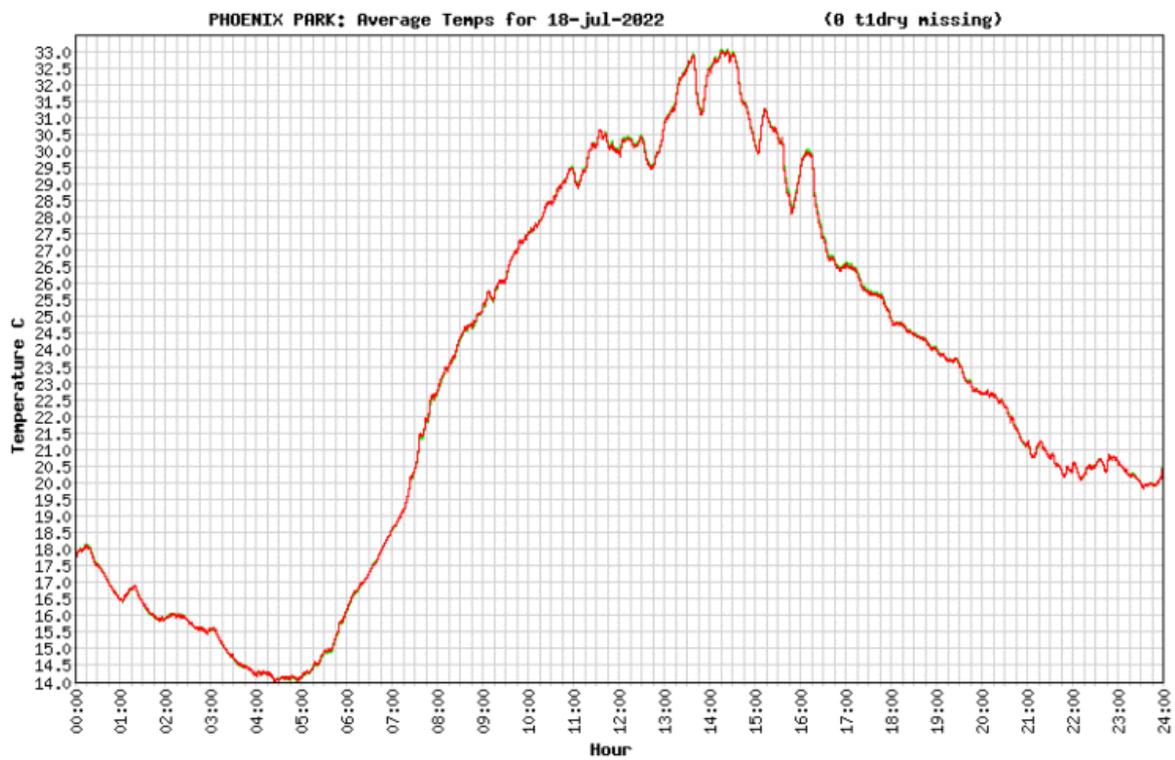


Figure 6 Phoenix Park Temperature July 18th, 2022

### *Climate Risks Going Forward – Heat Waves*

In the *Intergovernmental Panel on Climate Change (IPCC) Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, models project substantial warming in temperature extremes by the end of the 21<sup>st</sup> century. “It is *very likely* that the length, frequency, and/or intensity of warm spells or heat waves will increase over most land area” (IPCC, 2012). More recently, the IPCC WGII AR6 report, highlights the risk for cities and notes that in urban environments extreme weather has adverse impacts on human health, livelihoods, key infrastructure (transportation, water, sanitation and energy systems), and aggravated air pollution, which can result in economic losses, disruptions of services and negative impacts on well-being (IPCC, 2022a).

According to IPCC WGII AR6 Report, climate change, particularly heat waves and droughts, will place increased pressure on food systems, from production to access, especially in vulnerable regions, further exacerbating food security and nutrition. Global warming will adversely affect soil health and ecosystem services, pollination, and increase risk of pests and diseases and reduce marine animal biomass – all of which will undermine food security.

Previous heat waves in Europe adversely affected the agriculture sector with harvests being lost due to water scarcity and high temperatures. Impacts on agriculture due to heat waves in summer 2022 across Europe are being further compounded by the global food crisis due to the war in the Ukraine (United Nations, 2022). The *World Meteorological Organisation (WMO)* has reported that in some countries, economic sectors like tourism and hospitality that are recovering from the Covid-19 pandemic are already suffering due to these extreme weather events.

Increased exposure to extreme events such as heat waves will have negative impacts on population health and well-being from the near- to long-term due to both exposure to the heat, as well as food-, water- and vector-borne disease risks (ibid).

Heat waves can trap pollutants resulting in degraded air quality, which has adverse health impacts, particularly for vulnerable people (World Meteorological Organization, 2022). When a heatwave is matched with high levels of pollution, it can exacerbate respiratory and cardiovascular diseases as well as causing heatstroke and serious forms of hyperthermia, which can lead to premature death. Infants, children and older people are particularly vulnerable. Heat can kill and in past decades, hundreds of thousands of people have died as a result of extreme heat during extended heatwaves, as well as due to wildfires (World Health Organization, 2022). In the 2003 heat waves, 70,000 people died (United Nations, 2022). This year, there has already been 1700 deaths due to the heatwave in Spain and Portugal and wildfires are occurring as far north as Scandinavia, having destroyed 41 homes in London during the July heatwave (World Health Organization, 2022).

## 1.3 Updates to Policy and Legislation

International:

### *IPCC WGII and WGIII Report*

The IPCC *Sixth Assessment Report (AR6)* is comprised of three working groups (WG), each with the responsibility for reviewing available research to inform the *Physical Science Basis* of climate change (WGI), *Impacts, Adaptation and Vulnerability* (WGII) and *Mitigation of Climate Change* (WGIII). Since the CCAP Annual Progress Report 2020/21, WGII and WGIII have been published:

- AR 6 WGII:** WGII assesses the impacts of climate change on ecosystems, biodiversity and human settlements globally and regionally. People’s health, lives and livelihoods are being adversely impacted, in addition to property and critical infrastructure, including energy and transportation systems, by heatwaves, storms, droughts, flooding and slow-onset changes like sea level rise (IPCC, 2022a). The Chair of the IPCC, Hoesung Lee, has stated, “this report is a dire warning about the consequences of inaction” (IPCC 2022b). A key outcome of the report is the confirmed and unavoidable climate hazards that will occur over the next two decades with global warming of 1.5°C, which if exceeded, even temporarily, will result in severe impacts, some of which will be irreversible (IPCC, 2022a). Increased heatwaves, droughts and floods are already exceeding plants and animals’ tolerance thresholds, resulting in mass mortalities in species such as trees and corals (ibid). Compounding this is the fact that weather extremes are occurring simultaneously causing cascading impacts that are becoming increasingly difficult to manage. AR 6 WGII works to highlight the importance of healthy ecosystems, as they are more resilient to climate change and essential to provide life-critical services such as food and clean water (ibid). The key finding of the report clearly states, *“Climate Resilient Development is already challenging at current warming levels. It will become more limited if global warming exceeds 1.5°C. In some regions, it will be impossible if global warming exceeds 2°C. This key finding underlines the urgency for climate action, focusing on equity and justice. Adequate funding, technology transfer, political commitment and partnership lead to more effective climate change adaptation and emissions reductions. The scientific evidence is unequivocal: climate change is a threat to human wellbeing and the health of the planet. Any further delay in concerted global action will miss a brief and rapidly closing window to secure a liveable future,”* (IPCC, 2022b).
- AR 6 WGIII:** WGII report, *Mitigation of Climate Change*, provides an updated assessment of climate change mitigation progress, pledges and sources of global emissions. It examines and explains the developments in emission reduction and mitigation efforts, alongside national climate pledges and their long-term emission reduction goals (IPCC, 2022c). The WGIII reported greenhouse gas (GHG) emissions were the highest in human history in 2010-2019, but the rate of growth has slowed (ibid). However, without immediate and drastic emission reductions across all sectors, limiting global warming to 1.5°C will be impossible, the report warned (ibid). With the release of WGIII, the report’s co-Chair Priyadarshi Shukla said, “Having the right policies, infrastructure and technology in place to enable changes to our lifestyles and behaviour can result in a 40-70% reduction in greenhouse gas emissions by 2050. This offers significant untapped potential. The evidence also shows that these lifestyle changes can improve our health and wellbeing” (IPCC, 2022d). A key finding of the report is the scenarios assessed limiting warming to 1.5°C requires GHG emissions to peak before 2025 at the latest, and to be reduced to 43% by 2030 (IPCC, 2022c). The report explained that the global temperature would stabilise when carbon emissions reach net zero. For a 1.5°C scenario, this means achieving net zero carbon dioxide emissions globally by the early 2050s, for 2°C, it is in the early 2070s (ibid).

EU:

[REPowerEU](#)

REPowerEU is the European Commission’s plan to reduce the EU’s dependency on Russian fossil fuels in light of Russia’s invasion of the Ukraine, and climate change. It is a response caused by the disruption of Russia’s actions, which has caused an urgency to transform Europe’s energy system

and its dependence on Russian fossil fuels, which has cost European taxpayers nearly €100 billion per year (European Commission, 2022).

The plan intends to achieve its ambition through energy savings, diversification of energy suppliers, and an accelerated roll-out of renewable energy in order to replace fossil fuels. The European Commission has stated that energy savings are the most cost-effective method to address the current energy crisis (ibid). It proposes an enhancement of long-term energy efficiency measures through the *Fit for 55* energy efficiency targets within *European Green Deal* legislation (ibid). REPowerEU interlinks energy security and a clean energy transition, addressing both the energy crisis created by Russia's invasion of Ukraine, and the threat of climate change.

National:

#### *Carbon Budgets*

Under the *Climate Action and Low Carbon Development (Amendment) Act 2021* the *Climate Change Advisory Council* must propose carbon budgets for each of the periods, 2021-2025, 2026-2030, and 2031-2035 (provisional). A carbon budget encompasses the total amount of emissions, measured in tonnes of CO<sub>2</sub> equivalent that may be emitted during a specific time period. The first carbon budget programme came into effect in April 2022, after being approved by the Government and adopted by both Houses of the Oireachtas (Department of the Environment, Climate and Communications 2022).

The total emissions allowed within the budgets over each 5-year period are listed below:

- 2021-2025: 295 Mt CO<sub>2</sub> eq (4.8% emission reduction per annum over the budget period)
- 2026 -2030: 200 Mt CO<sub>2</sub> eq (8.3% emission reduction per annum over the budget period)
- 2031-2035: 151 Mt CO<sub>2</sub> eq (3.5% emission reduction per annum over the budget period)[Provisional]<sup>1</sup>

Ireland has committed to a 51% reduction in our GHG emissions by 2030, relative to our 2018 levels, the carbon budgets will operate as a framework and milestone system for reaching these reductions.

#### *Climate Action Plan 2021*

Ireland has committed to a 51% reduction of our GHG emissions by 2030 and reaching net zero by 2050. The *Climate Action Plan (CAP)* was released in November 2021 followed by its *Annex of Actions* in December 2021. Together these documents encompass the Government's pathway to achieving its legal commitments set out in the *Climate Action and Low Carbon Development Act*. The CAP will be updated annually to ensure relevancy. Currently there have been two progress reports released for Q4 2021/Q1 2022 and Q2 2022. The Q4 2021 and Q1 2022 saw a combined delivery rate of 73%, with Q2 2022 reporting a delivery rate of 45%. Overall, the implementation rate of the CAP 2021, as of 2022 Q2 progress report, is at 71% with 413 of 584 actions completed.

#### *EPA Provisional Green House Gas Inventory 1990 – 2021*

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<sup>1</sup> The carbon budget proposed for the period 2031-2035 is provisional and subject to proposed amendments from the Climate Change Advisory Council (CCAC), no later than 12 months before the expiry of the first carbon budget in 2025. This provisional carbon budget will support and continue on Ireland's trajectory towards climate neutrality no later than 2050.

The *Environmental Protection Agency* (EPA) is the body responsible for compiling the inventories of GHG emissions for Ireland and reporting them to the relevant European and international institutions under legal obligations. Under these obligations is the requirement to submit data for the period 1990-2021 to the European Commission and the United Nations Framework Convention on Climate Change, as well as requirements for climate governance under the Climate Action and Low Carbon Development (Amendment) Act.

For the first time the GHG emission inventory was compiled using *Global Warming Potentials* (GWPs), as suggested in the IPCC's AR 5. For 2021, the provisional total national GHG emissions, excluding *Land Use, Land-use Change and Forestry* (LULUCF) have been estimated as 61.53 Mt CO<sub>2</sub>eq, which is 4.7% higher than GHG emissions in 2020 (EPA, 2022a). Emissions for 2021, were 1% higher than pre-pandemic 2019 figures.

The EPA highlighted, that the increases in emissions seen in 2021 was the highest increase in the 32 years of reporting. Presenting a significant challenge for achieving both EU and national reduction targets (ibid). It is important to note, the EPA specified that these increases are only partially due to post-covid recovery with energy supply developments and the continued link between production and emissions in agriculture responsible for a greater portion of the emission increases (ibid).

#### *EPA: Ireland's Greenhouse Gas Emissions Projections 2021-2040*

The EPA has published their GHG projections for Ireland covering 2021-2040. The key finding of this report is that even if all planned climate policies and measures are fully implemented, including those under the CAP, they would only deliver a 28% emissions reduction to 2030 (EPA, 2022b). A reduction that does not meet our legally binding targets of national emission reductions of 51% by 2030 with neutrality by 2050 as committed in the Climate Action and Low Carbon Development (Amendment) Act 2021. The EPA's projected scenarios are made with "existing measures" and "additional measures". The gap between these scenario projections highlights that current implementation will not suffice and additional measures must be implemented quickly in order for Ireland to reach emission reduction targets.

#### *Circular Economy Legislation*

The Circular Economy Bill defines the circular economy for the first time in domestic law, supporting Ireland's transition from a linear economy model to a circular, and more sustainable, economy that will minimise waste and reduce GHG emissions.

The Bill:

- incentivises the use of reusable and recyclable alternatives to single-use disposable packaging
- re-designates the existing Environmental Fund as a Circular Economy Fund
- introduces mandatory segregation and incentivised charging for commercial waste in order to increase waste segregation and recycling rates
- address GDPR-compliant use of technologies for waste monitoring and enforcement, to address illegal dumping and littering while also protecting privacy rights
- provides statutory footing for the Circular Economy Strategy and National Food Waste Prevention Roadmap

- streamlines the process for end-of-waste and by-products decisions and supporting the availability of recycled secondary raw materials in the Irish market
- introduces prohibitions on explorations for and extractions of coal, lignite and oil shale

#### *Development Plans – Guidelines for Planning Authorities*

Development Plans outline where housing, infrastructure and services should be located over a six-year period. The guidelines are a reference for local authority planners and councillors, and have been revised for the first time since 2007. Revisions include:

- an approach to include sustainable long-term housing strategy, consistent with national housing targets and policies
- a method for identifying and zoning lands for new housing, both lands that can be quickly developed for housing and lands for longer-term development that require more surrounding infrastructure and services
- facilitates the development of compact and integrated communities, brownfield regeneration, activating greenfield land-banks for housing and the growth of sustainable communities
- assistance with adapting development plans with key national policies like the Climate Action Plan while also creating specific and tailored local objectives and policies

#### *Local Economic and Community Plans Guidelines 2021*

Local Economic and Community Plans (LECPs) outline how local authorities will support economic and community development over a 6-year period. The updated guidelines for LECPs focus on sustainable development and increased collaboration with communities. The current LECP is coming to the end of its cycle and these new guidelines will be used for the development of upcoming LECPs. The new guidelines aim to support more agile LECPs that can incorporate emerging needs, while reinforcing the role of communities in determining the needs and priorities of their local area.

The guidelines also consider the role of the LECP in supporting the delivery of actions in both local and national climate action plans, with specific actions included in the LECP implementation plans as appropriate.

#### *National Adaptation Framework*

The National Adaptation Framework was first published in 2018, and sets out Ireland's strategy for climate adaptation measures across different government sectors and local authorities. The aim of the framework is to build a climate resilient Ireland, building the capacity of Ireland's social, economic and environmental systems to adapt to climate change. The framework is currently under review, ensuring it is in line with the requirements of the Climate Action and Low Carbon Development Act.

Local:

#### *City Development Plan 2022-2028*

Dublin City Development Plan 2022-2028 is in stage 3 of development, which is the consultation stage post draft development plan release. Once the consultation period ends, a report of submissions will be given to the Elected Members. After consideration by both the Chief Executive

and the Elected Members, the Development Plan will be agreed upon, unless amendments are suggested, by end of October 2022.

The aim of the Development Plan is to;

- improve the quality of life of citizens
- ensure Dublin is an attractive place to live, work and visit
- guide growth and development
- provide a strategy for planning
- incorporate sustainable development in the city planning
- achieve a low carbon, sustainable and climate resilient city

### 1.3 Covenant of Mayors

The Lord Mayor has signed the revised Covenant of Mayors (CoM). Under the renewed ambitions CoM signatories, will commit to reaching climate neutrality by 2050, increasing our emission reduction targets, implementing adaptation to climate change measures and alleviating energy poverty through a just transition. Further, we commit to engaging our citizens, businesses and local stakeholders in the transition, thus contributing to the European Climate Pact.

## 2. Actions Update

### 2.1 Mitigation

DCC continues to make significant progress towards our mitigation targets, which are now a 51% reduction in emissions by 2030 and 50% energy efficiency from 2018. Note our baseline uses Census data and as such is a combination of 2016 and 2018 data sets. In 2021, it is estimated that DCC consumed over **161 GWh** of Total Primary Energy, emitted over **30,500 tonnes of CO<sub>2</sub>** at an estimated cost of **€11.4 million**. Note Figure 7 below from our energy management platform – Energy Elephant - displays total final consumption, total primary energy includes energy losses in transmission and distribution to point of use.

While this is positive, a large proportion of the reduction is attributable to the increasing percentage of renewables on the national grid. An ongoing challenge is the thermal element, which has only recorded a marginal reduction in the same period. DCC has identified the gap to target and has a list of projects for our building stock that will enable progress towards our 2030 and 2050 targets.

