

The Kilkenny City Decarbonising Zone

Decarbonising Zone Plan

Final Report - November 2023



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01

Introduction

Decarbonising Zones

Local Authorities have a key role to play in addressing and driving forward climate change mitigation. In addition to meeting their 2030 and 2050 energy and emission targets, they are well-placed to assess, exploit and support opportunities within their administrative areas. They can do this by not only using their resources but by working in cooperation with other local authorities, national bodies and with the communities they serve.

The **National Climate Action Plan 2023** states that each of the 31 Local Authorities must develop a Local Authority Climate Action Plan (LACAP). In doing so, each Local Authority is obliged to select a designated area to implement a Decarbonising Zone (DZ) and develop a plan to support implementation.

A **Decarbonisation Zone (DZ)** is a spatial area, identified by each local authority in Ireland. It is the place in which a range of measures are selected to increase energy efficiency, decrease greenhouse gas emissions and enhance climate resilience and biodiversity to help reach wider national climate action targets.

To support the development of the DZ plan, **DZ Guidelines** have been developed that provide for a stepped process for DZ plan development from identifying the DZ and assessing sources of emissions within the DZ area to developing a register of opportunities for the DZ that outlines the potential interventions that can be taken to reduce emissions and enhance climate resilience and biodiversity. On this basis, actions are then identified to deliver the identified opportunities and an implementation plan is developed.

Kilkenny City has been identified as the DZ for Kilkenny County Council. This report provides an overview of the DZ and the rationale for its selections, summarises sources of emissions within the DZ and develops a register of opportunities to support a targeted approach for action. The report identifies actions and provides a detailed implementation plan.



“DZs are a demonstration and testbed of what is possible for decarbonisation and climate action at a local and community level. Through iterations of experimentation and evaluation, the DZ enables a flexible, incremental and community-driven approach to ensure that its objectives are delivered.”



02

The Kilkenny City DZ

The Kilkenny City DZ: Environmental and Socio-economic context

As illustrated in the map on the right, the Kilkenny City DZ encompasses an area of 20km² (2009ha) which includes the land within the Kilkenny City Development Plan Boundary, plus the Dunmore Countryside Park & Civic Amenity Area which is 5km to the north of Kilkenny City.

The DZ is intersected by the River Nore and its tributaries. According to the CDP, land use is zoned into residential areas (approx. 31%), mixed green recreation areas (approx. 17%), agricultural land (approx. 16%) and a further ~35% across strategic reserve, white land; mixed/general commercial/industrial/enterprise uses; mixed/general community services/facilities uses; mixed-use, general development opportunities; industrial, enterprise and employment; office, business/ technology park and related; District, neighbourhood centre; Other commerce/ industrial/ enterprise use; Education; and General.

The River Nore is designated as a Natura 2000 site, being both a SAC (Special Area of Conservation) and a SPA (Special Protection Area).

The population density of the DZ area was found to be c.1371 persons per km². The population of Kilkenny City is projected to increase to 31,477 by 2031, representing an uplift of 3,641 persons from 2016. Accommodating this population growth while reducing emissions in line with targets will be a key challenge.

There are a significant number of public sector buildings in the DZ including Kilkenny County Council, HSE, OPW, ETB, Dept. of Agriculture, Intellectual Property Office of Ireland, Dept. of Defence, Teagasc and voluntary schools. The retrofitting of the DZ's commercial and public sector buildings is crucial to the area meeting its decarbonisation targets.



The Kilkenny City DZ: Environmental and Socio-economic context (cont..)

Kilkenny City receives approximately one million visitors per annum and is a medieval walled town, rich in cultural heritage. The Abbey Quarter, a site originally settled in by the Franciscan monks, and then operational as a brewery for 300 years up until 2014, was purchased by Kilkenny County Council. The area is currently undergoing redevelopment and will become a modern mixed-use quarter with office, residential, education, retail, and hotel facilities as well as public realm, community and cultural infrastructure.. The DZ is well served by transport infrastructure including road and rail, making it easily accessible for visitors.

Kilkenny City is the 8th largest employment centre in the State with strong performance in agri-business, finance and tourism/hospitality. Kilkenny is host to a sizeable portfolio of international financial services companies and has strong activity in the future growth sectors of Fintech, Regtech, Insurtech and the global payments sector. It has a strong creative industries sector along with a number of national creative and cultural agencies, and a programme and culture of internally renowned festivals and cultural attractions.