The 2030 CO<sub>2</sub>e target of 51% from the baseline year of 2018 aligns with the Amended Act, however, it has yet to be determined if this is a city-wide target which would expand the scope of mitigation actions beyond reducing emissions from our operations and service delivery. The Amended Act requires that local authorities to produce climate action plans. The scope of the plans is being debated, and it is yet to be determined if the mitigation actions will need to be expanded to cover the entire city, similar to adaptation actions. The EU Mission provides an opportunity to address how this is achieved.

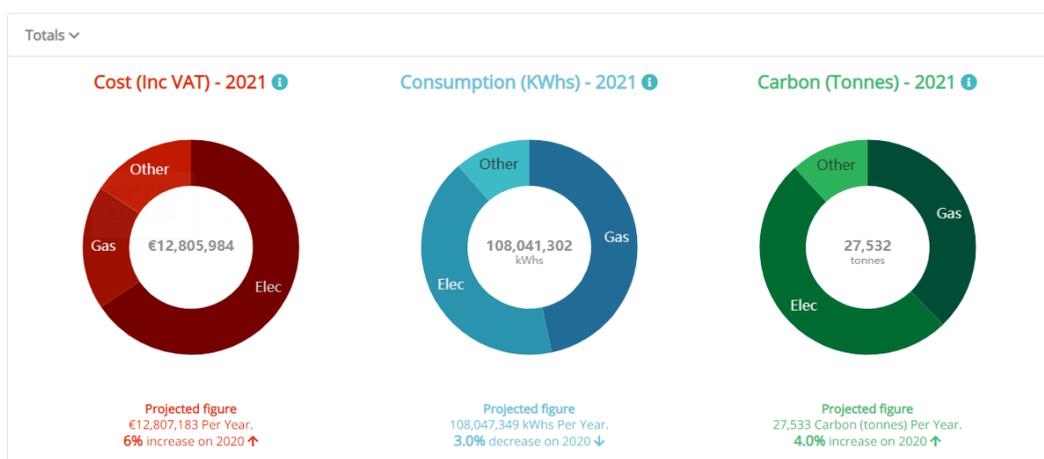


Figure 7 Energy and Emissions (Source: Energy Elephant)

## 2.2 Adaptation

Making Dublin resilient to climate change is a target of CCAP, this calls for adapting the city and residents for a future where we live with the impacts of climate change, such as flooding, extreme temperatures, and extreme weather events, that are locked in and are prepared for the unknown impacts.

Uncertainty adds to the challenge of implementing actions that contribute to the city’s resilience. Despite this DCC has made progress in the implementation of actions that contribute to our overall resilience, particularly in the use of nature-based solutions to respond to flood risk in the city.

Further, the long-term challenge is ensuring that the adaptation actions we implement are just. The implementation of city development plan is vital to making the city and residents resilient to climate change. The decisions we make about land-use and land-use change will determine our adaptive capacity. The location of housing, employment determines our vulnerability and exposure to climate risk.

We need to map our hazards, risks and vulnerability and use this to inform our decisions and investments.

In 2022, DCC initiated a process to understand the costs of adaption for the city. DCC is part of an EPA funded project – INFRALINC. Further to this, in August DCC hosted an intern with expertise in Atmospheric science, who commenced the development of a methodology for assessing climate risk using the city’s bridges and critical infrastructure as the case study. Their work has allowed us to progress action F16 in the CCAP.

Through the EU Mission, we will continue this process.

## 2.3. Energy & Buildings – Actions

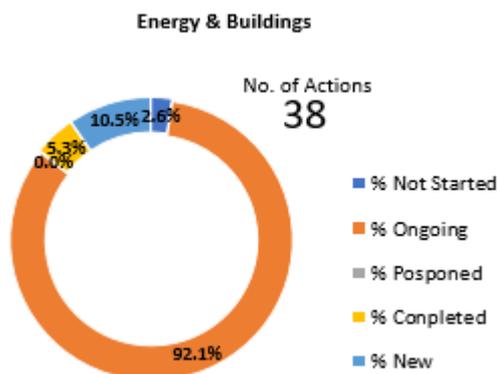


Figure 8 Energy & Buildings

DCC has achieved significant progress on actions under the thematic area of Energy and Buildings. As stated, the CCAP actions are focused on DCC's use of energy in owned, operated and managed buildings. Under the Amended Act, we will need to achieve a 51% reduction in GHG emissions by 2030, and neutrality by 2050. Achieving this target will be supported by ongoing projects including district heating, retrofitting, and energy efficiency upgrades.

### Social Housing

COVID has had an impact on the progress of the Energy Efficiency Retrofit Programme (EERP) as the health and safety of tenants and contractors is DCC's top priority. The target for EERP house retrofits is 114 units in 2022.

Beyond COVID, consideration will need to be given to emerging targets as set by the Department of Housing, Planning and Local Government and Department of Energy Climate and Communications.

The Energy Efficiency Retrofit Programme is designed to reduce unnecessary energy consumption, greenhouse gas emissions and demands for non-renewable resources in DCC's housing stock.

It also provides tenants with healthier living conditions and offers significant money savings in heating costs.

The Energy Efficiency Retrofit Programme involves the following upgrades:

- External Wall Insulation
- Attic/Cavity Insulation
- Roof and Wall Ventilation
- Hot Water Cylinder
- Windows and Doors where required
- Heat pumps

## Climate Ready Housing

Recognising the need to meet our emissions reduction targets as a public sector body and city, our retrofitting targets for social housing (BER B2 or cost optimal) and our housing delivery targets while meeting housing standards this project will provide a deeper understanding of the pathways to achieving these targets. By creating a digital twin to establish a theoretical baseline for performance of various options; we will be able to monitor the outcomes of measures taken in practice and understand if measures change energy use patterns of occupants as anticipated.

This project we anticipate will also identify policy gaps and therefore inform how we should focus our efforts to reduce GHG emissions associated with energy at the local level, while providing quality housing and meeting the demand for additional social housing. Further, by understanding the options proposed we can use the insights gained to assist with our long term retrofit programme well beyond 2030. Achieving our National Climate targets for 2030 (51% reduction in greenhouse gas emissions) and 2050 (climate neutrality target) demands significant reductions in emissions and energy use from the built environment; this project will provide valuable insights by enabling us to consider all options and the impacts of their implementation over longer timescales. Beyond housing the methodology produced in this project could be applied to other derelict buildings in Ireland, and be used to identify opportunities for rejuvenating these buildings.

The proposed test site for this project is DCC's social housing units on Dominick Street West. The three buildings on the site are vacant and provide an opportunity to implement 3 different strategies for retrofit. This project to create a digital twin of the site provides the first step in this long-term project by enabling the establishment of a baseline for theoretical performance of the buildings once works are completed and the buildings are lived in.

## Dublin Region Energy Master Plan

Codema has completed the [Dublin Regional Energy Master Plan](#), supported through the SEAI Research, Development and Demonstration (RD&D) programme. The project evaluated the cost-optimal, spatially possible and technically feasible low-carbon scenarios for Dublin to meet its 2030 and 2050 CO<sub>2</sub> reduction targets from the perspective of society, energy consumers and the energy sector. It did this through analysis of the three main energy sectors (heat, electricity and transport) and the synergies between them to deliver more cost-effective low-carbon pathways for the region. It looked at current and future policy impacts and shortfalls to targets needed to make Dublin net carbon neutral by 2050. This is the first master plan of its kind in Ireland to look at the County and small area level and to assess which solutions will work best within local constraints. The finished plan will aid planners and other decision makers in all energy related plans in the future.

Table 1 Energy & Buildings Funding

Currently funded	Department/ Agency	Area
-EU H2020 'Delivery of Renewable and Energy Efficiency projects across Dublin (DeliveREE)	Codema	E&B
- EU H2020 'Tomorrow' Project - creating a low-carbon transition roadmap for Dublin with citizens at the centre	Codema	E&B

- EU H2020 'Decarb City Pipes' Project - creating a roadmap to decarbonise the heating sector in Dublin with local working group (incl. DCCAE)	Codema	E&B
- SEAI RD&D 'Dublin Region Energy Masterplan' project - creating a scientific evidence-base for Dublin to identify possible zero-carbon pathways	Codema	E&B
- EU Era-Net 'REDAP' Project - creating an online 'digital twin' of the Dublin energy demand	Codema	E&B
- Climate Action Funding secured for DCC District Heating project	Codema	E&B
Smart Docklands Innovation District – Deployment of multiple smart city projects and demonstrators (flooding, environment, energy and connectivity) across docklands working across industry, academia and engaging local residents/communities. Partnership with Science Foundation Ireland (SFI), Enable and CONNECT research centres based in TCD (€500,000 over 2 years with co-funding from SFI)	Smart Dublin	All
Climate Resilient Housing – Public Sector innovation Fund	Environment and Transport and Housing	E&B

## 2.4 Transport – Actions

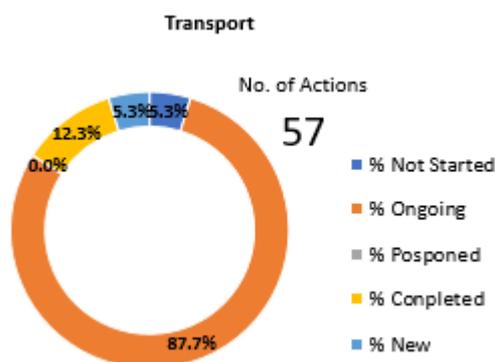


Figure 9 Transport Progress

### The Active Travel Programme – Walk-Wheel-Cycle Network

The Active Travel Programme Office continues to increase staff resources with the addition of a new Senior Engineer, a Senior Resident Engineer, an Executive Architect and a Senior Executive Planner in August 2022.

There is an emphasis on the rapid development of safer facilities on the core walk-wheel-cycle network. To date, assessments have been completed on seven corridors. The design of interim measures for segments of these corridors is now underway. The detailed proposals will be presented to the relevant Area Committees during September and October 2022. This will be followed by non-statutory public consultation.

These seven interim schemes are:

- Suir Rd to Thomas St via James Walk, Forbes Lane, Marrowbone Lane & Thomas Court
- Kimmage Rd West to Clogher Rd via Lorcan O Toole Rd, Stannaway Rd, Sundrive Rd & Rutland Ave.
- Tonglegree Rd, Kilbarrack Rd, Oscar Traynor Rd.
- Ratoath Road & Cappagh Rd
- Howth Rd, from Station Rd to James Larkin Rd
- North Circular Road
- Merrion Square West, Ely Place & Hume St

In addition, the tender documents for delivery of the remaining sections of the interim Liffey Cycle Route, comprising Eden Quay, George's Quay, Burgh Quay and Aston Quay are being finalised and will go to tender for construction during Q4 2022.

The construction of the Clontarf to City Centre Project is progressing and works have been scaled up following the implementation of the diversion of some of the city bound traffic from Annesley Road, North Strand Road and Amiens Street.

The National Transport Authority has approved Royal Canal Phase 3 to proceed to construction. In addition, works on the Dodder, Herbert Park to Donnybrook are also planned to commence later this month.

### [Bicycle Heroes Project](#)

The Bicycle Heroes Project facilitates pupils to create local solutions to barriers to cycling and become cycling advocates. Children have a unique perspective on their surroundings yet often go unheard. That's why a coalition of organisations are enabling young people to tackle urban challenges head on with a project shared between Dublin, Lisbon and Rome, that gives city building tools to children. Throughout 2022 young people will compete to create solutions to local cycling barriers, before working with city authorities to progress the best ones. Bicycle Heroes: Youth Voices for Active Mobility and is supported by EIT Urban Mobility, an initiative from the European Institute of Innovation & Technology, a body of the European Union. The programme has been piloted by coordinating organisation BYCS over the last five years in the Netherlands. BYCS is an Amsterdam-based global NGO supporting community-led urban change through cycling. Nearly ten thousand children have taken part in the initial awareness and problem-solving phase of the program, leading to the selection of approximately 150 Bicycle Heroes. The 2022 project builds on these successes.

DCC are rolling out the Bicycle Heroes Project in Dublin in partnership with Trinity College Dublin and European Partners. Local co-ordinator is Dublin Bicycle Mayor, Donna Cooney. The Project kicked off in March 2022 with a pilot workshop for transition year students in Trinity College. Students were tasked with designing active travel solutions for the route from Heuston Station to Trinity College Dublin. Following this, DCC invited three schools to participate in the Bicycle Heroes Project. The

three schools were chosen due to their participation in the Trinity Access Programme and their commitment to sustainable travel to school – as highlighted by their application under either the School Zones and/or Safe Routes to School programmes. Bicycle Heroes complements the SZ and SRTS programmes by providing additional engagement with the pupils and will look beyond the school gate to the route to school, and the route to Trinity College in the City Centre. Over the month of May, and specifically during Bike Week, workshops were held with pupils where they were facilitated to reimagine their streets to create safer active routes to school and to Trinity College. Pupils will be given the opportunity to present their visions for better routes to engineers, planners and decision makers to influence infrastructure in their own communities. An exhibition of the proposals and designs will be celebrated at venues associated with DCC and Trinity College Dublin in Autumn 2022.

Learnings from the Bicycle Heroes Workshops are being used to engage with schools with an installed School Zone (SZ). The aim of this is to empower the children to audit their SZ and consider if it is being used appropriately. Feedback from these workshops will inform future communications for Schools, Pupils and Parents.

#### E-Cargobikes for Business Pilot

DCC and bike sharing operator Bleeper are progressing well on the e-cargobike for business pilot project. The project gives businesses access to e-cargobikes at a discounted rate, enabling them to replace trips which would otherwise have been taken by car or by van. The pedal-assist electric cargobikes are available to businesses at a discounted rate of €100 per month. The bikes have a cargo carrying capacity of 60kg, with a battery which can last for up to 160km and can be fully recharged in 6 hours. The project has been so successful that an extension of the project has been agreed. The timeframe has been increased to allow for a further 10 opportunities to be provided to qualifying businesses. To date over 20 e-cargobikes have been delivered to successful participants, and 34 businesses have made applications. As part of Bike Week 2022, a public webinar was held on May 16th to showcase the project to date.

#### Electric Vehicle Charge Strategy

The Dublin Local Authority Electric Vehicle Charging Strategy is now complete. The executive Summary and the full report will be available for download through the [Council website](#). This research piece will enable each Local Authority in the Dublin Metropolitan Area to develop related but distinct implementation plans, based on local needs and related policies. Where commonality of approach allows, the DMA working group will collaborate to improve efficiency (for example in the area of procurement).

The DCC implementation plan will include the identification of Council and community facilities that may be suitable for EV charge points.

Furthermore, variations to the City Development Plan 2016-2022 introduced new objectives such that all new parking for new (or extensions to) housing, apartments and places of employment that provide car parking shall be electric charge point enabled.

Dublin City Council will work closely with the ESB and other stakeholders to enable and facilitate an increase in the number of EV charge points across the city. All new (or upgraded) commercially

operated car parking developments will be required to provide a minimum of 50% of spaces with EV charging facilities.

A mapping tool is also now available on our website to allow the public to suggest where they think there is a need for EV charging facilities. It does not guarantee that a charge point at that location it will allow the Council build a picture of demand and will help inform the process of rolling out the strategy.

#### *Finglas Mobility Hub*

A pilot off-street small-scale public charging mobility hub in Finglas is now complete and was launched in early September. Data from usage will help inform future plans. The project consists of:

- two charger types:
  - one AC (nominally 22KW) for 2 cars spaces with one dedicated to car share clubs to be rotated between all 3 licenced operators in Dublin City across the pilot duration
  - one DC 75KW also for 2 car spaces,
- a dedicated eBike commuter hub with 8 eBikes provided by ESB under the brand HubX in association with Bleeper Bikes

In addition, there will also be a dedicated charging facility for a DCC staff EV for use on Finglas Area Office business.

*Table 2 Transport Project Funding*

<b>Currently funded</b>	<b>Department/ Agency</b>	<b>Area</b>
Smart Workplace Mobility Hub - Small business innovation challenge (SBIR) - E-cars, e-bikes, app and booking system for workplaces –multiple pilot projects, phase 2 includes scale up project with Sixt, Nissan, UCD, GTS & Bleeperbike. €200k (Co-funded with EI)	Smart Dublin	Transport
Mobility as a service (MaaS) - work programme in partnership with the NTA – €50k funding from DEPR through Smart Dublin	Smart Dublin	Transport
Smart Docklands Innovation District – Deployment of multiple smart city projects and demonstrators (flooding, environment, energy and connectivity) across docklands working across industry, academia and engaging local residents/communities. Partnership with Science Foundation Ireland (SFI), Enable and CONNECT research centres based in TCD (€500,000 over 2 years with co-funding from SFI)	Smart Dublin	All

## 2.5 Flood Resilience – Actions

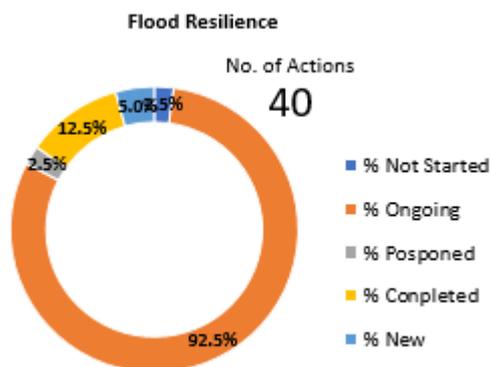


Figure 10 Flood Resilience Progress

### Sustainable Urban Drainage Systems Working Group

The SuDS Working Group is well established with multi-disciplinary representation from Drainage, WFD, Roads, Climate Change, Parks, City Architects and Planning. The Working Group agreed 3 new appendices to the new Development Plan which support policies in that plan. These cover:

- Surface Water Management Plans.
- SuDS guidance
- Green Blue Roofs policy.

Three new guidance documents have been introduced:

- SuDS Design and Evaluation Guide
- Green Blue Roofs Guide
- SuDS Retrofit Guide

The new Guidance documents were presented to the Climate Action, Environment & Energy SPC on the 25th May. The focus now is on ensuring the widespread use of these documents and on implementing the new policies when the new Development Plan comes into effect. Many of these measures are being implemented already.

### Flood Risk Management & Awareness

Coastal flood risk has increased dramatically in the City over the last 20 years with an estimated 130mm+ increase in average sea level in Dublin Bay. This also leads to increased wave heights during some storm conditions. All of these factors are being included in proposed flood alleviation measures for the City. All of the recently implemented flood alleviation measures have an allowance or adaptation plan for climate change in them, sea level rise of 0.5m to 1.0m, increased rainfall +20% to +30%, drying out of flood defences during long warm periods, etc. Flood Alleviation works are progressing on the Lower Dodder and schemes are being developed at Sandymount, Clontarf, on the Camac, Wad and Santry rivers as well as many local flood alleviation initiatives

In accordance with the OPW approach to flood risk management, DCC is actively working with communities to promote flood awareness and preparedness. The OPW provides information via two websites: [floodinfo.ie](http://floodinfo.ie) and [flooding.ie](http://flooding.ie). The website [floodinfo.ie](http://floodinfo.ie) provides information on flood risk both fluvial and coastal, based on three scenarios: low probability, medium probability and high

probability. Citizens can find localised flood maps of Dublin and photos of past flood events to understand the extent to which areas were flooded. In addition to this, users can view a map of the flood plans that have been developed. The second website, [flooding.ie](http://flooding.ie), is focused on protection. Information provided on the website serves to inform people how to protect themselves, and their property before, during and after a flood event.

Further, the draft Development Plan Strategic Flood Risk Assessment as well as many policies and objectives target the reduction of existing and future flood risk while maintaining sustainable development and the environment in the City. The introduction of river corridors for a large number of reasons as well as flood alleviation is a welcome addition following on from the Greater Dublin Strategic Drainage Study of many years ago.

### Protection of Water Bodies

DCC is working to deliver a number of projects to ensure that the opportunities to meet DCC's Water Framework Directive (WFD) obligation of achieving "good" status for all our water bodies by 2027 are maximised. Current examples are:

- The Santry River Restoration and Greenway Project is a cross-agency, multi-disciplinary project to produce a Masterplan, based on an options assessment, for the River Santry catchment in order to achieve the objectives set out in the Water Framework Directive, Floods Directive, Birds & Habitats Directive as well as the Greater Dublin Area Cycle Network. This project aims to set out the most effective plan to restore the river to a more natural state, encompassing a much-enhanced public amenity, promoting biodiversity, remediating sources of pollution and addressing potential flooding within the catchment. This project is being developed in collaboration with Fingal County Council, DCC Parks, Landscape Services & Biodiversity, as well as DCC's Active Travel unit of the Environment & Transportation Department. LAWPRO, the EPA and Inland Fisheries Ireland are supportive of this scheme. Funding is mainly from the Urban Regeneration and Development Fund, and, in the case of the greenway, the National Transport Authority.
- The Protection of Water Bodies Office is progressing a pilot surface water management project using Green Infrastructure principles. This project scope has been refined to prioritise and enhance five of the original nine locations identified adjacent to the Dodder and Santry river catchments. These Sustainable Drainage Systems (SuDS) are expected to have the dual effect of reducing the rate of surface water runoff into sewers/watercourses, thus reducing the risk of downstream and local flooding. Equally important is the expected outcome of improving the water quality and enhancing biodiversity opportunities in the public realm.
- Culvert Improvement Works – Screen Upgrade Works. The Contractor has been appointed for the works. This work will provide safer access for staff to maintain 22 screens which collect debris from watercourses and provide public safety, particularly during times of heavy rainfall.

Table 3 Flood Resilience Project Funding

Currently funded	Department/ Agency	Area
OPERANDUM EU H2020 - Flood Mitigation and Nature Based Solutions (overall project €14,000,000, 26 partners, including University College Dublin) (€123k for DCC) Partnership with University College Dublin (Ongoing – 2 years left) OPERANDUM will deliver tools and methods for the demonstration and market uptake of Nature-Based Solutions to reduce hydro-meteorological risks. <a href="https://www.operandum-project.eu/">https://www.operandum-project.eu/</a>	Smart Dublin	Flood Resilience and NBS
Gully Monitoring - Small Business Innovation Challenge (SBIR) – piloting delivery of low cost gully monitoring sensors to help mitigate flood risk. Phase 2b deployment underway. €260k (co funded through EI)	Smart Dublin	Flood Resilience

## 2.6 Nature Based Solutions – Actions

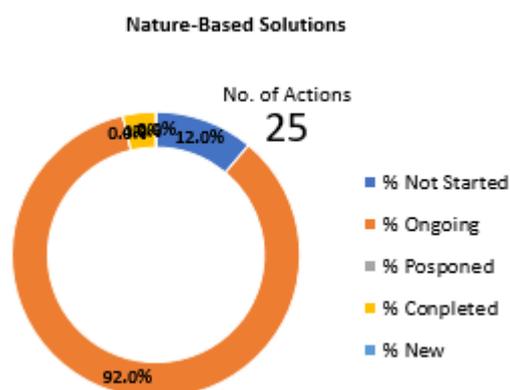


Figure 11 Nature Based Solutions Progress

Bringing nature into the city is critical to mitigating and to adapting the city to climate change. It is not without challenges, especially in a city that is built up. Recognising the value of nature as a solution to the problem of climate change DCC is actively working to implement nature-based solutions across the city.

Guiding NBS actions are the Biodiversity Plan, Tree Strategy, Public Open Space and Parks Strategy, and Invasive Species Plan. These plans have been informed by, and respond to, National and EU policy directions. Similar to Flood Resilience Actions, NBS Actions will have to respond to the sectoral adaptation plans. Fortunately, collaboration across departments and applying an interdisciplinary approach, the multiple benefits of using NBS are being prioritised. This can be seen in the formation

of cross-departmental working group on sustainable urban drainage (SuDS) which will produce guidelines that will inform how SuDS solutions are implemented.

### Wolfe Tone Square

Wolfe Tone Park is nestled into a busy shopping and business district in the north inner city. In its latest iteration it has been restored as an oasis of green space for the respite, rest and relaxation of locals and visitors.

Originally a market space in the 18<sup>th</sup> century as part of the Jervis Estate, it became the graveyard attached to St Mary's Church, and remained so until it was deconsecrated in 1966. It was first laid out as a park in 1998 by Dublin Corporation and re-designed in 2001 as an 'urban plaza'. It was subsequently used regularly for events which in hindsight were probably not appropriate in a former burial ground, however the new design is respectful of the site context and the Parks team have worked closely with the City Archaeologist, carrying out a full survey and inventory of the grave memorials. A contemplative 'garden' has also been created using the memorials, which have been carefully restored by conservation specialists.

The design for the park reconfigured the thresholds to four pedestrian entrance points which has created a sense of enclosure within which a new 475sqm lawn has been laid, twenty-one trees and a mixture of herbaceous perennials, bulbs, ornamental grasses and hedging shrubs have been planted. These will provide for year-round interest and colour but also a biodiversity-rich environment for pollinators and wildlife in the city.

The project involved the removal of parking spaces adjoining the park on Wolfe Tone Street and Jervis Street and the narrowing of the carriageway on Wolfe Tone Street to maximise the public realm for pedestrians. The new pavements and carriageway of Wolfe Tone Street have been constructed with Leinster granite, traditional Dublin setts and salvaged antique granite kerbing. The existing bench seating has been refurbished and new bench seating has been installed using granite and Iroko timber for additional comfort.

The Design Intent involved an attempt to sensitively modify the existing space by bringing back a sense of enclosure, reminiscent of an older character of the space, while not undoing previous interventions and respecting the history of the site. To do this while at the same time paradoxically bring the carriageway of Wolfe Tone Street into the character of the overall space. Wolfe Tone square is an example of how DCC can and is making better use of space in the city centre, which is at a premium. And 'working with what we have'.



*Figure 12 Opening of Wolfe Tone Park (Image: Fennell Photography 2022)*

### Bridgefoot Street Park

Bridgefoot Street Park is a new public park in the liberties area of Dublin 8, approximately 1 hectare in size. Innovation is central to the design of this park in order to create a more sustainable and ecological project build. One of the main distinctive design features of this park is the re-use of secondary raw materials in the construction of the park, such as existing calp and concrete, reclaimed stone and brick, both as large paving elements and as aggregate, reducing construction waste.

The majority of the hard landscape elements consist of recycled aggregate in-situ concrete pathways, larch terraced seating and the additional paving elements re-using secondary raw material salvaged from parks depots. The formal playground pieces are placed in an enclosed space but the park is design consists of earth mounding of various heights which will create informal play areas. 180 new trees have been planted and the additional soft landscaping consists of a mixture of herbaceous and ground-cover planting mix with some turf grass and some ornamental hedging shrubs but the over-riding landscape emphasis is on native wild-flower seed mix which will be sown into a mix of soil and recycled aggregate. These seeded areas will germinate, flower, self-seed and develop a naturalistic landscape which be unique this park, creating a biodiversity-rich environment for pollinators and wildlife in the park.

A key feature of this park is a new community garden group which is built on the strength and success of the community garden group, led by Richie Taplin. There is a huge interest in the community garden from a variety of residential and community groups in the surrounding area, which is not fenced in, making it an integral part of the park.



Figure 13 Bridgefoot Street Park

## 2.7 Resource Management – Actions

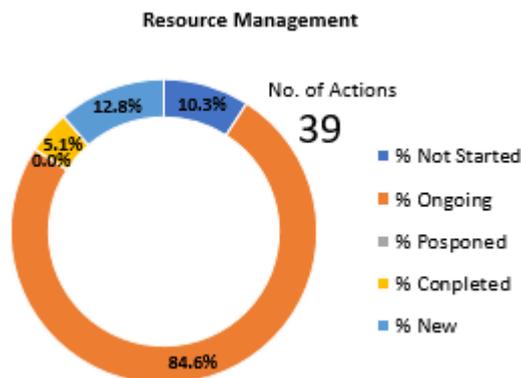


Figure 14 Resource Management Progress

### Housing Waste Recycling Project

Assessments of existing bins and bin areas in housing and older person's complexes in North Central Area - Kilbarrack and North West Area – Finglas have taken place. A number of complexes in each area are ready for the introduction of brown bins (food waste), and where necessary green bins (recyclables). A report has been sent to Housing Maintenance for each complex and bins will be introduced in due course. Several complexes in each area require the construction of secure bin storage areas and the introduction of segregated bins will follow once these units have been

constructed. Construction of secure bin storage units is now underway following delays due to the replacement of key personnel in Housing Maintenance

### Composting for Schools Programme

The **Composting for Schools Programme** pilot is a vitally important initiative that aims to increase knowledge and skills about food waste and composting among students of all ages and the wider school community. It has successfully facilitated 98 primary and secondary schools from across the Greater Dublin Area (GDA) in setting up school composting systems during 2021 and 2022. The programme also included training, educational resources and a communication and promotion campaign. The programme trained a total of about 350 teachers and school staff in practical knowledge and skills for composting as well as providing fun and pedagogically excellent classroom resources for teachers on circular food, climate action, food waste recycling, and food growing. This project is highly replicable and will be extended to additional local authority areas in 2023.

### The Partners

Composting Ireland led this programme in collaboration with partners, the Clean Technology Centre (Munster Technological University), Fingal County Council, Dublin City Council, South Dublin County Council, Dún Laoghaire / Rathdown County Council and the Eastern-Midlands Regional Waste Management Planning Office.

### Project Aims

The aim of the programme is to help schools set up, start or improve composting to reduce waste, save money and combat climate change and assist them in attaining Green School Flags and Sustainable Development Goals. The pilot programme makes it easy for teachers to access a variety of fun, participatory and interactive activities for school children to learn about composting and gardening. These activities support children's understanding of the underlying principles of ecology, biology and biodiversity that underpin all life on our planet. The goals of this pilot project are as follows:

- Help schools reduce biodegradable waste and save money.
- Provide school staff or caretakers with the knowledge and tools necessary to prevent and compost landscape waste on-site.
- Provide teachers with the knowledge and tools necessary to incorporate composting within classroom learning activities that align with existing curricula.
- Teach students about the composting process and how compost is vital to the many cycles that sustain our planet including the water, nutrient and carbon cycles.
- Create and fine tune an effective training and technical support programme for schools in the Dublin area that can be expanded in future years to all schools around the country.

### Dublin Circular Economy Hotspot 2023

Dublin was competitively selected as a host city for Circular Economy Hotspot 2023. Being selected as a Circular Economy Hotspot, provides a unique opportunity to highlight circular economy initiatives, best practice examples and innovation to a local, national and international audience. DCC supported the successful application and will support the various activities that will take place

as part of a programme focused on: social enterprise; design and manufacturing; the built environment; and food systems and the bioeconomy.

## 2.8 Engagement

### Businesses

Cities are major contributors to climate change, waste generation and consumption, and also major hubs for innovative solutions, new approaches and transformation. Cities and the Local Authorities that lead them, can play an essential role in the development of a circular, low carbon and sustainable economy. They can do so through targeted policy interventions, initiatives, engagement and communication to positively influence and support consumers and businesses. Dublin as a European capital city is uniquely positioned to address complex problems through practical experimentation and innovation. The transition to a circular economy requires multi-level governance and new visions of what the city of the future could look like. Therefore, involvement at a local level is crucial for the transformation from a traditional, unsustainable and outdated linear economy to a sustainable, low carbon and future proofed circular economy.

Moving to a circular economy, where materials are continuously re-used and recycled, is essential if Ireland is to meet its greenhouse gas (GHG) emission reduction targets under the national Climate Action Plan. According to research by the Ellen McArthur Foundation – a leading authority on the circular economy – around 45% of GHG emissions reductions will come from applying a circular approach to how we make and use products and produce food (with the other 55% coming from switching to renewable energy sources). As well as helping the environment, going circular could have huge social and economic benefits. In Europe alone it could save 450 million tonnes of carbon by 2030, create 580,000 jobs and save €600 billion for EU businesses, equivalent to 8% of their annual turnover. With the European Union policy and regulations for a low-carbon economy and the Irish government Green Procurement standards, Irish businesses need to understand and apply circular economy principles. Doing so will help to future proof their business and enable them to build back better.

DCC has been working with key stakeholders to plan and deliver on a range of initiatives that support a more circular approach and support Dublin to become a Circular city. In regard to businesses, the City Council has been developing and collaborating on various initiatives to support businesses to become more sustainable, to adopt circular economy principles and to adopt a low carbon approach to their operations. As part of the Dublin Regional Enterprise Plan to 2024, DCC is collaboratively supporting the achievement of Strategic Objective 4: Enable and position business as leaders in Dublin's low carbon transition, and the associated actions. Some of the key initiatives that DCC is leading or collaboratively supporting are detailed below:

### *MODOS*

MODOS was developed and piloted in 2018 by DCC Economic Development Office and Eastern Midlands Waste Region Office as a first of its kind circular economy training programme for micro, small and medium size enterprises. It equips enterprises to apply circular economy principles, helping them reduce waste and carbon emissions while creating opportunities to save money, increase resilience and boost competitive advantage. Over 100 participants have completed the programme so far. In addition, EPA grant funding was secured in 2021 to develop it as a Local

Authority Prevention Network – Waste Prevention Project by DCC and Dun Laoghaire Rathdown County Council.

#### *Profit with Purpose*

Profit with Purpose Magazine is an international publication, which seeks to use the power of communication to raise awareness, inspire action and empower innovators to create a sustainable and just economy. Published in Dublin twice a year by Business Spirit News, it features content related to sustainable business, social entrepreneurship, circular economy, climate change, sustainable development and addressing pressing social and environmental challenges. The publication is supported by DCC / LEO and came about as a spin out collaboration stemming from previous support for Responsible Innovation Summit.

#### *Circular City Accelerator – Climate KIC*

DCC is a partner in the EIT Climate-KIC initiative to accelerate the transition to a zero-carbon, climate resilient society and is a city partner in the ClimAccelerator to support climate impact and circular economy start-ups. The ClimAccelerator is led by Tangent, Trinity College's Innovation and Entrepreneurship Centre and supports 15 start-up companies which are each attempting to scale their circular economy propositions. The accelerator also engages closely with senior management in local authorities in DCC, Berlin Senat, Copenhagen City Council and the Municipality of Athens. The further development of the accelerator programme is referenced as an action in the Dublin Regional Enterprise Plan 2024.

#### *SoCircular*

SoCircular took place on the 5<sup>th</sup> October 2022 as an event to celebrate Dublin's social and circular economy ecosystem and culture. The event aimed to transform Dublin through highlighting and celebrating the social and circular economy ecosystem and associated culture, encouraging people, businesses, organisations and government departments to buy from and support local social and circular enterprises, promoting supports to help enterprises adopt circular / sustainability approaches, and through providing a forum for conversation, insights and ideas on developing a SoCircular Dublin. 300 people attended, 50 social and circular enterprises including some support organisations exhibited, 18 expert panellists shared insights on 4 panel discussions, 4 fire side chats took place and Lord Mayor of Dublin Caroline Conroy and Minister Ossian Smyth supported and spoke at the event.

The event took place as part of and / or in alignment with the Dublin City Summit Series, Dublin Regional Enterprise Plan to 2024, European Commission – European Social Economy Regions Project & Network, UN SDGs – European Sustainable Development Week 2022 / Act4SDGs campaign, Circular Week 2022. An outcomes report will be produced and disseminated to support future policy formulation, knowledge sharing and relevant economic development.

#### *Green 4 Micro*

Launched in March 2021, the Local Enterprise Office Green for Micro programme helps prepare small businesses for the low carbon, more resource efficient economy of the future. It is a free

programme, available to companies with up to ten employees and has continued and expanded into its second year of operation.

## Community

This past year the Arts Office led a Creative Ireland Climate Action Fund Project. Crumlin Creative Climate Action is made up of seven key projects that will change the way the people of Crumlin think about their environment and the changes we all need to make to secure a more sustainable future.

**[The Kingfisher Project](#)** at Blarney Park Allotments is transforming an 'urban waste ground' on the banks of the River Poddle at Kimmage into a community resource for education, knowledge, engagement and social capital building. This winter the people at Kingfisher will create self-sustaining solar and wind power in the allotments to germinate plants. They will create a circular Food Security Project that will then be shared with schools and the community re-introducing people to the knowledge of where food comes from, how we can grow it ourselves, and the importance of food security particularly in today's climate. They will also create an inventory of local flora and fauna which aims to capture and describe every plant, insect and animal in the Kingfisher Project ecosystem. In turn, this will be used to monitor the health of the area's biodiversity as well as a teaching resource for school and community groups visiting the project.