The Kilkenny City DZ: Decarbonisation Opportunities

Building on its socioeconomic and environmental characteristics, the Kilkenny City DZ has a strong foundation of existing assets and services, with the potential to deliver a wide-range of decarbonisation opportunities.

Sustainable Conservation of Cultural Heritage for Future Generations: Kilkenny City has a unique medieval history making it a flagship destination under Ireland's "Ancient East" brand. Historical assets include the City Walls, the Abbey Quarter, the Medieval Mile Museum, and Kilkenny Castle, which is the most visited fee-paying OPW-managed site in the country. There are opportunities for the DZ to lead the way and explore innovative and sustainable means for these unique assets. This could be supported by engagement and collaboration with bodies located in the city (e.g. the Heritage Council). The Abbey Quarter is also currently undergoing redevelopment with plans for modern mixed-use offices bringing opportunities for diversifying the economy (e.g. FinTech) and promoting sustainable offices in harmony with surrounding cultural heritage.

Delivering Sustainable and Carbon-neutral Tourism: Kilkenny is a key destination for national and international tourism. The city can build upon its reputation by leading the way in being prepared for the tourist of the future who demands sustainable choices. Festivals are a key tourism offering within the DZ (e.g. the Arts Festival, Cats Laughs, Kilkenomics). Adopting a holistic approach to tourism, and events, and incorporating sustainability across all aspects of the tourist experience offers a significant opportunity for Kilkenny City.

The Public Sector Leading by Example: The significant number of schools and public sector buildings in the Kilkenny City DZ provide ample opportunity for the Local Authority and public sector to lead by example in emissions reductions. The Local Authority and Public sector have already made significant progress in increasing energy efficiency and decreasing emissions across their assets, fleets and services. For example, between 2009 and 2020, Kilkenny County Council achieved a 34% increase in energy efficiency by improving energy management practices, investing in public lighting and upgrading facilities.

Harnessing our Green Spaces: There is a rich and diverse range of green spaces across the DZ with significant green and blue infrastructure including the River Nore, River Breaghagh, Newpark Marsh, Kilkenny Castle Park and Dunmore Countryside Park. These areas play an important role in conserving the city's biodiversity and are home to a range of fauna and flora from kingfishers to otters. Leveraging and enhancing biodiversity assets and green infrastructure to attract visitors presents an opportunity for the DZ, in addition to the potential use of green infrastructure for urban cooling and carbon storage. The County Council are developing a recreational and biodiversity park for Dunmore's former landfill site, which will provide multiple benefits and educational opportunities for the residents and local schools in the DZ and beyond.

Promoting Active Travel: Commuting patterns in the DZ area show a ~64% reliance on private cars with almost one-third of commuting journeys using public transport, cycling or walking. Further improving sustainable transport modes (bus, cycling and walking) will be key to reducing emissions across the DZ. Kilkenny County Council are preparing a Sustainable Urban Mobility Plan (SUMP) for Kilkenny City, which aligns with future green transport objectives in the DZ including pedestrianisation, enhanced public transport, cycle-friendly infrastructure and reduced traffic. Further opportunities to reduce transport emissions in the DZ include the electrification of private cars and innovating LGVs and Public Transport to operate via electricity or low-carbon fuels.

Enhancing our Green Credentials: There are a number of businesses in the city with carbon reduction and sustainability targets that align with DZ ambitions and timelines, highlighting the strong local interest in sustainability. A number of hotels in the DZ have already begun their decarbonisation journeys. There are currently four pre-existing Sustainable Energy Communities within the DZ which highlight the interest of local communities in sustainability and promoting decarbonisation. Such stakeholders and partners in implementing actions can provide key learnings and opportunities when information is shared within the DZ and wider county. Collaboration and partnerships with relevant agencies and/or public bodies in the wider county (e.g. the South East Energy Agency) and other SECs will further support progress.

The Kilkenny City DZ: Decarbonisation Opportunities (cont..)