**[The Weight](#)** is a large scale temporary mural on Seagull House that currently overlooks Crumlin Road and the Grand Canal. It is a collaboration between artists Sarah Bracken Soper, Holly Pereira and assisted by Joe Caslin and the local residents whose concerns about climate change are incorporated into the mural. It features two young residents of Seagull House (Conan Johnston Welstead, age 9 and Lucy Lambe, age 8). Installed over the 1st + 2nd November The Weight forces us to confront the burden we are placing on future generations by not tackling the climate crisis.

**[Change Clothes Crumlin](#)** is a new temporary clothing reuse hub for the area. They have run three events during Reuse October in the local Scoil Íosagáin which featured repair and upcycling workshops, clothes swapping facilities and an exhibition raising awareness about the impact of the fast fashion industry. The events were hugely successful, attracting large attendance and with over 600 swaps made during the three events. The team behind Change Clothes Crumlin are working to make this a permanent fixture for the Crumlin community. To find out more follow [@clothescrumlin](#)

**[The ReCreate Ireland](#)** facility in Ballymount saves tonnes of materials from landfill every year. Their 'creative reuse' policy encourages the public to reuse materials in all kinds of creative and inventive ways, giving them a new lease of life. They are bringing the fabulous potential of 'creative reuse' to life within the Crumlin community with two exciting projects. CuriousB is a pop-up outdoor creative re-use event space for curious learning, creative exploration and play. Constructed almost entirely from reused materials with design input from local Crumlin community groups – it showcases what can be created if we think outside the box. WonderMaker is a 12-month creative engagement programme for Montessori and early years settings, teaching them sustainability principles to integrate into their curriculum, introducing the idea of green play and assemble/dismantle activities. It also encourages them to work towards becoming plastic-free settings (no plastic toys), advising them on how to build their own upcycled play areas using reuse materials and running a programme of nature-based workshop sessions for their staff.

[Is It All On You?](#) is a multimedia project combining documentary film, events and social media campaigns created by Beta Bajgart and Olga Tiernan. The idea of creating behavioural change around climate action, assumes that the choices available to us in order to do this are easy, readily available and that we are the ones, choosing to do the opposite. But the reality of that for many, is quite different and this will be explored in every aspect of the programme. Coming to a screen near you in early 2023!

### 3. Conclusions and Future Implementation

This third report on DCC's progress on the actions set out in the *Climate Change Action Plan 2019-2024* shows that significant progress has been made, however, more needs to be done. The challenge ahead will be facilitating not only collaboration across departments to achieve an interdisciplinary approach to climate action but with stakeholders outside of DCC, particularly in the context of the EU Mission for 100 Climate Neutral and Smart Cities.

The Climate Action and Low Carbon Development (Amendment) Act 2021, a welcomed development in moving Ireland to a low carbon future provides DCC with legislative basis for taking action on climate. DCC will be required to prepare climate change action plans that include both adaptation and mitigation to be updated every 5 years. While our current plan covers both mitigation and adaptation, it is likely that this plan will need to be revised. This may provide an opportunity to strengthen our capacity to respond in that we will be re-assessing the climate risks facing the city.

As our current approach is interdisciplinary, we have an understanding of the challenges in implementation. Further, our plan is a living document that responds to emerging science and changes in policy. The primary concern with developing a new plan is that it becomes a barrier to ongoing implementation. Efforts will be made to ensure that this is not the case.

Over the next year, we will develop a new climate action plan that strives to reach the target set out in the EU Mission while meeting our national commitments, how the actions we implement will support a just transition, identifying data gaps and how data can inform action, a shift to a circular economy through our partnership with Belfast through the Shared Island Fund and progressing the Edible Dublin food strategy for the city.

#### 3.1 Climate Neutral Dublin 2030

Reaching neutrality by 2030 through the Mission will be a challenge but not impossible. The process will be iterative as the Climate Action Plan is a living document that responds science and changes in policy and legislation.

The focus in the next 11 months will be on submitting our Climate City Contract to the European Commission by October 2023 to be assessed and awarded the Mission Label. To achieve this, we will need to establish a Climate Neutral Dublin Steering Group, reviewing and revising our current CCAP through workshops with staff and external stakeholders, developing an investment plan, and a communications plan.

### Climate Neutral Dublin Steering Group

The first step will be the establishment of the Climate Neutral Dublin Steering Group. The responsibility of the steering group will be to insure participation in this process by all Dublin City Council Staff and to encourage innovation; and to engage with external stakeholders to address challenges and barriers to innovation.

### Revised and Consolidated CCAP

Our second step in this iterative process is evaluating our current climate action plan alongside our Corporate Plan, City Development Plan, the Local Economic and Community Development Plan, and insuring its alignment with the Low Carbon Development and Climate Act Amendment 2021, National Climate Action Plan (51% GHG Reduction from 2018), and the EU Green Deal (55% reduction from 2018). This will include strengthening our understanding of our greenhouse gas emissions, and the hazards, risk and vulnerabilities posed by climate change that we need to build resilience and adapt too.

Achieving the ambition of Climate Neutrality by 2030 will require a review of our existing plan to identify gaps and opportunities. This process is ongoing by the Climate Action Team, we are trialling a novel approach – climate triage (Appendix II).

Initial discussions with key internal stakeholders highlights the need to consolidate the plan and to embed more deeply a collaborative approach to achieve the systems innovation demanded by the Mission. In this context, Box 1 provides a proposed restructure of the actions from the five thematic areas to four pillars with some example actions.

Actions will need to be developed through workshops and one to one discussions with teams and individuals with current responsibility. The workshops will again be an opportunity to insure the interdisciplinary nature of the actions and that actions have multiple co-benefits.

#### *Box 1 Proposed CCAP Re- Structure*

To progress our first climate change action plan and facilitate greater collaboration for a cohesive and interdisciplinary plan actions will be interconnected and support four pillars.

#### **Four Pillars:**

**A Resilient City:** Dublin has been here for millennia, it will be here for another millennia if we continue to be resilient and adaption to a changing climate.

**A Resource-Full City:** In recognition our city's resources – nature, people, culture, history – we are conscious of the value of these resources and use them wisely and to their full potential. Nothing goes to waste in Dublin.

**An Open City:** Cities are built on knowledge gained over life times of ideas passed from generation to generation, each learning from the previous and innovating. Climate change impacts us all and we need to learn together and from each other. Sometimes tomorrow's problem has a solution in yesteryear.

**A Social City:** People define Dublin, they are the story of the city. Climate action is achievable when people come together to take care of the city and their legacy in it.

### 3.2 Just Transition: Health in All Policies

Fundamental to the city's response to climate change is the collaboration of stakeholders on actions to address vulnerabilities created by climate change. The aim should be a just transition to a low carbon climate resilient future. This is dependent on people working in concert to respond to the vulnerabilities created by climate change and actively contributing to the development and implementation of policy.

The demand for the transition to be just is supported by the Amended Act, however, the focus remains on jobs. As a signatory to the revised Covenant of Mayors, we as a city recognise that a just transition is more than employment, it is about equity.

There is ongoing work to develop a climate readiness toolkit that will build capacity to understand the impacts of projects and programmes in terms of equity. The Sustainable Development Goals (SDGs) have been incorporated into the toolkit, as there is alignment. We recognise that the SDGs provide a meaningful framework as it applies a systems approach to ending poverty, improving health and education, reduce inequality, enable economic growth, all the while tackling climate change and working towards the preservation of our green and blue spaces. This systems approach is housed in goal 17, *partnerships for the goals*, and further supports objective of the toolkit for building capacity for interdisciplinary action.



Figure 15 United Nations Sustainable Development Goals: <https://sdgs.un.org/goals>

### 3.3 A Connected Circular Economy

DCC in partnership with Belfast City Council (BCC), are striving to make their respective cities leaders in the transition to a circular economy. Our successful proposal under the Shared Island Fund will involve undertaking a feasibility assessment to enable the development of capital projects in Dublin and Belfast that supports the expansion of the circular economy island wide leading to a Connected Circular Economy. At present, Dublin and Belfast are developing their circular economy ecosystems and have established strengths and partnerships that will contribute to identifying challenges and opportunities to be explored and addressed in the feasibility assessment.

#### Our Goal

We want to develop an implementation plan for realising a Connected Circular Economy that builds on our existing strengths and unlocks the latent potential of private enterprise identified via the feasibility assessment.

Both cities recognise through their independent efforts described in detail in the appendix, that there are significant gaps that need to be identified and addressed to bring coherence to existing policies and plans. We aim to identify and address these gaps through this feasibility assessment with funding from the Shared Island Fund. This will include feasibility on the capital expenditure needs, and economic analysis. This will be carried out according to the Public Spending Code and under UK 'Green Book' guidelines to present both authorities with a detailed and robust case to guide investment decisions.

#### Our Objective: Connected Circular Economy Infrastructure

Our primary objective with the feasibility assessment is to inform the development of an official business case for delivering infrastructure and programming for a Connected Circular Economy between Dublin and Belfast. A partnership between the two largest local authorities on the Island, will provide opportunities to create scale, exchange knowledge and complement initiatives on an all-island basis. The feasibility assessment will identify how and what we need to invest in, to realise a Connected Circular Economy and to take advantage of the opportunities provided by all-island co-operation.

The feasibility will focus on the economic and social potential of the circular economy, as well as sustainability and climate change – in other words how can the circular economy support a just transition by creating jobs that strengthen communities affected by the transition away from fossil fuels.

This will then help us to evaluate and to prepare a comprehensive business case for a Shared Island capital project that results in a Connected Circular Economy, with infrastructure needs and support regimes informed by evidence, expert knowledge and lived experience of SMEs.



Figure 16 Shared Island Fund Launch

### 3.4 Food Strategy – Edible Dublin

Water, soil and food are essential to life, and they are all at risk because of climate change. Without water and soil to grow food we cease to exist. Yet an assumption that we will always be able to buy all the food we need to meet our nutritional needs and a belief that we are food secure persists. Climate change impacts are not limited by geography, a drought or flood in one place has global consequences. The IPCC Working Group II Report highlights the risk we face:

*Climate change will increasingly put pressure on food production and access, especially in vulnerable regions, undermining food security and nutrition (high confidence). Increases in frequency, intensity and severity of droughts, floods and heatwaves, and continued sea level rise will increase risks to food security (high confidence) in vulnerable regions from moderate to high between 1.5°C and 2°C global warming level, with no or low levels of adaptation (medium confidence) (IPCC, 2022a).*

Edible Dublin is an initiative by Dublin City Council that will set out how we feed a city in a time of climate change. This strategy will follow the principles of a just transition insuring that all residents of the city have equitable access to nutritious food to maintain their health and well-being. The Edible Dublin vision is that by focusing on food justice and nutritional equity the strategy will insure that all residents of the City will have access to healthy food within a 15-minute walk, cycle or journey by public transport from their home by 2030.

The objective of the strategy is to re-energize the city and its residents through the shared experiences of growing, cooking, creating and discovering food; nourish a climate resilient food system in the city;

build on the city's land-use, green infrastructure, and economic and community development policies to make the city and its residents resilient to climate change's impact on the food system.

Developing a food strategy that is rooted in resilience requires an understanding of population health and of the policy context as it pertains to food and population health. From this understanding, the strategy assesses the need for a food strategy, the populations (all demographics and socio-economic backgrounds) access to food, the population's relationship and interactions with the food system via a public survey and avenues to engage the public.

The strategy proposed four themes to guide actions

- Healthy Citizens, Healthy City
- Growing Food at Home
- Cooking and Creating
- Farm to Fork and Back – Stopping Food Waste

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## Appendices

### Appendix I – CCAP Action Progress

Thematic Area	Action Number	Action	Progress 2022					Timeline	Timeline (Year)	Climate Team Progress	Indicators
			Not Started	Ongoing	Postponed	Completed	New				
Energy & Buildings	E1	Create Energy Master Plan for the Dublin Region				Completed		In the next 5 Years	Action Complete The Dublin Region Energy Masterplan, prepared by Codema, has now been completed. The masterplan provides realistic, evidence-based pathways for the Dublin region to achieve its carbon emission reduction targets to 2030 and 2050. The webpage below includes headline figures from the Dublin Region Energy Masterplan and also includes project resources links, including; a recording of the masterplan launch, a summary brochure and the full report <a href="https://www.codema.ie/projects/local-projects/dublin-region-energy-master-plan">https://www.codema.ie/projects/local-projects/dublin-region-energy-master-plan</a>	Website with e-Map	
	E2	Requirement for all new developments to be district heating-enabled in Poolbeg West, North Lotts and Grand Canal SDZs		Ongoing				10 Years Plus	DDHS Project Team ongoing liaison with the various Design Teams for all new Buildings located within the SDZ's areas: Poolbeg West SDZ – Phase 1: currently at Planning / Preliminary Design North Lott's SDZ – 21 DH Enabled / 21 DH Conversion / 2 Under Construction Grand Canal SDZ – 7 DH Enabled / 46 DH Conversion / 4 Under Construction	# of buildings DH-enabled	
	E3	Prepare Dublin City Sustainable Energy and Climate Action Plan		Ongoing				In the next 5 Years	Action Complete	SECAP complete	

E4	Evidence-based climate change chapter in City Development Plan 2022-2028	Ongoing	In the next 5 Years	Public consultation complete. Submissions being reviewed. Plan reviewed by council	Chapter with policies and development management standards
E5	Develop ISO 50001 compliant energy management system	Ongoing	In the next 5 Years	Ongoing	System developed and ISO 50001 compliant
E6	Annual Monitoring & Reporting to SEAI	Ongoing	10 Years Plus	Ongoing	DCC's energy use monitored and reported
E7	Publish Energy Review annually	Ongoing	10 Years Plus	2020 Energy Review currently in progress.	Review published, # of recommendations implemented
E8	Display Energy Certificates for public buildings	Ongoing	10 Years Plus	All DEC's for relevant buildings have been updated for 2021 and published	Compliant with legislation
E9	Dublin District Heating System	Ongoing	In the next 5 Years	DDHS Project Team ongoing liaison with the various Design Teams / Facility Managers for all Buildings located within the SDZ's areas.  DDHS Project Team liaising with DCC Divisions for other Projects to include the installation of DH Infrastructure.	# of buildings connected;
E10	Identify sites for trialling renewable energy projects, including solar PV	Ongoing	In the next 5 Years	Ongoing - DELIVEREE	Properties identified, projects planned
E11	Energy efficiency works in 30 Council owned and operated buildings	Ongoing	10 Years Plus	ongoing	# of buildings upgraded; energy savings as per bills (Energy Elephant)

E12	Dublin Fire Brigade energy efficiency works	Ongoing		In the next 5 Years	Ongoing	# of buildings upgraded
E13	Continue the Fabric Upgrade Programme of housing stock	Ongoing		10 Years Plus	114 Units completed as of Q3	Completion of 200 retrofits per annum, to B2 level or better; Energy savings achieved
E14	Develop and implement Public Lighting Master Plan	Ongoing		5-10 Years	ongoing	% public lighting converted to LEDs
E15	Landlord lighting upgrades in 15 complexes across the City	Ongoing		5-10 Years	ongoing	# of lights retrofitted
E16	Facilitate EPC project in 7 leisure centres/dry sports centres across Dublin City	Ongoing		In the next 5 Years	Service phase continuing	EPC project delivered; annual CO2 savings
E17	Install PV panels on Council buildings in Dominick Street, North King Street, Cornamona Court	Ongoing		In the next 5 Years	Dominick St & Nth King St Completed Cornamona ongoing.	Kwhs of PVs installed
E18	New nZEB Super Depots	Not Started		In the next 5 Years		Completion of depots, # of depots merged into super depots
<del>E19</del>	<del>Develop proposal to use Docklands SDZ to test smart public lighting infrastructure</del>					<del>Proposal developed</del>
E20	Expand and develop Small Business Innovation & Research (SBIR) programme	Ongoing		10 Years Plus	ongoing	Energy and climate change challenges identified for yearly SBIR challenge

E21	Work with CARO on research and project proposals for grant funding	Ongoing	10 Years Plus	ongoing, review resource capacity	# of research projects initiated
E22	Develop an understanding of deep geothermal resources in Dublin through the GEOURBAN Project	Ongoing	In the next 5 Years	Geo-Urban Project has been completed. Final report to be completed.  Learnings of Report to inform future Geothermal Projects.	Report complete
E23	Continued staff energy awareness in Council buildings	Ongoing	10 Years Plus	ongoing	# of building owners tracking energy use through energy elephant
E24	Engage with students about energy and buildings through CPD Programme/Engineers Week	Ongoing	10 Years Plus	During Engineers Week 2022 DCC Technical Staff gave talks to local school children: Schools – 7 Students – 388	# of students participating in events and activities
<del>E25</del>	<del>Provide citizens with energy awareness material in public buildings</del>				<del># of materials available in public buildings</del>
E26	Provide City Council tenants with energy awareness materials at home, particularly at the time of taking up new tenancy	Ongoing	In the next 5 Years	ongoing	% tenants receiving information
E27	Monitor and develop the Home Energy Savings Kits in DCC's public libraries	Ongoing	10 Years Plus	Home Energy Saving Kits continued to be promoted to the public	# of kits borrowed
<del>E28</del>	<del>Develop research and funding opportunities for renewable and efficiency projects</del>				<del>Research and funding management group established</del>
E29	Undertake programme of flat complex regenerations to	Ongoing	10 Years Plus	ongoing	No of regenerated flats to nZEB standard each year from 2022;



climate action in the built environment

E34	Identify sites for trialling renewable energy projects, including solar PV and geothermal technologies					# of site identified
E35	The City Council will undertake a research study to investigate the Lifecycle Assessment of traditional and new construction methods for residential projects in Dublin, with a view to formulating initial recommendations by end 2019	Ongoing		In the next 5 Years		Publish research report
E36	In all building projects, new build or retrofit, Swift Bricks or other nesting sites for swifts will be provided where practicable. The presence of swift breeding sites will be identified to ensure that known breeding sites are not lost as a result of construction work <b>NEW WORDING Ecology Assessment to be carried out on all DCC projects with the intent to enhance the site's ecological value and biodiversity</b>	Ongoing		In the next 5 Years	ongoing	# of sites provided

E37	Develop maintenance and condition survey programmes for Council-owned historic and ancient monuments that are informed by climate change impacts	Ongoing		In the next 5 Years	Ongoing, aligning with the Built Heritage Sectoral Adaptation we are assessing and monitoring the impacts of climate change on historic and ancient monuments and ensuring resilience to climate change.	# of surveys completed
E38	Conduct research and seek to develop City Council-based case studies on appropriate and sensitive retrofitting/energy upgrading of traditional buildings to inform works both to Council-owned properties and to guide private owners	Ongoing		In the next 5 Years	"Built to Last" digital publication which is being edited at present and provides guidance on the retrofitting and upgrading of traditional buildings. Conservation grants, fund works to upgrade thermal performance of traditional sash windows and rainwater systems.	# of case studies developed
E39	Achieve ( & exceed where possible) compliance with current building regulations with the provision of on-site renewable energy in all DCC building projects, new build or retrofit.	Ongoing		New	ongoing	
E40	City Architects have commissioned Life Cycle Assessment reports on two feasibility studies that compare retrofit to new build options. It is clear that the CO2E emissions from retrofits are lower than those of a normally-constructed new building, per square meter, by a factor of 12. City	Ongoing		New	New Action initiated	

Transport	E41	Architects are therefore investigating the implications and costs of constructing a small new housing project in timber, either timber –frame or CLT, at St Bricens Phase 4 City Architects will assess the CO2E emissions of all housing projects, comparing existing emissions (in the case of an existing complex), emissions due to construction, emissions in operation, all on a square meter basis.	Ongoing	New			New Action initiated	
	E42	Undertake a Flat Complex Demonstration Project at scale, exploring optimum approaches to retrofit in the context of 2030 and 2050 carbon emission reduction targets.	Ongoing	New			New Action. Site identified and Housing Department has indicated approval to initiate project.	
	T1	Develop strategy to convert fleet to low emission vehicles		Completed	In the next 5 Years		44 EVs in fleet.	Strategy produced
	T2	Pilot more electric vehicles within Council fleet	Ongoing		10 Years Plus	2020	Pedestrian electric sweeper and small box cage side loader electric vehicle being piloted	Report on pilot and plan for scaling up
	T3	Conduct detailed study of staff modal split	Ongoing		10 Years Plus		Staff survey conducted in May/June 2022. 1005 participants. Mode share breakdown: Walking - 9% Cycling - 16% Public transport - 31% Car - 33%	Yearly survey

T4	Promote Cycle-to-Work Scheme to DCC staff	Ongoing	10 Years Plus		69 staff availed of scheme in Q2 2022	# of staff availing of scheme
T5	Implement Smart Mobility Hub in Civic Offices	Ongoing	10 Years Plus		The pilot scheme has closed as of August 26th, 2022, will be going to tender	# of staff using hub
T6	Carbon offset programme for staff flights	Ongoing	10 Years Plus		ongoing	Tonnes of CO2 offset
T7	Occupational driver training for fleet staff	Ongoing	In the next 5 Years		816 Drivers have completed training. This training is now completed.	# of staff trained
T8	Assess potential for using an e-mobile for real time air quality monitoring in the City Centre	Ongoing	In the next 5 Years	2019	Google Airview car has recorded 42 million records of air quality data across Dublin City. Will be going to tender	Assessment report complete
T9	Implement the measures outlined in the Dublin City Centre Transport Study 2016	Ongoing	In the next 5 Years		Study is being updated.	# of measures implemented
T10	Implement traffic calming programme	Ongoing	In the next 5 Years		ongoing	# of traffic calming measures
T11	Expand 30 km/h speed limit zones to all residential areas of the City	Ongoing	In the next 5 Years		Has been completed	# of residential areas with 30 km/h speed limit
T12	D30 public awareness campaign of speed limits in City	Ongoing	In the next 5 Years		ongoing	# of citizens engaged
T13	Regular maintenance of regional and local roads	Ongoing	10 Years Plus		953 defects on the road network were repaired and/or made safe during July and August	# of repairs carried out on the road network
T14	Rolling out last mile delivery eco hubs in the City Centre area	Ongoing	In the next 5 Years		See below	# of last mile delivery eco hubs established

T15	Develop 'last mile' delivery solutions, as part of SBIR challenge	Ongoing	In the next 5 Years	<p>After the successful stakeholder workshop in May, we have started our conversation on a shared Urban Consolidation Centre which is being built in Ravensdale by An Post. We are in process of contacting other delivery companies to take part in the pilot which is planned for the start of Quarter-3.</p> <p>- WE have also formed a Delivery and Servicing Working Group, led by Jennifer McGrath. This is to bring together Dublin's businesses, retailers, delivery companies and councillor to understand their needs and work towards sustainability and efficiency. We are supporting Jennifer in looking into the Eco Hub Bye Law for Dublin City using the working group and encouraging the use of micro hubs as a part of Senator Project.</p> <p>- The kerbside mapping pilot has already begun and we are looking into mapping of two areas with two companies. The areas are around 1 square km around South Docklands and near Grafton Street. The maps should be ready by the first week of November.</p>	# of solutions trialled
T16	<p>Phase I Pedestrian Zones (2016-2022):</p> <ul style="list-style-type: none"> <li>- Liffey Street</li> <li>- Mary Street</li> <li>- Talbot Street</li> <li>- Castle Street/Cork Hill</li> <li>- Barnardo's Square</li> <li>- Temple Bar Public Realm</li> </ul>	Ongoing	In the next 5 Years	Currently reviewing projects	Schemes completed

T17	Phase II Pedestrian Zones (2023-2028): - Dame Street West - Lord Edward Street - Parnell Street - O'Connell Bridge - D'Olier Street - Lombard Street - Westland Row - Nassau Street - Aungier Street/ Valentine District - Merrion Square - Pearse Street - North Lotts - North Quays	Not Started	5-10 Years	Not Started	Schemes completed
T18	Phase III Pedestrian Zones (2029 and beyond): - South Quays - Tara Street - Parkgate Street	Not Started	10 Years Plus	Not Started	Schemes completed
T19	To investigate the introduction of traffic free areas on sections of: - Drury Street - South William Street - Exchequer Court - Dame Court - Dame Lane retaining access for car parks and deliveries	Ongoing	10 Years Plus		Schemes completed

T20	World Car Free Day (Annual)	Ongoing		10 Years Plus	Annual event - Bike Week takes place in Q2 2023	Promotion of EU event
T21	European Mobility Week	Ongoing		10 Years Plus	Activities during European Mobility Week included: - Creating an Efficiency of Space image for Dublin city to show how much more space cars take up on our streets compared to sustainable modes of transport. Approximately 50 volunteers took part in this activity. - Launch of DCC's e-bike loan scheme for staff pilot project - Free 1 day DublinBikes cards for Car Free Day - Bike Disco cycling for all event in Phoenix Park - Walk21 conference took place in TU Dublin (with sponsorship from DCC)	Promotion of events
T22	DCC to liaise with NTA on BusConnects programme	Ongoing		10 Years Plus		# of meetings
T23	2 EV charging point trials in the Docklands		Completed	In the next 5 Years		2 charging points installed
T24	Assessment of Council public car parks for trickle and rapid charge EV points		Completed	In the next 5 Years		Assessment complete
T25	Organise Pedestrian Days in areas with high footfall	Ongoing		In the next 5 Years	No pedestrian days held in Q3	# of pedestrian days held
T26	Set up partnership and create a communications engagement and promotion platform	Ongoing		In the next 5 Years	2 Workshop held to discuss Connecting Communities Workshop: 1. Internal with Traffic Staff; 2. Walking & Cycling Sub-Committee and Traffic Staff. Updates provided to full SPC and Walking & Cycling Sub Committee.	# of communities / areas involved
T27	Develop cycle action plan: 471 km of possible network	Ongoing		In the next 5 Years	Briefing to 5 Area Committees and the Traffic and Transportation SPC completed	Plan completed
T28	Dodder Greenway (Pedestrian and Cycle Improvement) - 7.5 km section	Ongoing		In the next 5 Years	Interim scheme proposal prepared and presented to Steering Committee on 27th September	Planning application approved

T29	2.7 km Clontarf-to-City Centre Cycle Scheme	Ongoing		In the next 5 Years	Three work areas opened up, Amiens Street, Fairview & Clontarf Road	Drawings of route completed Scheme Complete
T30	Liffey Cycle Route (6.8 km)	Ongoing		5-10 Years	Strategic Assessment Report presented to DCC stakeholders in advance of submission to NTA	Review of route completed Scheme Complete
T31	Fitzwilliam Cycle Route - 1 km route with upgrades for junctions	Ongoing		5-10 Years	Preparation of tender documents completed.	Consultant appointed Scheme Complete
T32	Sandyford-to-City Centre Cycle Scheme - proposal and options for 9 km route	Ongoing		5-10 Years	Preliminary design of scheme complete. Scheme presented to SEAC	Report completed
T33	Royal Canal Phase 3 - 7.5 km two-way cycle track with pedestrian route	Ongoing		5-10 Years	Tenders received	Tender issued Scheme Complete
T34	Grand Canal Premium Cycle Route - 4.4 km addition to route linking Portobello to Blackhorse	Ongoing			A review of the scheme feasibility is in progress following the resumption of the project.	Feasibility study completed Scheme Complete
T35	Pedestrian and cycle bridges: - Pedestrian and cycle bridges for Blood Stoney - Pedestrian and cycle bridges for the Point - Dodder PT Bridge	Ongoing		10 Years Plus	Ongoing	Planning permission submitted
T36	Cycle Training Programmes for 6th Class students / Pedal Power Labs*	Ongoing		10 Years Plus	Ongoing	# of students participating
T37	Feasibility of emissions-linked parking charges in City Centre	Not Started		In the next 5 Years		# of parking spaces
T38	Increase number of public bike parking facilities*	Ongoing		10 Years Plus	3 indoor cycling parking; (Check number of stands in the city)	# of parking spaces added
T39	Expand Stationless Bike scheme and add ebikes*	Ongoing		In the next 5 Years	ongoing	# of bikes available

T40	Expand Dublin Bikes scheme	Ongoing		In the next 5 Years	ongoing	# of Dublin bikes # of locations
T41	Implement policy to increase modal shift to cycling	Ongoing		In the next 5 Years	Ongoing work for the Launch of The Active Travel Network for Dublin City	
<del>T42</del>	<del>DCC to host Velo City 2019</del>		<del>Completed</del>	<del>In the next 5 Years</del>		<del>Event hosted</del>
T43	Install pilot Electric Vehicle charging station at John Rogerson's Quay		Completed	In the next 5 Years	completed	EV charge point installed
T44	Assessment of Rediscovery Centre car park in Ballymun for trickle or rapid electric vehicle charging station	Ongoing		In the next 5 Years	ongoing	EV charge point installed
<del>T45</del>	<del>Samuel Beckett Bridge segregated cycle lane</del>					<del>Segregated lane complete</del>
T46	DCC aspires to be a Future Cycling City*	Ongoing		10 Years Plus	The Handshake project concluded in Q3. Dublin collaborated with 12 other European cities throughout this project to learn from mentor cities and peers to exchange best practice, learnings and experiences on transitioning to becoming a cycling city.	# of collaborations
<del>T47</del>	<del>DCC will continue to seek new and expand on existing partnerships to encourage sustainable travel and safer travel behaviours</del>			<del>10 Years Plus</del>	<del>REDUNDANT</del>	<del># of partnerships</del>
T48	DCC will engage with local communities to develop a vision for the future of their neighbourhoods with a strong focus on local living, sustainable mobility and quality of life	Ongoing		10 Years Plus	DCAW Events specifically launch of Climate Campaigner and eat the streets festival included focus on active travel.	# of engagements

T49	Sustainable transport hubs – various locations 2	Ongoing	5-10 Years	Finglas Hub was launched on September 6th. Two EV chargers with Four charging spaces;  1 No. AC charger (nominally 22KW), with 2 charging spaces, and 1 No. DC 75KW charger with CCS and CHAdeMO, 2 charging spaces All chargers supplied and operated by EasyGo. A dedicated Car Share Club EV charging space (one of the AC spaces), to be rotated between all 3 licenced operators in Dublin City across the pilot duration (with Enterprise, GoCar and Yuko) A dedicated ESB eBike commuter hub with 8 eBikes, in association with Bleeper Bikes	# of hubs
T50	Support the development of bus routes including the Bus Connects programme	Ongoing	10 Years Plus	third phases launched in May	# of routes frequency of services
T51	Carry out Canal Cordon Count	Ongoing	10 Years Plus	ongoing	Results from count Annual Report Complete
T52	Implement policy to increase modal shift to public transport	Ongoing	10 Years Plus		# of additional bus lanes provided, # of cordon count results Number of passengers as a % of modal share
T53	Implement policy to give bus priority on core bus network	Ongoing	In the next 5 Years	ongoing	# of bus priority junction interventions
T54	Develop a strategy to promote car sharing	Ongoing	In the next 5 Years	ongoing	Strategy document developed
T55	The Council will undertake an assessment of the number of existing and potential future electric vehicle charge points in its jurisdiction and	Ongoing	In the next 5 Years	Dublin Local Authority Electric Vehicle Charging Strategy has been completed and was launched on September 6th. First charge points in service September 2022, Procurement planned for next phase.	# of charging points

	expand the availability					
T56	Replace diesel hand sweepers/power washers with electric models	Ongoing		In the next 5 Years	ongoing	% reduction
T57	Dublin City Council to promote Mobility-as-a-Service (MaaS) initiatives in the City to increase active travel options	Ongoing		10 Years Plus	Smart Dublin completed and published its MaaS Thought Leadership. The DoT have assigned the next steps to the NTA.	MaaS platform created Number of Initiatives in place Number of service providers participating in improving mobility options Baseline complete
T58	Create a baseline of sustainable urban mobility for Dublin in line with EC indicators		Completed	In the next 5 Years	Baseline complete. To be reviewed when Census results for 2022 are available.	Baseline complete
T59	East Coast trail (10.8km in DCC area)	Ongoing		In the next 5 Years	Tenders received for the implementation of a two way cycle track along East Wall Road.	Trail complete
T60	INTERREG Building an Ecosystem to Generate Opportunities in Open Data (BE GOOD) project to promote the safe wellbeing of the City and improvements in public transport services		Completed	In the next 5 Years		Quantitative & Qualitative information from the citizen on their experience with public transportation and on adherence to the HGV management strategy.
T61	DCC is working in partnership with the EPA on expanding and enhancing ambient air quality monitoring in Dublin in accordance with the National Ambient	Ongoing		In the next 5 Years	ongoing	

Flood Resilience		Air Monitoring Programme				
	T62	DCC is exploring the feasibility of carrying out an air quality status study in Dublin Port	Ongoing	In the next 5 Years	ongoing	
	T63	Cycling for Everyone - increase accessibility of cycling by providing adapted bikes for persons with a disability		New	2 trishaws in St. Anne's park (Check with Robert) 8 total in county; need to identify volunteers (can be from the community) to be trained to operate.	# of journeys; # of sites, #of trishaws
	T64	Roll-out of low traffic neighbourhoods		New	3 in operation - Pigeon House Road, Grange Gorman and Walsh Road,	# of schemes
	T65	Increase number of school zones, where feasible		New	70 school zones	# of school zones
	F1	Implement flood risk management guidelines	Ongoing	10 Years Plus	Ongoing, new policies in draft development plan	# of DCC projects following guidelines;
	F1A	Monitor implementation of flood risk management guidelines in planning applications	Ongoing	5-10 Years	Ongoing	
	F2	Coordinate Emergency Response Plans	Ongoing	10 Years Plus	Ongoing annual review	Review planning applications and provide recommendations ; % of planning application Plans completed
	F3	Implement flood awareness campaign with the OPW	Ongoing	10 Years Plus	Ongoing	
	F4	Monitoring of flood forecasting and warning system	Ongoing	10 Years Plus	Yearly review completed	Campaign implemented
F5	Produce a new Design Guide for SuDS and green infrastructure	Ongoing	10 Years Plus	<a href="https://www.dublincity.ie/residential/environment/water-and-wastewater/drainage-services/drainage-requirements-planning-applications">https://www.dublincity.ie/residential/environment/water-and-wastewater/drainage-services/drainage-requirements-planning-applications</a> ; <a href="https://www.dublincity.ie/sites/default/files/2021-12/dcc-suds-de-guide-2021.pdf">https://www.dublincity.ie/sites/default/files/2021-12/dcc-suds-de-guide-2021.pdf</a>	System maintained	

F6	Implement Sustainable urban Drainage Guidelines in Council buildings where feasible	Ongoing	In the next 5 Years	<a href="#">100%</a>	Guide developed
F7	Build demonstration sites to show options for SuDS	Ongoing	In the next 5 Years	2 sites at design stage	% of projects recommended to implement SuDS measures
F8	Establish a Dublin Bay Sentinel Group, led by DCC and including other key stakeholders, to monitor tide levels and other marine related flood risk issues in Dublin Bay	Ongoing	In the next 5 Years	Group established, work is ongoing	# of demonstration sites developed
F9	Develop and implement Coastal Zone Management plan for Dublin Bay, aligned with the four DLA Climate Change Action Plans for Dublin and other local authority plans and strategies	Ongoing	In the next 5 Years	Plan being developed	Group established, medium and long term action plan developed
F10	Implement the Dublin Bay Biosphere work programme	Ongoing	10 Years Plus	ongoing	Plan developed and progressing implementation
F11	Trial hemp baskets for flood protection	Ongoing	In the next 5 Years	Sandymount Phase 3	Work programme developed and implemented
F12	Identify areas for integrated constructed wetlands	Ongoing	10 Years Plus	2 areas identified, Annes Park	Trials implemented, report on findings
F13	Expansion of rainfall sensors and weather stations, as part of the Connect Flooding Demonstrator programme	Ongoing	In the next 5 Years	30 sensors and 4 weather stations	Areas identified and report published

F14	Phase 2 of Gully Monitoring SBIR Challenge		Ongoing		In the next 5 Years	Proceeding with project, Tender process with Smart Cities.	# of sensors installed, # of weather stations added
F15	Develop a climate change impact GIS risk map with scenarios for the Dublin Region	Not Started			In the next 5 Years		# of solutions developed and implemented
F16	Develop template to capture impacts, response and costs (including consideration of ecosystem services/natural capital costs) for all major climate events		Ongoing		10 Years Plus	Developing template using past event storm event that captures direct (damage, pollution, loss of life/property) and indirect costs (mental health)	GIS map developed
F16a	Assess the costs of adapting the city to climate events considering both direct and indirect impacts.		Ongoing	New		Work has commenced on this, and will be progressed as part of EU Mission	
F17	Establish a Working Group to deal with the issue of pluvial flood risk		Ongoing		10 Years Plus	Working Group Established	Template developed and issued
F18	Update DLA urban drainage and flooding policies promoting natural flood measures as a priority to inform new development plan		Ongoing		In the next 5 Years	Policies updated in draft development plan	Working group established
F19	Risk workshops to assess the likely impacts on Council services		Ongoing		In the next 5 Years	At least one per year, risks being updated.	Policies updated
F20	South Campshires Flood Defence			Completed	10 Years Plus		Risks identified