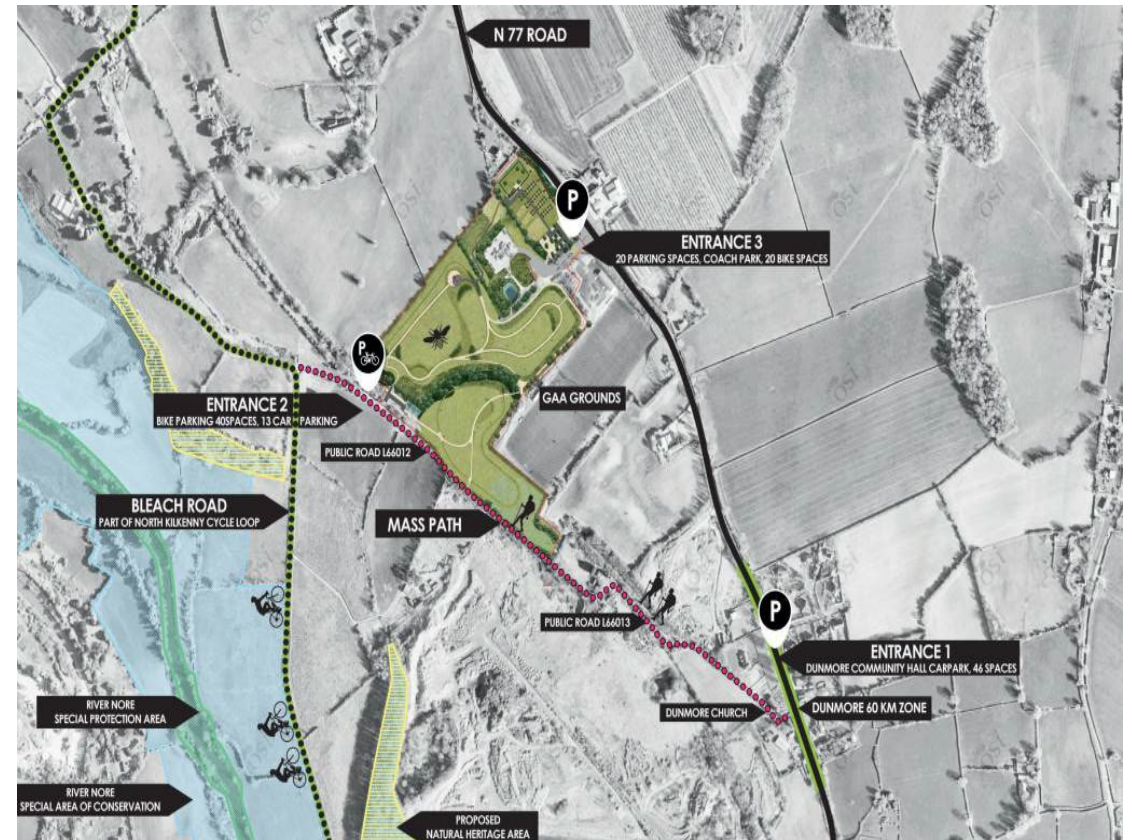
Dunmore Biodiversity & Recreational Countryside Park

An example of a project within the DZ that will bring multiple co-benefits is the proposed redevelopment of the former Dunmore landfill site. Kilkenny County Council are in the process of developing a recreational and biodiversity park at the site. A map of the site is shown on the right.

The 17-acre site, located 5km north of Kilkenny City Centre will provide multiple benefits for the residents of the DZ and beyond including the provision of trails for walking, running, cycling and orienteering, and multiple educational opportunities. GAA grounds are included within the redevelopment plans. The grounds will include playing pitches, dressing rooms, and other training facilities.

In addition, the park will allow for the enhancement of natural heritage and biodiversity. The River Nore, both a SAC and a SPA, is located adjacent to the park.

The Bleach Road, highlighted on the map, will connect the park to the city. This route is included within the DZ boundary and will serve as a link between the park and the city as it is more amenable to cycling and pedestrian traffic than the N77 to the east of the park.



Dunmore Biodiversity & Recreational Countryside Park Layout Plan. Source: Kilkenny County Council.

The Kilkenny City DZ: Decarbonisation Opportunities (cont..)

Kilkenny is home to a number of key economic sectors and activities with significant potential to deliver a wide-range of decarbonisation opportunities including the Creative, Fintech, and Tourism sectors. These sectors make Kilkenny unique and play a crucial role in the area's economy.

Creative: Kilkenny has a proud and rich heritage, a unique and diverse arts environment and is a hub of crafts, design, culture, and creativity. From the city's festivals (e.g. the Arts Festival, Cats Laughs, Kilkenomics) to the historical assets of the DZ, the creative sector can play a transformative role in sustainable development, creating multiple social and economic benefits.

Fintech: Kilkenny is host to a sizeable portfolio of international financial services companies and has strong activity in the future growth sectors of Fintech/Regtech/Insurtech and the global payments sector. Key companies located within the DZ include State Street, Taxback Group, Carne Group, and VHI. The strong presence of this sector within the DZ presents the city with multiple decarbonisation innovation and digitisation opportunities.