F21	Sir John Rogerson's Quay flood alleviation scheme	Ongoing		In the next 5 Years	Part of DDDA public realm project. Consultants appointed	Project completed
F22	North Campshires flood alleviation scheme	Ongoing		5-10 Years	Part of DDDA project	Project completed
<del>F23</del>	<del>Clanmoyle flood alleviation scheme</del>		<del>Completed</del>	<del>10 Years Plus</del>		<del>Project completed</del>
F24	Wad flood alleviation scheme	Ongoing		In the next 5 Years	Phase 2 at Planning Stage	Project completed
F25	Poddle flood alleviation scheme	Ongoing		In the next 5 Years		Project completed
F26	Camac flood alleviation scheme	Ongoing		In the next 5 Years	Project at preliminary design stage	Project completed
<del>F27</del>	<del>Dollymount flood alleviation scheme</del>		<del>Completed</del>	<del>10 Years Plus</del>		<del>Project completed</del>
F28	Clontarf Promenade flood alleviation scheme	Ongoing		In the next 5 Years	Project at feasibility stage	Project completed
F29	Sandymount Promenade flood alleviation scheme	Ongoing		10 Years Plus	Project at pre-construction stage	Project completed
F30	Sandymount Phase 2 flood alleviation scheme	Ongoing		In the next 5 Years	Project at feasibility stage	Project completed

F31	Chapelizod flood alleviation scheme		Postponed		In the next 5 Years	Awaiting staff replacement	Project completed
F32	Island Bridge flood alleviation scheme		Completed		In the next 5 Years		Project completed
F33	Santry River Regeneration Project	Ongoing			5-10 Years	Appointing consultant	Project completed
F34	River Dodder flood defence works in the fluvial section upstream of Ballsbridge	Ongoing			10 Years Plus	Phase 2 programmed completion Q4. Phase 3 computer modelling	Project completed
F35	Study impacts and benefits of increased buffer distances to watercourses	Ongoing			In the next 5 Years	Policies updated in draft development plan. Study ongoing.	Project ongoing
F35A	River restoration projects implemented	Ongoing		New		Ongoing on Camac and Santry	
F36	Promote and encourage community involvement in the retrofit of SuDS in existing developments	Ongoing			In the next 5 Years	3 communities involved in projects	Study completed
F37	Survey possibly by drone / satellites of paved areas of the City	Ongoing			10 Years Plus	Compiling documents for study	# of communities involved
F38	Environmental surveys of all City rivers and estuaries as baseline surveys	Ongoing			In the next 5 Years	Ongoing with river projects	Survey Completed
F39	Increase funding for gully cleaning in the city		Completed		10 Years Plus	Budget maintained	Survey Completed

Nature-Based Solutions	F40	The Council will work with the Local Authority Waters Programme in its support of communities and stakeholders in the delivery of local water quality projects and initiatives	Ongoing	10 Years Plus	Ongoing	Budget increased
	F41	Communication and awareness campaigns on flood risk management and natural flood management measures	Ongoing	In the next 5 Years	Ongoing	Project Completed
	N1	Establish regional working group on nature-based solutions	Ongoing	10 Years Plus	DCC Working Group Established; work is ongoing	Working group established
	<del>N2</del>	<del>Agree joint action plans to protect native habitats and species across all 4 DLA</del>				<del>Action plans agreed</del>
	N3	Establish a cross-departmental Trees and SuDS Working Group to promote and pilot water sensitive urban design incorporating urban tree planting	Ongoing	10 Years Plus	Working group established; workshops held in 2022; SuDS strategy in place, interdepartmental working group evolving	Working group established; Workshops held
	<del>N4</del>	<del>Workshop on trees and SuDS</del>				
	N5	Produce regional river basin management guidelines. Use Santry River as demonstration				Guidelines produced

N6	Facilitate an annual workshop for information exchange between biodiversity experts	Ongoing		10 Years Plus	Done as part of Biodiversity Action Plan, meeting annually	Workshop organised
<del>N7</del>	<del>Collect data to inform the preparation of a list of habitats and species in Dublin City vulnerable to climate change. Devise measures for reducing risks to these habitats and species locally and implement and evaluate their effectiveness</del>					
N8	Develop Green Infrastructure Strategy for region	Ongoing		10 Years Plus	Included in Draft Development Plan;	
N9	Implement Public Open Space and Parks Strategy	Ongoing		10 Years Plus	Ongoing	Strategy completed
N10	Map access to green space in City to identify areas of need		Completed	In the next 5 Years	completed	Strategy completed
N11	Continued support of the greenways concept for: Dublin Bay, Dodder, Santry, Liffey, Tolka and Camac	Ongoing		10 Years Plus	Ongoing	Spaces mapped, areas identified
N12	Assess the feasibility of green walls	Ongoing		10 Years Plus	ongoing - Will look to EU Mission to implement as an innovation action; resourcing is the challenge identified	Sites identified
N13	Implement Dublin City Tree Strategy	Ongoing		10 Years Plus	Ongoing	Report complete
<del>N14</del>	<del>Continue to map and collect data on trees in Dublin City</del>					
N15	Promote and expand Native Tree Trails programme	Ongoing		10 Years Plus	Ongoing - focus on promotion	Data mapped and collected

N16	Produce guidance on species of public trees for urban planting in accordance with Action 3.1 of the Dublin City Tree Strategy	Ongoing		10 Years Plus	new tree species and cultivars are being planted to assess their suitability for different urban environments	# of tree trails
N17	Tree-planting activities with schools including annual National Tree Week and National Tree Day	Ongoing		10 Years Plus	Ongoing	Guide produced
<del>N18</del>	<del>Investigate the use of the DAFM NeighbourWood Planting scheme for use in suitable urban area as part of the DCC Tree Strategy</del>					
N19	Analyse climate change impacts on City's trees to inform management	Not Started				Report complete
N20	Implement Dublin City Council Invasive Alien Species Action Plan	Ongoing		10 Years Plus	incorporated in biodiversity plan. No longer an action	
N21	Promote international World Wetlands Day	Ongoing		10 Years Plus	#	Event organised
<del>N22</del>	<del>Provide data to RAMSAR Committee for Ireland on wetlands in Dublin City</del>					Data submitted
N23	Prepare and publish Flora of Bull Island	Ongoing		10 Years Plus	completed	Book published
N24	Conduct a common cord-grass management study and monitoring for North Bull Island SPA	Not Started		In the next 5 Years		Study conducted

N25	Prepare a GIS based ecological sensitivity map of Dublin Bay Biosphere					Map complete
N26	Participate in the INTERREG-funded Acclimatize research project	Ongoing		In the next 5 Years		Project complete
N27	Conduct light-bellied Brent goose roost survey	Ongoing		10 Years Plus	ongoing in partnership with university of exeter	Survey complete
N28	Implement the North Bull Island Management Plan	Ongoing		10 Years Plus	Ongoing	Plan implemented
N29	Pilot projects for green roofs on civic buildings	Ongoing		10 Years Plus	ongoing	# of pilots
N30	Develop demonstration sites to showcase nature-based solutions with existing land uses					# of sites developed # existing green roofs
N31	Implement the North East Inner City and Liberties Greening Strategy	Ongoing		10 Years Plus	ongoing	Strategy implemented
N32	Develop urban woodland strategy as part of the DCC Tree Strategy					Strategy developed
N33	Incorporate tree and shrub planting in all new Council housing developments	Ongoing		10 Years Plus		# of trees per new dwelling, # of shrubs per new dwelling
N34	Assess feasibility of additional green space for local food production, including community gardens and urban orchards	Ongoing		In the next 5 Years	Ongoing as part of the development of Edible Dublin Food strategy	Feasibility report
N35	Produce A Guide to Sustainable Living in Dublin City	Ongoing		In the next 5 Years	Ongoing as part of the development of Edible Dublin Food strategy; the rationale for inclusion in the food strategy is that through food numerous climate issues can be addressed: energy, waste, and transport.	Guide produced and available in libraries

N36	Identify sites suitable for community gardens for local food production					# of sites identified
N37	Assessment of causes and impacts of Ectocarpus brown algal growth in Dublin Bay	Ongoing		In the next 5 Years	Ongoing with NUIG	Assessment complete and actions developed Develop Sustainable Programme of Mgt List prepared
N38	Prepare a preliminary list of species and habitats vulnerable to climate change for informing environmental impact assessments					
N39	Prepare an analysis of soil sealing in Dublin City to determine levels of permeability	Not Started		In the next 5 Years	NEED RESOURCE - Important to EU Mission Climate City Contract	Analysis done
N40	Engage with business community to develop sustainable business initiatives for Dublin Bay UNESCO Biosphere Business Strategy					
N41	DCC will continue as a partner in the Pollinator Plan for the duration of the Climate Change Action Plan and will monitor results over time					Annual report on bee population

Resource Management	R1	Monitor and enforce waste regulation	Ongoing	10 Years Plus	Ongoing	Environmental Performance Assessment from EPA
	R2	Assess waste in Council buildings and plan actions	Ongoing	10 Years Plus	Ongoing	Assessments completed annually
	R3	Run staff recycling awareness campaign	Ongoing	10 Years Plus	Ongoing	Campaigns implemented
	R4	Identify areas in need of civic amenity sites and waste transfer stations	Ongoing	10 Years Plus		# of areas identify and feasibility assessed
	R5	Apply for LAPN (Local Authority Prevention Network) grants	Ongoing	10 Years Plus	EPA scheme did not open	# of projects implemented
	R6	Create Stop Food Waste campaign for businesses and schools	Ongoing	10 Years Plus	Ongoing. Stop Food Waste is Ireland's national food waste prevention campaign. Dublin City Council promote and participate in these regular campaigns	Campaign developed and implemented
	R7	Promote Reuse Month annually	Ongoing	10 Years Plus	Planned for October	# of promotional activities
	R8	Promote programmes to advise businesses on reducing waste e.g. EcoMerit				# of businesses participating
	R9	Promote recycling and the circular economy to householders through a range of workshops, talks and programmes	Ongoing	10 Years Plus	ongoing	# of workshops and attendees
	R10	Continue to work with the Rediscovery Centre to promote sustainability	Ongoing	10 Years Plus	Rediscovery Centre have paused this proposal due to lack of available space for storage of additional bikes on their premises	# of collaborations

R11	Research and implement sustainable procurement guidelines	Ongoing		In the next 5 Years	ongoing	Research complete, findings implemented
R11 A	Identify opportunities of introducing circular economy principles in depots	Ongoing	New		identifying resource to implement	Opportunities identified and principles implemented where practicable
R11 B	Expand Depot collection of WEE products to all Depots				ongoing	All depots have WEE collection capacity
R12	Run anti-dumping and antilitter campaigns	Ongoing		10 Years Plus	6 Anti dumping initiatives completed by Area office under department scheme	# of campaigns
R13	Support and promote litter clean up days and initiatives	Ongoing		10 Years Plus	ongoing	# of days
R14	Solar Compactor Bins provided in City	Ongoing		In the next 5 Years	357 solar bins in operation across the city	# of smart bins added, reduction in waste collections
R15	Mapping and tagging of City bins	Ongoing		10 Years Plus	Fully rolled out and process in place	# of bins tagged and mapped
R16	Identify areas in need of recycling infrastructure	Ongoing				Areas of need identified
R17	Develop pilot projects for recycling	Ongoing		10 Years Plus	Recycling bins expanded new trial of mixed dry recycling to Clontarf triple units	Pilots developed
R18	Engage with relevant stakeholders and deliver an energy efficiency, circular economy and sustainability training programme targeting micro and small enterprises	Ongoing		In the next 5 Years	ongoing	SME sign up and roll out training programme
R19	Investigate introducing a leaf composting	Ongoing		In the next 5 Years	Already policy since 2020	Composting programme introduced, #

	programme across the City					tonnage of leaves diverted to composting
R19 A	Explore potential of 'in-house' on site composting in DCC Parks	Ongoing	New		ongoing	Sites identified
R20 A	Support and promote Tidy Towns / City Neighbourhoods initiatives	Ongoing		10 Years Plus	City Neighbourhood event Croke park 6th Oct	# of participants yearly
R20 B	Support and promote Green Schools and Annual Conference	Ongoing	New	10 Years Plus	ongoing	# of Schools participating
R20 C	Support and promote Community Environment Action Fund (CEAF) Initiatives	Ongoing	New	10 Years Plus	Waiting for DECC to launch grant	#of projects supported
R21	Develop sustainability guidelines and terms and conditions for any events supported, facilitated or organised by DCC	Ongoing		In the next 5 Years	ongoing	Guidance produced, # of events with sustainability terms and conditions
R22	Review terms and conditions for all events approved by DCC to incorporate possible sustainability conditions		Completed	In the next 5 Years	ongoing	Guidance produced on terms and conditions
R23	Any events supported, facilitated or organised by DCC will not permit balloon or Chinese lantern releases	Ongoing		10 Years Plus	Already policy since 2020	included in the guidelines
R24	DCC to consult with the events industry on alternatives to noncompostable single use food and beverage containers at DCC events	Ongoing		In the next 5 Years	ongoing	Consultation undertaken and submissions received

R25	DCC to select an appropriate event as a pilot to trial alternatives to non-compostable single use food and beverage containers	Ongoing		In the next 5 Years	ongoing - events have only returned post COVID - Eat the Streets encouraged attendees to bring their own containers. Food vendors are facing challenges and are stretched	Event selected and trial undertaken
R26	Phase out the use of single use plastic cups from all DCC canteens and replace with the use of ceramic cups and personal reusable cups	Ongoing		In the next 5 Years	ongoing	No single use plastic cups in use in all Dublin City Council canteens
R27	Identify pilot locations for water access points		Completed	In the next 5 Years		Sites identified
R27A	Install and maintain water access points	Ongoing		New	Q2 - Clarendon Row installed	
R28	Host and select sites for the Composting Demonstration using Master Composter EPA Stop Food Waste Programme or similar programme to assist sustainable gardening and management of landscaping waste	Ongoing		10 Years Plus	Programming to take place in Q4 in partnership with Libraries	# of sites
R29	<del>Continue to investigate best practice in street recycling facilities</del>					Report produced
R30	Explore collaboration with stakeholders such as Refill.ie to reduce single use items	Ongoing		In the next 5 Years	Ongoing	Feasibility assessed
R31	Implement water conservation	Ongoing		In the next 5 Years	Ongoing	% reduction in water consumed



## Appendix II – Met Eireann Climate Summaries

Year	January	February	March	April	May	June	July	August	September	October	November	December
2016	was mostly dominated by the North Atlantic jet stream, with Storm Gertrude a notable feature. Long Term Averages (LTA) for temperature were normal and above average for rainfall.	NA	Storm Jake and Katie were named. Most places reported below their 1981-2010 Long-Term Averages (LTA) for rainfall and mean air temperatures .	Changeable and unsettled early on, but settled for the second half of the month. 1981-2010 Long-Term Average (LTA) rainfall values were variable and all stations reported below average air temperatures .	Changeable with some clear spells. Most 1981-2010 Long-Term Average (LTA) rainfall values were below and all stations reported average or above average mean temperatures .	Two-thirds of Long-Term Average (LTA) rainfall values were above average. All stations reported above average mean air temperatures and LTA sunshine values were variable.	Long-Term Average (LTA) rainfall totals were variable, half of monthly mean air temperatures were above average and nearly all LTA sunshine totals were below average.	Two-thirds of stations reported below Long-Term Average (LTA) for rainfall, nearly all stations were above mean temperatures and sunshine totals were mainly below average.		was mainly influenced by anticyclonic conditions allowing for predominantly dry settled conditions and no strong gales or storms reported	however, was dominated by anticyclonic conditions and the Azores high. Most stations reported below their Long-Term Averages (LTA) for rainfall and all stations were below their LTAs for temperatures .	Most stations reported below Long-Term Averages (LTA) for rainfall and above for temperatures
2017	was mild and dry. All rainfall totals were below their LTA and above their LTA for temperatures.	was mild. Half of the stations reported monthly rainfall totals below their Long-Term Average (LTA) and air temperatures across the country were all above their LTA. Storms Ewan and Doris affected Ireland.	Mild, unsettled and wet. Most rainfall totals and temperatures were above their LTA.	Mild and dry everywhere. All rainfall totals were below their LTA with temperatures near or above their LTA.	Warm, dry and sunny. Most rainfall totals were below average. Mean air temperatures were above everywhere and most available sunshine totals were above their LTA.	Changeable, unsettled and dull. The majority of stations reported above average monthly rainfall totals and above average mean Air temperatures , while two-thirds of available sunshine totals were below their LTA.	Changeable with rain or showers most days. Most rainfall and sunshine totals were above average while the majority of air temperatures were below their LTA.	Cool and dull. LTA rainfall values were variable, all air temperatures were below average and nearly all sunshine totals were below.		brought the memorable ex-Hurricane Ophelia and then Storm Brian with violent storm force winds and strong gales reported at many stations throughout the country	was changeable, cool and unsettled. Below average monthly rainfall and mean temperatures at most locations with above average sunshine totals.	was unsettled and mild. Storm Dylan was the main feature with monthly rainfall and temperature totals above average and sunshine totals below average.