Tourism: Tourism is an important economic driver for the economy of Kilkenny. Kilkenny City receives approximately one million visitors per annum and is a medieval walled town, rich in cultural heritage. The public is more aware of the threat of climate change than ever before with the sustainability performance of tourism destinations becoming a key criterion for consumers in making their decisions. There is an opportunity for Kilkenny City and the organisations in the DZ to become exemplars in the area of sustainable tourism by adopting a holistic approach to tourism, and events, and incorporating sustainability across all aspects of the tourist experience.



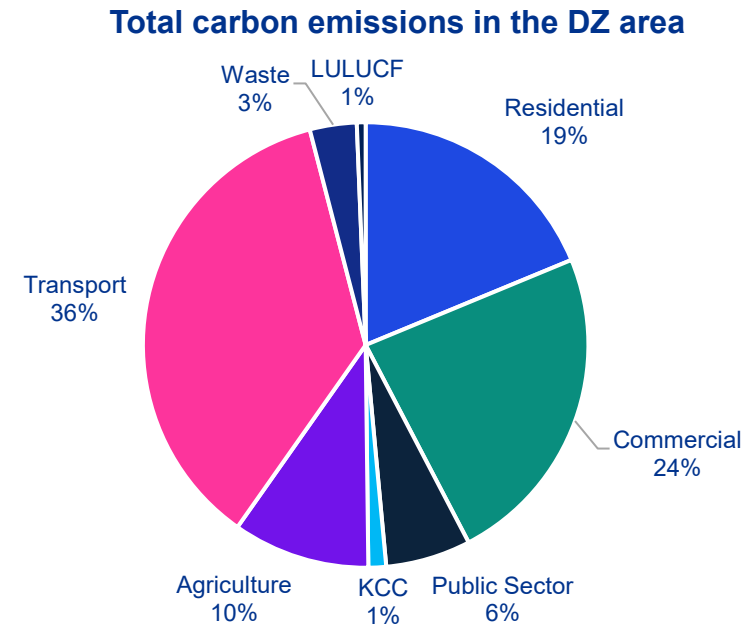
03

The Kilkenny City DZ: Summary of Emissions

The Kilkenny City DZ: Emissions Inventory

Measuring the baseline carbon emissions is the first step in the decarbonisation of the Kilkenny City DZ and provides an indicator of the areas that need to be targeted for innovative decarbonisation solutions. The baseline year for this emissions inventory is 2018 and the inventory determined the level of emissions for five sectors (Residential, Commercial, Public Sector, Municipal, Transport, Waste and Agriculture) across the Kilkenny City DZ with the results presented in the table and chart below. Total carbon emissions for the DZ equate to approximately **169,878 tCO₂e (tonnes of carbon dioxide equivalent)***. This translates to **6.17 tCO₂e per capita** based on 2016 census population data. In 2018, Ireland's national carbon emissions equated to approximately 12.6 tCO₂e per capita. While the DZ's carbon emissions per capita is lower than the national equivalent, Ireland is higher than the EU average of 8.2 tCO₂e per capita**.

	Carbon emissions (tCO ₂ e)
Residential	31,869
Commercial	40,068
Public Sector	10,492
Kilkenny County Council	2,184
Transport	61,486
Waste	5,783
Agriculture	16,914
LULUCF	1,082
Total carbon emissions	169,878
Total carbon emissions per capita (tCO₂e/capita)	6.17



** Source: [EU Greenhouse gas emissions per capita 2018](#)

*CO₂e is a unit of measurement that is used to standardise the climate effects of various greenhouse gases on the basis of their global-warming potential (GWP)

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Approach to DZ Emissions Assessment

In assessing emissions for the Kilkenny City DZ area, we have employed the LACAP guidance document Technical Annex C: Climate Mitigation Assessment and Technical Annex D Decarbonising Zones. The relevant spatial and non-spatial data extracted from various sources to develop this assessment have been summarised below.

Sector	Supporting information
Residential	<ul style="list-style-type: none"> • Average energy consumption use for private and social houses calculated from the SEAI BER Research Tool for the Kilkenny DZ area. • Total 'occupied' housing stock extracted from CSO for the DZ grouped by Electoral Division (ED), construction period, and dwelling type. • Total number of social housing units has been provided by Kilkenny County Council. • Total energy consumption broken down into fuel and electricity sources using CSO data representative of the primary heating source of DZ homes. • Relevant SEAI Conversion Factors were used to convert energy into carbon emissions.
Commercial	<ul style="list-style-type: none"> • Total commercial buildings within the DZ broken down by sector and total floor area m² extracted from the Valuation Office List. • CIBSE fuel and electricity benchmarks were used to estimate the energy use for each of the building types based on their floor area. • Total energy consumed broken down into fuel sources and electricity using the national energy breakdown for the commercial sector. • Relevant SEAI Conversion Factors were used to convert total energy consumption to carbon emissions.
Public Sector	<ul style="list-style-type: none"> • Meter Point Reference Number (MPRN) and Gas Point Registration Number (GPRN) data of Public Sector buildings within the DZ was extracted from the public sector building MPRN and GPRN provided by Kilkenny County Council. • Total energy consumed broken down into fuel sources and electricity using the national energy breakdown for the commercial and public sector. • Relevant SEAI Conversion Factors were used to convert total energy consumption to carbon emissions.
Municipal	<ul style="list-style-type: none"> • MPRN and GPRN data of Kilkenny County Council buildings within the DZ was extracted from the Public Sector MPRN and GPRN dataset provided by Kilkenny County Council. • Relevant SEAI Conversion Factors were used to convert total energy consumption to carbon emissions.
Transport	<ul style="list-style-type: none"> • Number of vehicles licenced by end of 2018 in Kilkenny were extracted from Transport Omnibus and proportioned down to the DZ area based on population. • Total energy consumed per transport mode broken down into fuel sources and electricity, supported by the SEAI National Energy Balance. • Relevant SEAI Conversion Factors were used to convert total energy per transport mode to carbon emissions.
Agriculture	<ul style="list-style-type: none"> • Agricultural holdings, livestock numbers, and land utilisation within the DZ area were extracted from the CSO and the Department of Agriculture, Food, and the Marine (DAFM). • Benchmarks from various sources were used to measure the impact of enteric fermentation and on-farm energy use. • Total on-farm energy consumed per livestock converted to carbon emissions using SEAI Conversion Factors
Waste	<ul style="list-style-type: none"> • The EPA's Pollutant Release & Transfer Register (PRTR) has been reviewed to understand carbon emissions associated with the wastewater facility. • As there were no emissions data included on this register, a benchmark for waste-related carbon emissions per population was used to estimate waste related carbon emissions

Future Emissions will be impacted by a number of factors

Quantification of emissions has been developed based on 2018 baseline information and as a result does not account for amongst others projected demographic change across the DZ or the potential increase in the baseline share of renewables across electricity, heat and transport to the DZ. These are significant influencing factors for the future decarbonisation of the Kilkenny Town DZ:

- Population Growth: The population of Kilkenny City is projected to increase to 31,477 by 2031 representing an uplift of 3,641 persons from 2016. Accommodating this population growth while reducing emissions will be a key challenge for the Kilkenny City DZ.
- Renewable Electricity – the Climate Action Plan (CAP) 2023 aims to increase the share of renewable electricity to 80% by 2030 from a baseline of 38% (2018). This transition will be gradual with the carbon intensity of the electricity generating sector reducing over time leading to a reduction to the national grid in electricity-based emissions across all sectors.
- Renewable Transport - The CAP biofuel target is for at least B20 (biodiesel equivalent) in diesel and E10 (Ethanol) in petrol by 2030 (with an interim B12/E10 by 2025 target). The increased level of biofuel blending will help Ireland’s transport sector reduce its emissions.
- Renewable Heat – Ireland targets 5.7 TWh of biomethane production by 2030 (10% of current gas demand). This could help reduce the carbon intensity of gas used in Kilkenny DZ.