2018	was wetter than normal with near or slightly above LTA for temperatures and rainfall. Fog was a significant feature, particularly in the West and South.	was cold, sunny and dry. Nearly all rainfall totals were below their LTA and air temperatures across the country were below their LTA.	Storm Emma yielded widespread snow, ice and low temperatures. Most rainfall totals and all temperatures were below their LTA.	Unsettled, dull and wet. The majority of monthly rainfall totals and air temperatures were above their LTA and most available sunshine totals were below their LTA.	Mostly warm, dry and sunny. Nearly all rainfall totals were below their LTA. All mean temperatures and all available sunshine totals were above their LTA.	Heatwave conditions experienced in many places. Air temperatures and sunshine values were above average everywhere while rainfall totals were below their LTA. Storm Hector passed by the Northwest on the 13th & 14th.	Dry & warm with drought conditions. All monthly rainfall totals were below average, while all mean air temperatures and most of the sunshine totals were above their LTA.	Cooler & wetter in the North & West, drier & warmer elsewhere. Most monthly rainfall totals were below their LTA, mean air temperatures were variable and all stations had below average Sunshine totals.		was a cool, dry month with above average sunshine values and the major weather event that month being Storm Callum which led to widespread heavy rain on the 12th and 13th.	was dull and wet, with above average rainfall and monthly mean temperatures in most places. Storm Diana was a feature on the 28th with the highest recorded gust of 62 knots (115 km/h) at both Casement (its highest in 27 years) and at Roche's Point (its highest in 13 years).	was mild and unsettled with Storm Deirdre affecting Ireland. Many stations were near normal for rainfall totals but above in the South. Air temperatures were above LTA and sunshine totals below.
2019	was mild and dry with a cold finish. Rainfall LTA were below everywhere and above average for temperatures.	was very mild and mostly dry. Rainfall totals were below their LTA and air temperatures across the country were above their LTA. Storm Erik affected Ireland	Storms Freya and Gareth were named. Unsettled and rainfall totals and temperatures were above their LTA.	Above average temperatures and rainfall for most stations with Storm Hannah bringing storm force winds this month.	Mostly dry with near average temperatures. Rainfall totals were nearly all below their LTA. Mean temperatures were variable and it was sunniest in the Southwest.	Cool and unsettled overall with a warm finish. The majority of monthly rainfall totals were above average, mean air temperatures were below and sunshine values were variable.	Warm overall, drier and sunnier in the South and East. The majority of monthly rainfall totals were below average while all mean air temperatures were above average and sunshine totals were variable.	Mild and Unsettled. Above average rainfall totals, air temperatures and sunshine totals in most places.		was mainly sunny and cool but wet in the South, ex-hurricane Storm Lorenzo brought unsettled weather at the start of the month.	was very wet and dull in the East and cool everywhere. Most monthly rainfall totals were above their LTAs and all stations had below average monthly mean temperatures.	was mild, bright and breezy. Storm Atiyah on the 8th and 9th and Storm Elsa on the 18th brought windy, wet conditions and coastal flooding. Monthly rainfall totals varied, temperature and sunshine totals were above LTA.

2020	was mild and dry overall. Storm Brendan, brought storm force winds including thunderstorms in the West and the East. Rainfall LTA were below average in most places and temperatures were above average everywhere.	was exceptionally wet and very windy. All rainfall totals were above their LTA and nearly all mean air temperatures were above their LTA. Storms Ciara, Dennis and Jorge affected Ireland.	Storm Jorge was named. This month was cool, sunny and dry in the East. Rainfall totals and temperatures were below their LTA nearly everywhere.	Very dry, mild and sunny. Rainfall totals were below average everywhere, all air temperatures across the country and all available sunshine totals were above their LTA.	Very dry, warm and sunny. Rainfall totals were below average but storm Arthur brought widespread rain late in the month. All mean temperatures and all available sunshine totals were above their LTA.	Changeable, dull and windy. The majority of monthly rainfall totals were above average. Temperatures were near average, while sunshine values were below average everywhere.	Cool and wet. All monthly rainfall totals were above average while mean air temperatures and sunshine totals were below.	Warm, wet, and stormy. Storm Ellen and Francis brought heavy rainfall and gales. Rainfall and air temperatures were above average nearly everywhere while sunshine totals were below their LTA.		was predominantly cool, wet, and windy and storm force winds were reported during Storm Aiden which developed towards the latter stages of the month. Storm Aiden, on Saturday 31 October 2020, is the last time storm force winds were observed across Ireland.	was mild, wet in the West and dominated by an Atlantic regime, with rainfall above average in most places and mean temperatures above average everywhere.	was cool, wet and windy. Storm Bella brought windy and wet conditions on the 26th and 27th.. Rainfall and sunshine totals were above their LTA and temperature was below in most places.
2021	was cold and wet. Rainfall was above average in most places and temperatures were below average everywhere.	was mild overall and wet, especially in the South. Rainfall totals were above their LTA and nearly all mean air temperatures were above their LTA. Storm Darcy affected Ireland.	Mild and settled. Rainfall totals were below their LTA and air temperatures were above their LTA.	Very dry, cool and sunny. All rainfall totals and nearly all air temperatures were below their LTA while all available sunshine totals were above their LTA.	Cool and wet everywhere. All rainfall and sunshine totals were above their LTA and all mean temperatures were below their LTA.	Dry everywhere, sunny and warm in the South and East. Rainfall totals were below average everywhere. The majority of mean air temperatures were above average and nearly all sunshine totals were above average.	Hot, sunny with widespread heatwaves. Rainfall totals were variable and all mean air temperatures and sunshine totals were above average.	Mild and changeable, dry finish. Most monthly rainfall totals were below their LTA, nearly all mean temperatures were above, and sunshine values were variable.	Warm, dry for most and dull; Rainfall: Below average in most places, driest in the East; Temperature : Above average everywhere, record breaking in places	Mild. Wet, especially in the South and West. Sunny in the South and East; Rainfall: Above average in most places, wettest in the South and West; Temperature: Above average everywhere	Mild and dry for most of the month. Sunny in the South; Rainfall: Below average nearly everywhere, driest in the East; Temperature: Above average everywhere	Mild, changeable and windy at times; Rainfall: Above average in most places, wettest in the South and East; Temperature : Above average everywhere

2022	<p>was mild and very dry. Rainfall was below the Long-term average. Temperatures were above average</p>	<p>Violent storm force winds reported during storm Eunice. Was mild, wet and windy, Rainfall was above the long term average. Temperatures were above average.</p>	<p>March was mild, dry and very sunny. Rainfall: Below average nearly everywhere, driest in the Northwest; and Temperature s were above average</p>	<p>Was Mild, dry and sunny overall; Rainfall: Below average in most places, driest in the East; Temperature: Above average at most stations, warmest in the West</p>	<p>Very mild, dry in the South, wet in the Northwest; Rainfall: Below average in the South, above average in the Northwest; Temperature: Significantly above average everywhere, especially warm at night</p>	<p>Wetter, cooler and cloudier in the West. Drier, warmer and sunnier in the East; Rainfall: Above average in most places, highest in the West and Southwest. Below average in the East; Temperature: Mostly above average, below average at some stations in the West</p>	<p>Warm and dry with record high maximum daily temperature s reported; Rainfall: Below average everywhere, lowest in the South; Temperature : Above average everywhere, record high maximum daily temperature s reported at nine stations</p>	<p>Dry, sunny and very warm, with heatwaves and record temperature s reported; Rainfall: Below average everywhere, lowest in the Midlands, South and East; Temperature : Above average everywhere, record high maximum daily temperature s for August reported at eleven stations</p>	<p>Relatively mild and wet overall; Rainfall: Above average in most places, highest in the Midlands, South and East. Temperature : Above average in most places. Sunshine: Sunniest in the Southwest, dull in the East; Wind: Strong gales reported</p>				
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## Appendix III – Climate Action Regional Office (CARO) update

The Climate Action Regional Offices (CAROs) were established in 2018 in response to Action 8 of the 2018 National Adaptation Framework (NAF) – *Planning for a Climate Resilient Ireland*. The offices are mandated to co-ordinate engagement across the varying levels of government and help build on experience and expertise that exists in the area of climate change and climate action. The offices have a role in driving climate action at both regional and local levels, including supporting the implementation of local adaptation plans/Climate Change Action Plans.

The composition of the four Climate Action Regions has been determined by the geographical and topographical characteristics, vulnerabilities and shared climate risks experienced across local authority areas. The four CARO regions, constituent local authorities and associated lead authorities are shown in Table X.

Table 4: Climate Action Regional Offices

Climate Action Region	Local Authority function area	Lead Authority
<b>Dublin Metropolitan</b>	Dublin City, Dun-Laoghaire-Rathdown, South Dublin, Fingal	Dublin City Council
<b>Eastern and Midlands</b>	Carlow, Cavan, Kildare, Kilkenny, Laois, Leitrim, Longford, Louth, Meath, Monaghan, Offaly, Roscommon, Tipperary, Waterford, Westmeath, Wexford, Wicklow	Kildare County Council with support from Kilkenny County Council
<b>Atlantic Seaboard North</b>	Donegal, Sligo, Mayo, Galway City & County	Mayo County Council
<b>Atlantic Seaboard South</b>	Clare, Limerick, Kerry, Cork City & County.	Cork County Council

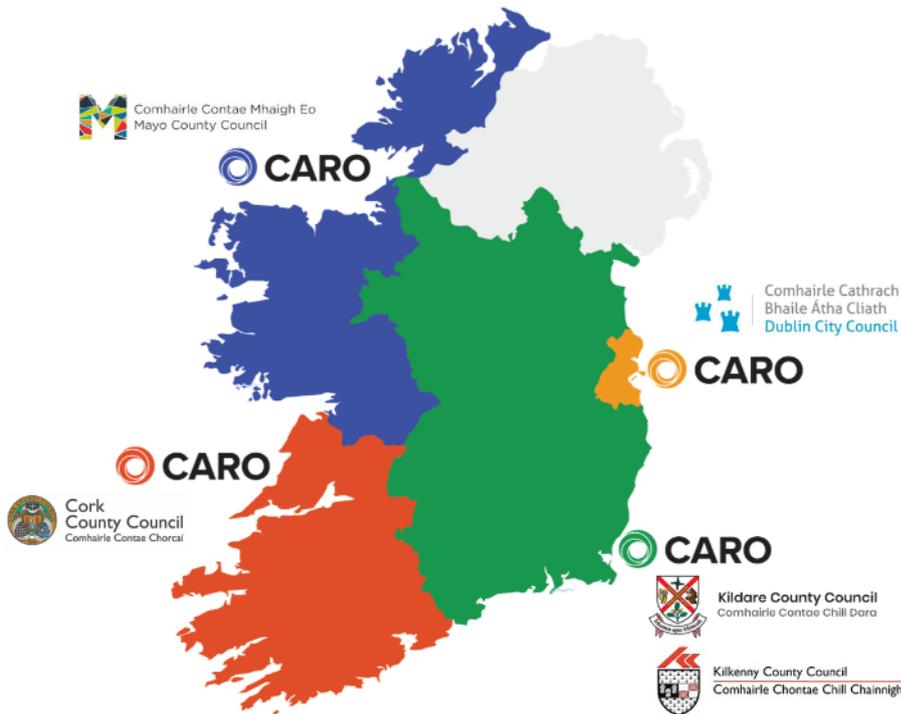


Figure 17: Climate Action Regional Offices (CAROs)

The Dublin Metropolitan CARO has been working closely with the four Dublin Climate Teams and Codema, the Dublin Energy Agency to support the implementation of their Climate Change Action Plans. The Dublin CARO has a regional steering group comprising the four Director of Services of the Dublin Local Authorities, and colleagues from Codema and the Eastern Midlands Regional Assembly. Examples of projects across the six key areas of the CARO work programme are included below;

- **Management and Governance**
  - National, Regional and local climate team meetings
  - Participation in sectoral adaptation steering groups and working groups
  - Preparation of detailed business case to support climate action for the local authority sector
  - Participation in relevant CCMA/LGMA and Government working groups on Climate Action
- **Climate Adaptation**
  - Assisting local authorities with implementation and reporting of Climate Change Adaptation /Action Plans including implementation guidance
  - Preparation of guidance such as guidance document for adaptation of regional & local roads
  - Working with Government Departments and agencies on the implementation of sectoral adaptation plans
  - Collaborating with key climate actors such as Climate Ireland, 3<sup>rd</sup> Level Universities

- Participation on National Working Groups such as new Coastal Change Strategy Steering Group
- **Climate Mitigation**
  - Participation in Regional and National Electric Vehicle (EV) working groups
  - Collaboration with energy agencies and SEAI on energy related projects
  - Identifying and assisting local authorities with projects eligible for the National Climate Action Fund
- **Communications and Citizen Engagement**
  - Presentations to Councils, Government Departments and Agencies, youth organisations and the general public
  - Supporting individual local authorities with community engagement events including climate action workshops
  - Collaboration with key stakeholders such as GAA on Green Clubs Programme, Comhairle Na nOg, Age Friendly Ireland etc.
  - Maintenance of the CARO website and social media communication channels
  - Production of a quarterly on-line newsletter detailing new policy, legislation, best practice examples of climate mitigation and adaptation, news
  - Preparation of submissions on climate relevant public consultations
- **Training and Education**
  - Preparation and rollout of a comprehensive Climate Action training plan for the LA sector across all levels (see below for further details)
  - Identification of external training and upskilling opportunities in climate action for the Local Authority Sector
  - Collaboration with expert organisations and representative bodies for tailored workshops and training seminars
- **Knowledge Development**
  - Development of online Weather impacts Reporting App (WIRE) for Local Authorities
  - Preparation of guidance and position papers on climate action areas
  - Identification and communication of funding opportunities for climate action projects in local authorities and assistance with application process
  - Participation in relevant climate action research projects from the Environmental Protection Agency research programmes and other funding programmes
  - Engaging with local authorities and Regional Assemblies on planning issues relating to climate action

A key focus of the CARO work programme for 2022 has been the roll out of climate action training across the local authority sector. This training plan has been developed by the CAROs in collaboration with partners such as the Local Authority Environmental Services Training Group (LASTNG), Climate Ireland, the Sustainable Energy Authority of Ireland (SEAI), Met Éireann, the Environmental Protection Agency, the Institute for Public Administration and others. Training has been targeted at all staff levels and focuses on the following six pillar areas;



**LOCAL AUTHORITY  
Climate Action  
Training Programme**

- *Climate Action Leadership* – aimed at all elected members & senior staff
- *Climate Action Awareness Training* – aimed at building capacity across climate action teams
- *General Awareness Building* – online training for all indoor staff to raise awareness of climate action
- *Practical Climate Action* – training for all outdoor staff to assist them to deliver practical climate action measures
- *Behavioral Change Training* – to empower staff to promote positive change both internally and across the community
- *Specific and Targeted Training* – training arising from specific knowledge gaps or individual policy/role requirements, such as spatial planning, flood risk management and

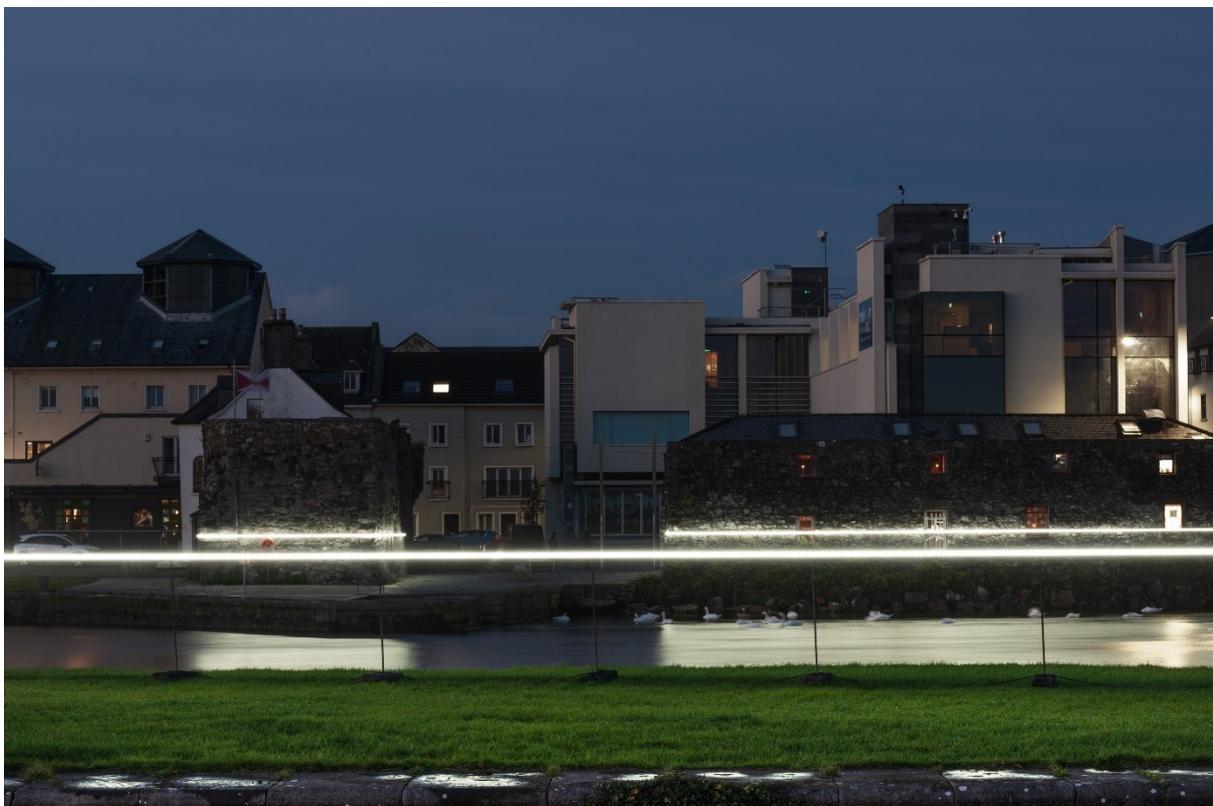
Despite the COVID restrictions that were in place for the first part of 2022, the training programme advanced in interactive online formats and workshops throughout the year across all counties. Since January 2021, just over 16,500 training places have been provided to staff from all 31 Local Authorities across all 6 training pillars of the Local Authority Climate Action Training Programme. Other key work areas for Dublin CARO throughout 2021 included:

**Strengthening communications.** This has been primarily by developing the CARO website and the CARO quarterly e-newsletter. The CARO website was launched in February 2021 and has had over 144,000 views and 86,000 users since then. The most popular sections of the website include projects, research, local authority climate action, training and academic courses. The CARO newsletter has more than 700 subscribers across a range of local authorities, agencies, government departments, academia and members of the public. Both the website and the newsletter are key tools for dissemination of information on climate policy, research, funding, events, training and examples of climate action work across the local authority sector.