CLIMATE ACTION PLAN 2023 CAP23

Changing Ireland for the Better



04

Stakeholder Engagement

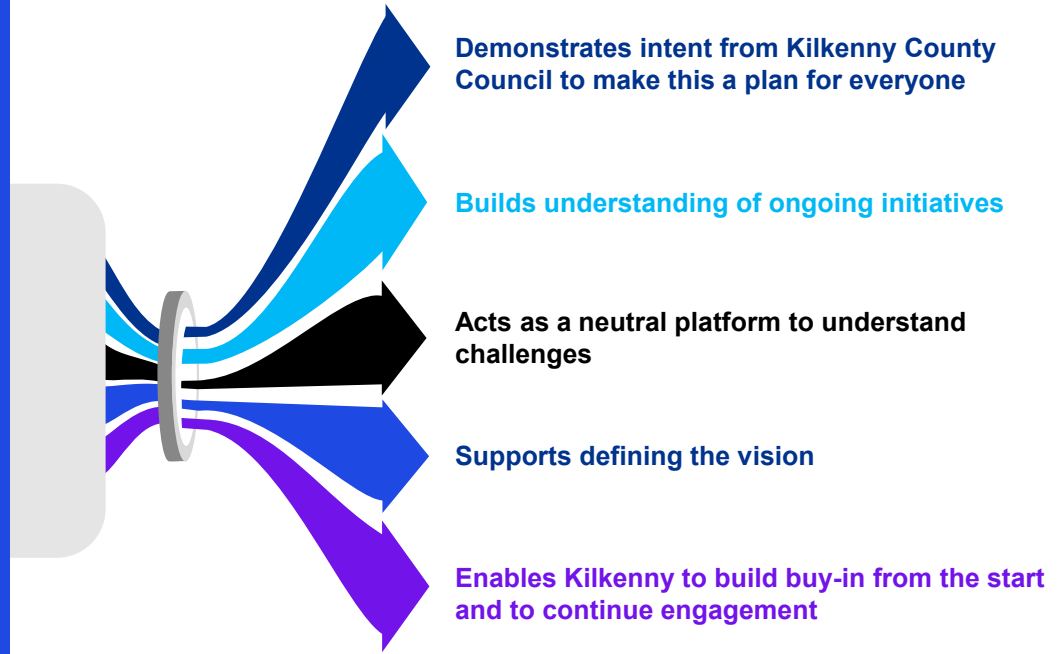
Why Stakeholder Engagement is Important?

The DZ planning process highlighted the importance of stakeholder engagement as a first step to gathering the views of groups that could impact or be impacted by the DZ plan. In developing the Kilkenny City DZ Plan, we engaged with a wide range of stakeholder groups and each of these engagements sought to explore opportunities and constraints around climate action and to elicit the broad spectrum views on the key considerations for the effective delivery of the DZ actions.

Participating stakeholders



Importance of stakeholder engagement



Our Approach to Stakeholder Engagement

Our approach adopts a two-step approach to stakeholder engagement. Step 1 involved understanding of the issues, concerns and capacities of the public, private and community sectors and to gather ideas and insights on potential actions. These ideas and actions were subsequently refined in Step 2 during an internal workshop with Kilkenny County Council.



Stakeholder Concerns, Issues and Ideas

During the stakeholder engagement process, participants identified a number of key challenges for DZ development, presented their ideas and made suggestions. A summary of these are outlined below with further detail provided on pages 14-16.

Challenges

- The need for a unified vision, a positive focus and a collaborative environment.
- The need for clear actions with roles and responsibilities delineated effectively.
- The present lack of funding streams for decarbonisation initiatives, making change cost prohibitive for businesses and the Council.
- Engagement from businesses remains low and the business case for time commitment and participation is currently perceived as unclear.

Ideas

Branding

Brand the city as sustainable and introduce a city charter to align activities and participation with a 'North Star'

Innovation

Be a true test bed for impact initiatives. Harness the good work done so far and learn from others

Collaboration

Enable effective collaboration within and between stakeholder groups and celebrate success more publicly

Governance

Align SUMP, LACAP and DZ on governance and communications plan to ensure consistent messaging. Consider developing or participating in a regional focus group

Suggestions

- 01** To be a truly innovative testbed for initiatives that can be rolled out county-wide
- 02** To align activities and momentum across the city to a shared objective
- 03** To celebrate and acknowledge progress and create a network of change makers
- 04** To ensure a Just Transition, meeting the decarbonisation requirements of the future without compromising the societal needs of today
- 05** To build scalable projects and solutions that match the business and city profile
- 06** To build ownership and accountability through a shared and measurable vision/brand

The Community

Overview of stakeholder group:



This includes engagement with Kilkenny LEADER Partnership (KLP)* (#2), Kilkenny City Sustainable Energy Communities (SEC) (#2), Kilkenny's Public Participation Network (PPN) (#9)

This group of stakeholders are seen as the promoters and voice of decarbonisation actions in their communities.

Key messages:

- It became evident during discussions that greater collaboration is possible between the council and community groups. A unified goal for the DZ that includes community goals will help to deliver lasting behavioural change.
- Communication from the different council departments needs to be consistent, positive and thought leading (not all stakeholders knew there was a Climate Action Coordinator).
- There is a need to celebrate progress, share experiences and explain why certain actions are being taken.
- Momentum is key, quick wins build belief and give energy to the next action.

*KLP were included in the community analysis section due to their close involvement with community groups.

OBSERVATIONS

There is a unified **definition of winning** for this group and that is to see a lasting and impactful plan that filters all the way through to grassroots. However, the measure of impact varies for the different groups. For example, for KLP success is measured through the number of jobs created, for SEC it is about alignment with their current initiatives and community plans. Generally, there needs to be more understanding and recognition across, and between, groups on objectives, funding and impacts, with KCC providing a governing voice.

Groups would like to be **acknowledged** for the good work they have already done on climate initiatives e.g. Energy Towns and Smart Bus Stops, and would benefit from a centralised platform to share good news e.g. forum or newsletter, and to network e.g. sustainability café.

Stakeholders would participate in a **meaningful steering committee** that focuses on action, but not a talk-shop.

ACTIONS

- Collaborate more closely with community groups as they are the leverage needed to elevate the green agenda into grassroots projects and local sentiment.
- Through benchmarking there is potential to create friendly rivalry between different areas of the city to encourage climate action.
- Ensure the SEC Energy Master Plan is aligned with the DZ plan
- Ensure connectivity and support with the Green Schools Initiative – leading examples provided from the Gaelscoil.
- Introduce a DIY tools library for communities, or repair cafes to extend the life of appliances.
- More community gardens.
- Consider a new Millennium Woods, whereby every family in the city has a tree planted in their name.
- Establish a Park and Ride facility connecting the city centre with frequent, free buses.
- Promote sustainable procurement practices, including local food purchases to reduce food miles.
- More recycling bring centres.
- Create better connections with industrial estates at the edge of the city to allow cycling. Lack of connectivity across the ring road.
- More school buses.
- Eagerness to learn from others and see some Irish success stories
- The council voice on this agenda needs to be unified. "Need a decarbonisation department in the Council" and for Councillors to be brought on board.

CHALLENGES

- Skills gap on green economy and the wider ESG agenda. Mentoring or a twin city partnership would be invaluable.
- KLP will consider green procurement requirements, but only if instructed to by the government.
- Personal habits are hard to break and some people have no alternatives (e.g. driving). Take care to not demonise people.
- Need assistance in accessing grants and support.
- Help from the Tús community work placement programme would be useful.
- Apathy and nimbyism limit the pace and ambition of change
- Difficult to get the community involved in the large actions. Need to focus on simple, everyday things so that people can get behind broader efforts

Local Authority

Overview of stakeholder group:



This group includes Kilkenny County Council staff (#7), Kilkenny Councillors (#1)

This group are seen as the facilitators and enablers of the low carbon transition through the DZ.

Key messages:

- Ensure **greater alignment** needed between SUMP and the DZ on governance and communications
- Challenge to get interest and action from small businesses due to the **burden of other priorities** and absence of a clear business case
- Focus on the **positives**, what can be gained rather than lost (e.g. quality of life and business attractiveness)
- Recognised need to explore all possible funding opportunities at national and European level to deliver actions (e.g. Biodiversity and Climate Infrastructure Fund from National Budget 2024)

OBSERVATIONS

The **definition of winning** for this group is to achieve a minimum of a 51% reduction in GHG emissions and for the DZ to be a truly innovative testbed for initiatives that can be rolled out county-wide.

Alignment in governance and communication between the SUMP and DZ is seen as critical to avoid mixed messaging and initiative fatigue. As well as embedding climate consideration routinely in all council decision making – everyone in the council should be an agent of climate action and enhancing biodiversity.

A **success factor** for KCC would be to see businesses take ownership of this agenda and a level of pride in the city being a DZ.

The DZ should link closely to **social empowerment** and impact, as well as enabling a just transition.