**Community outreach.** Working with the four Dublin Local Authorities and Codema a significant amount of work and events were undertaken as part of the Dublin Climate Action Week in September to deliver a programme of in person and online events to showcase climate action. Additional outreach will be achieved through the delivery of recorded webinars on the CARO website for future use. Significant work was also undertaken with other partners as part of the GAA

Green Clubs Phase 1 programme<sup>2</sup>. Other events have included working with partners such as Age Friendly Ireland, An Taisce Climate Ambassadors and 3<sup>rd</sup> Level universities to participate in events and workshops on climate action.

**Changing behaviour and empowering local adaptation.** CARO have worked with artists, a number of local authorities, academia and other partners on the Creative Climate Action Funded project ‘Línte na Farraiqe’<sup>3</sup>. It consists of a series of LED light art installations at coastal locations to visualise sea level rise and storm surge. Communication tools such as a website, information boards and a social media campaign have been devised to engage the public on climate action. The project launched in September 2022 with an installation in the Spanish Arch Galway (see image x below) and Wexford Promenade in October. Further installations will be completed in Dublin in early 2023.



*Figure 18. Línte Na Farraiqe installation by Pekka Nittyrvita and Timo Aho – Galway, September 2022.*

**Providing expertise to national policy formation.** CARO contributed to policy development as a member of expert groups and for the following publications:

- Project Advisory Group on Local Authority Climate Action Plan Guidelines;

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<sup>2</sup> [Green Clubs Programme \(gaa.ie\)](https://www.gaa.ie)

<sup>3</sup> [www.lintenafarraige.com](https://www.lintenafarraige.com)

- Dublin Local Authority Electric Vehicle Charging Strategy; climate team to consider including separate section on DLA strategy which was launched in June 2022
- Local Authority Electrification of Fleet and EV Charging Guidance.
- Preparation of submissions to DECC National Adaptation Framework and Department of Transport Electric Vehicle Charging Strategy
- Local Authority GPP Training Steering Group; and
- Dublin's Energy Transition Roadmap (Zero Together).

## Appendix IV – Codema Update

This section is a non-exhaustive summary of some of the main activities Codema has undertaken in the last 12 months. Since the Climate Change Action Plan’s publication in 2019, Codema has continued its work as the energy advisor to the four Dublin Local Authorities (DLAs).

### Energy Management

Codema assists in the direct energy management within Dublin City Council (DCC), completing the Sustainable Energy Authority of Ireland (SEAI) Monitoring and Reporting to show the authority’s progress towards its 2030 50% energy efficiency improvement target . As of 2021, DCC has achieved a 40.9% energy reduction compared to the baseline. In addition to this, a target of a 50% absolute reduction in energy-related greenhouse gas emissions (GHGs) has also been set by 2030. This target will use a separate baseline to the energy efficiency target, taking an average of emissions from 2016-2018. Codema has assessed what additional actions will be required to achieve this target, using the latest Gap-to-Target tool developed by SEAI. By the end of 2021, DCC had reduced its GHG emissions by 25% compared to this baseline. Forty-three Display Energy Certificates were generated for public buildings in 2021. Codema regularly assists the DLAs in applications for national funding to assist in the development of low-carbon projects. Codema was awarded significant funding from the EU Horizon 2020 Programme in 2021 to develop a Project Implementation Unit for the development of renewable energy and energy efficiency projects in Dublin over the next three years. Under this DeliveREE project, 43 DCC facilities have been proposed for energy projects within the project pipeline. In conjunction with this, Codema is working with the four Dublin Local Authorities to develop a Pathfinder funding application with SEAI, which could provide up to 50% capital funding for these projects.

### Energy and Climate Awareness

As one of the organising partners, Codema worked very closely with Dublin City Council throughout the organisation and implementation of Dublin Climate Action Week 2022 . There was excellent synergy and collaboration achieved across the Codema and Dublin City Council teams, resulting in a cohesive and informative week of events. Codema continued to support the Home Energy Saving Kit Scheme across Dublin City Council’s public libraries. In 2021, Codema developed an additional 42 Home Energy Saving Kits for Dublin City Council’s public library branches. This included online training for library branch staff. . The Home Energy Saving Kit scheme has continued to expand nationally, with the kits now available to borrow from over 160 public libraries across Ireland. In January 2022, Codema submitted a funding application to Pobal’s Community Climate Action Programme in partnership with Dublin City Council Public Libraries and the other library networks in the Dublin region to deliver a training programme that would build capacity and knowledge among local communities by recruiting volunteers as ‘community champions’ to carry out peer-to-peer

learning using the Home Energy Saving Kits. Unfortunately, the application wasn't successful but Codema will continue to identify possible funding streams that can help to support the Home Energy Saving Kit scheme and help the people of Dublin to get to the next steps of their energy saving journey.

### Dublin Region Energy Master Plan

Codema has completed the [Dublin Regional Energy Master Plan](#), supported through the SEAI Research, Development and Demonstration (RD&D) programme. The project evaluated the cost-optimal, spatially possible and technically feasible low-carbon scenarios for Dublin to meet its 2030 and 2050 CO<sub>2</sub> reduction targets from the perspective of society, energy consumers and the energy sector. It did this through analysis of the three main energy sectors (heat, electricity and transport) and the synergies between them to deliver more cost-effective low-carbon pathways for the region. It looked at current and future policy impacts and shortfalls to targets needed to make Dublin net carbon neutral by 2050. This is the first master plan of its kind in Ireland to look at the County and small area level and to assess which solutions will work best within local constraints. The finished plan will aid planners and other decision makers in all energy related plans in the future.

### Sustainable Energy Communities (SEC)

Codema are the coordinators for the SEAI Sustainable Energy Communities (SEC) Programme for the Dublin and Mid East region. The seven counties (4 Dublin LAs, Kildare, Wicklow and Meath) are each provided with a mentor to help advise the SECs and move them along their progress from learning about energy and climate change, to conducting an energy master plan and registry of opportunities to finally undertaking projects. The aim is to upskill and educate but also to reduce energy consumption through behavioural change, energy efficiency, renewable and smart solutions. The seven local authorities are acting as lead applicants on behalf of the SECs for their energy master plans providing finance to activate grants and procurement expertise for hiring consultants. Work has been carried out to improve and streamline the energy master plan process, to make it more accessible for SECs, by reducing risk and highlighting Stakeholders. This has been achieved through Dublin City Councils EMP Framework, which is managed by Codema. A Memorandum of Understanding has been signed by five of the seven LAs (Dublin City, South Dublin, DLR, Meath and Kildare) in order to make the EMP process more accessible for SECs, and reduce admin for LAs. The tender will last for four years, with two years remaining, and has already proved very popular with sixteen new SECs signing up this year across the region, and a current total of one hundred and sixty six SECs. Dublin City has thirty-five SECs, with seventeen EMPs completed to date, out of a total fifty five EMPs completed overall.

### Decarbonising Zones

Codema has supported the Climate Action Regional Offices (CAROs) with the development of the guidelines for the implementation of decarbonising zones, and has supported the Dublin Local Authorities (DLAs) with their decarbonising zone selection process and is also providing ongoing

support with the development of their zone analysis and planning process for inclusion in future updates to the DLAs' Climate Change Action Plans (CCAPs).

## EU Projects

An area Codema has extensive knowledge and experience in is the application and execution of EU projects across a range of funding streams, at present we have several active projects, namely:

### *Zero Together:*

Codema has made significant progress in relation to the Zero Together initiative, which sets out to create a collaborative roadmap and strategy for the whole of Dublin to ensure we meet our 2030 and 2050 emission-reduction targets. Dublin City Council is a member of the Zero Together Transition Team, which includes change agents across academia, transport, local authorities, community, energy and NGOs to work together collaboratively to develop a roadmap to reduce Dublin's emissions by 2030 and 2050. Over the course of 10 months between 2021 and 2022, Codema organised eight facilitated workshops with the Transition Team. Throughout 30 hours of deliberation, the team brought their knowledge and expertise to the process, building out a vision for Dublin, discussing the current barriers, setting out the strategic directions and looking at the key actions that need to be implemented for Dublin's energy transition.

The Zero Together roadmap is grounded in three core elements to ensure that it is fair and impactful: 1) an evidence-base to direct the roadmap and ensure that it is grounded in the best available information and science, 2) collaboration across a diverse range of sectors, moving beyond silos and working together to develop and disseminate the roadmap and 3) public engagement and participation. All of these three elements are in motion; the Dublin Regional Energy Master Plan is the culmination of three years of research and was launched in June 2022, the Transition Team has been formed and engaged in a number of exploratory workshops, as mentioned above, and public engagement is outlined in the paragraph below. The Zero Together initiative is being supported by the EU Horizon 2020 TOMORROW project, where Dublin - along with five other pilot European cities - is being guided on best-practice energy transition management processes.

**Zero Together Public Engagement:** In September 2021, Codema launched a county-wide Zero Together survey to get the public's views on how we can move Dublin away from fossil fuels. Over 1,000 people responded to this survey, which had some very interesting findings, including 68% of respondents stating that they would like initiatives that "allow people living and working in Dublin to discuss, propose and vote on actions that could be presented to local authorities and national government". To build on this, and to ensure that the Zero Together roadmap is reflective of the lived experience of those working, living and studying in Dublin, Codema has developed a detailed strategy for implementing a mini-public on Dublin's energy transition, based on best-practice democratic processes.

In September 2022, Codema launched its Postcards from Dublin 2050 campaign, as part of Dublin Climate Action Week. This initiative invites the people of Dublin to share their ideal vision of our

capital free from fossil fuels. Codema will build on the next phases of this campaign - and wider Zero Together public engagement - in 2023.

#### *Decarb City Pipes:*

Codema are partners in the Decarb City Pipes 2050 project which kicked off in September 2020. This project is focused on the decarbonisation of heat through capacity building in cities. This includes creating local working groups (made up of key local stakeholders within the cities of Bilbao, Bratislava, Dublin, Munich, Rotterdam, Vienna and Winterthur) to outline gaps in knowledge and current practices (planning methodologies, tools, policy instruments, effective governance structures, etc.) and then go about addressing these gaps through deep peer-to-peer learning with input from an experienced advisory board. An in-depth engagement process will be adopted to develop these roadmaps, to build strong effective working relationships within each city, and ensure strong buy-in from stakeholders. As part of this engagement process Codema have set up a local working group of key stakeholders for Dublin which includes the ESB, Gas Networks Ireland, Dublin City Council, Sustainable Energy Authority of Ireland, Commission for Regulating Utilities, representatives from the Department of Environment, Climate and Communication, and Geological Survey Ireland. This group is examining barriers and solutions to decarbonisation of heat in Dublin. Additionally, as part of the project Codema is exploring paths to trialling local heat decarbonisation policy changes in tandem with development of a strict heat network in Dublin. To date the project has completed the development of city heating and cooling plans, investigated governance structure with the partner cities and is now

#### *REDAP*

**REDAP** (Regional Energy Demand Analysis Portal) project, which was approved under the 2018 European Research Area Network (ERA-Net) Smart Energy Systems fund and is supported by the Sustainable Energy Authority of Ireland. REDAP, which started in November 2019 and was completed in March 2022, presents a cross-sectoral approach to regional energy systems and will help end-users to spatially visualise and better understand the characteristics of urban energy demand. This project builds on the work Codema had previously done in developing the Spatial Energy Demand Analysis (SEDAs), similar to the SEDAs, this project gives insight into the building stock and additionally, also provides information on the transport sector. It combines GIS with urban energy planning data to provide an integrated approach to energy in both the building and transport sectors, and spatial planning. This in turn enables planners, policy-makers and investors to make more informed decisions relating to energy demand, energy efficiency and renewable energy alternatives, whilst also generating an increased evidence base to inform further project feasibility and implementation.

#### *QGasSP:*

Codema along with Tallinn University of Technology (TalTech), Stockholm Environment Institute (SEI) and Oivan were awarded the tender for QGasSP. This research is financed through the European Spatial Planning Observation Network (ESPON) Programme, which is an applied research programme aimed at supporting the formulation of territorial development policies in Europe. This project which started in October 2020, was completed in May 2022. The objective of this research project was to produce a methodology that will allow planning authorities at national, regional and local administrative levels to quantify the influence of spatial planning policies on GHG emissions in a consistent manner. More specifically, the objective was to address the knowledge demands and

technical requirements of the four stakeholders included within this Targeted Analysis Project, namely, the Eastern and Midlands Regional Authority (IE) who are the lead stakeholder in this project; Scottish Government – Planning & Architecture Division (UK); Department of Infrastructure, Northern Ireland (UK); and Regional Council of Kymenlaakso (FI).

The ESPON Greenhouse Gas Impact Assessment (GGIA) tool is designed to quantify the climate impact of spatial plans and policies in territories, cities and municipalities throughout Europe. GGIA provides two alternative modes for greenhouse gas (GHG) emissions quantification: Territorial mode consists of sectoral modules and quantifies the direct GHG emissions arising within the specific areas. Consumption-based mode quantifies the GHG emissions which arise from the consumption of goods and services by the residents in the area. Codema's role in this project was to lead the case study pilots, building related GHG methodology and data collection. This project specifically targets the EMRA's RSES Regional Policy Objective (RPO) 3.6 - *City and county development plans shall undergo assessment of their impact on carbon reduction targets and shall include measures to monitor and review progress towards carbon reduction targets.*

#### *DeliveREE*

DeliveREE will create an innovative project finance and delivery structure for EE projects in the Dublin region, across 4 municipalities, using various performance-based contracting structures. By creating a structured approach, DeliveREE will accelerate the formation of large-scale projects by standardising the project development process, allowing projects of various types and sizes to be aggregated to create scale. This enables the use of energy performance and energy supply contracts whose performance guarantees are both critical for achieving value for money and provide a mechanism for the involvement of private capital. DeliveREE will do this by:

- Creating a 'one stop shop' Project Implementation Unit (PIU) for project owners to go to for energy saving projects
- Creating an innovative standardised central project delivery system for processing potential projects to achieve speed of assessment and give confidence and familiarity to clients & market players
- Removing legal and administrative barriers through cooperatively designing approved assessment templates and procedures to ensure quality control and due diligence
- Aggregating projects, bundling multiple small and medium projects together to attract ESCo market and private financing, and gain large scale impact on efficiency in the building stock
- Using a range of performance-based contracts to ensure long-term guaranteed energy savings, and de-risk cash-flows

DeliveREE will test and develop the PIU with the roll-out of a pipeline of EE projects in public sector buildings and services across the 4 Dublin Local Authorities over 4 years. The pipeline includes over 140 buildings and sites across the 4 municipalities, including a mix of building types such as leisure centres, fire stations, theatres, libraries, head offices, community buildings and landfill treatment facilities. The project will save an average of 24GWh energy savings over the contract lifetime, amounting to 3.8 ktCO<sub>2</sub> savings. The total CapEx of the pipeline is €20.4m, with an estimated total contract value of these energy projects of circa €23.5m of which at least €9.75m will be privately financed. Based on the consortium's experience of delivering projects with a mix of financing sources, we aim to have a financing split of 20% project owner, 50% grant and 30% private financing on average across the contracts. Procurement for the first 3 lots of aggregated projects is expected to begin by the end of 2022. These projects include energy efficiency measures on 5 buildings and

Solar PV at a landfill site in South Dublin County Council and energy efficiency measures at five buildings in Dún Laoghaire-Rathdown County Council.

The DeliveREE consortium consists of technical, facilitation, project management, communications, procurement, legal and financial experts, as well as project owners who will test the DeliveREE structure. In addition to the four Dublin Local Authorities and Codema consortium includes:

Resourceful Futures Ltd (UK) bring their extensive experience in legal, commercial and finance, from developing and deploying energy transition (power, heat and energy efficiency) and circular economy projects to remove legal and administrative barriers, and add bankability due diligence and project risk allocation.

Philip Lee Solicitors Ltd has vast legal experience in large energy infrastructure projects and will provide expertise to ensure compliance with legal and regulatory requirements, including public procurement advice.

Sustainable Development Capital LLC (SDCL) bring their in-depth experience of investing in EE; they manage the Irish Energy Efficiency fund and invest in EE retrofit projects and seek a return based on savings achieved.

#### *District Heating*

Codema have been supporting Dublin City Council in the development of the Dublin Docklands District Heating Scheme, which utilises waste heat from the Dublin Waste-to-Energy plant. Codema has provided assistance in the development of techno-economic models, provided clarifications for Climate Action Fund approval, Part L compliance analysis and heat load modelling. Codema have worked with Euroheat and Power and representatives from the data centre industry to produce a recommendations paper for EU Commission representatives on how to increase waste heat recovery from data centres via heat networks as a means of decarbonising Europe's heat sector. Codema has been engaging with SEAI and relevant government departments in the development of building regulations to include fair treatment of DH networks within national calculation methodologies. Additionally Codema are members of the National District Heating Steering Group convened by the Department of Environment, Climate and Communications. Codema have also presented at multiple conferences including the Irish District Energy Associations annual conference, Dublin Climate Action Week & the Decarb City Pipes Vienna Conference . Codema are also part of the Celsius Initiative and have worked with members across Europe to foster knowledge transfer via peer-to-peer learning sessions in relevant topics such as waste heat recuperation, low-temperature district heating, stakeholder engagement etc.

#### *Poolbeg RD&D Integration of heat, electricity and transport: Use of curtailed renewable energy in Poolbeg*

This project will explore how to use existing and planned infrastructure in the Poolbeg area in the most efficient way by examining the potential for coupling and integrating separate aspects of the electricity, heat and transport sectors.

One of the key problems the project seeks to address is how to make use of curtailed or wasted renewable energy from offshore wind and from the nearby waste to energy plant.

The project will explore via energy models, how district heat with thermal storage, and a separate hydrogen electrolyser, along with curtailed renewable electricity and hydrogen end-use applications, can provide an efficient, holistic and integrated energy system solution. The project will utilise modelling and analysis carried out by Codema and MullanGrid, and will collaborate with Dublin City Council and Dublin Waste-to-Energy.

The project aims to:

- Identify and quantify the technical and cost barriers to deployment and test solutions in case study
- Provide insights and guidance to local and national policy makers
- Facilitate the path to zero carbon and minimise curtailment and constraint of renewable generators.

In particular, it looks at how to best use 'curtailed' or wasted renewable energy available in the area from planned offshore wind, and from the waste-to-energy plant in the area that currently burns general waste.