ACTIONS

- Align SUMP, LACAP and DZ on governance and communications plan to ensure consistent messaging and consider developing or participating in a regional focus group with other LAs.
- Smaller businesses are overwhelmed by the pace and scope of the climate agenda and would like help to understand the business case for action, in particular, where is the pay back? Council to provide a central system for measuring.
- The DZ plan should have a positive tone and speak of what will be gained rather than lost.
- A fair transition is paramount and support must be made available for businesses that may be negatively impacted by the DZ plan.
- Need to localise the message and create opportunities for people to meet and learn - provide examples to empower.
- KPIs should be measurable and impact of action should be known.
- Full roll out of public lighting efficiency programme.
- Consider large scale renewable options: maximise solar power generation, scope for district heating, work with the agricultural sector to assess the possibility of developing an anaerobic digester for city waste streams.
- Utilise the energy from the methane flare at the former Dunmore landfill as a potential source energy .
- Consider how the urban regeneration site at the Abbey Quarter can be used for case examples and test bed ideas

CHALLENGES

- At present there are no substantial or clear funding streams for large scale action, making change cost prohibitive for businesses and the Council.
- Challenge getting initial engagement with businesses. LEO has a number of activities and events planned of 2023/2024 and already have free 2-day consultations available to businesses, however uptake is low and the business case for time commitment and business participation is unclear.

Businesses and Local Enterprise

Overview of stakeholder group:



- Retail and business members from 10 businesses
- 2 surveys circulated to:
 - Kilkenny Chamber of Commerce (21 participants)
 - Kilkenny Tourism community (10 participants)

This group is seen as the change makers for the DZ plan. Without support and a realistic plan to mobilise this group, meeting targets will be a challenge.

Key messages:

- Provide a carbon measurement tool and training to help business baseline their carbon footprint to align with national targets and decarbonisation within the DZ.
- Develop a sustainable business charter for the City, similar to the successfully implemented Age Friendly Scheme
- Create a business support network for sharing case studies, key contacts and publicly recognising achievements e.g. utilise the new Invest Kilkenny Green Journey Platform
- Communication is essential to overall success and must be jargon free

OBSERVATIONS

The **definition of winning** for this group is that this becomes a plan that enhances business opportunities and is not a burden or cost. The case for action must be clear and advantageous, avoiding the use of jargon and greenwashing.

Branding the city as sustainable and introducing a **city charter** to align activities and participation was viewed positively (and many stakeholders have a good experience of the Age Friendly Programme). In order for this to be made possible, KCC can support with the identification of actions for participants which would have a tangible impact and can be monitored transparently and enhanced over time. This should also enable the opportunity to **celebrate and recognise achievements** more publicly.

Commercial buyers are asking about sustainability (especially in the hospitality sector). A sustainability charter will help this sector sell Kilkenny as a destination and **realise financial benefits**.









ACTIONS

- Develop a Sustainable City Charter with a menu of options for action and ratings to recognise improvements over time (Gold, Silver, Bronze). As well as framing the agenda, this will provide a suite of options for businesses to consider. For example, if it is difficult to do things on their premises, can businesses invest in a solar farm at the edge of the city?
- Scope for better knowledge and information sharing through case studies and newsletters. Schools also need to have a role
- Consider adopting a rates discount scheme similar to Waterford where companies with a decarbonisation plan in place receive an 8% rate discount. As a result of this there has been an 80% uptake in footprinting and decarbonisation planning
- Report achievements more publicly, for example through an automated city centre emissions calculator screen
- Help businesses to measure their carbon footprint and baseline emissions so any future actions are captured
- Consider a central biomass waste facility, rainwater harvesting to help counter the risk of extreme rain events and incentives to monitor water use

CHALLENGES

- There is a fear of lower footfall associated with pedestrianisation
- Before businesses make changes to their own models, alternatives need to be in place and easily accessible e.g. pedestrianisation with no new buses. Need to significantly improve public transport (including more trains). The SUMP will negatively impact on some businesses.
- At present there are no substantial or clear funding streams for large scale action, making change cost prohibitive for businesses and the Council
- Fear that actions will be imposed and costs will mount (with no real economic benefits). Grants are often too small and difficult to access.
- Businesses don't know their carbon footprint. Assistance is needed in measuring carbon footprint to set baselines for improvements.

Example actions provided by stakeholder

	Community	Business & Local Enterprise	Local Authority
 Active Travel / Public Transport	<ul style="list-style-type: none"> • Electric fleet of buses and community cars • More buses to wider county • Park and Ride facility with free buses • More school buses and cycle buses 	<ul style="list-style-type: none"> • Improve public transport within and around city • High frequency electric buses • More trains 	<ul style="list-style-type: none"> • Successful SUMP implementation • Mobility plan for the council
 Waste / Circular Economy	<ul style="list-style-type: none"> • DIY tools library • Repair cafes • More recycling bring centres and can crushers 	<ul style="list-style-type: none"> • Central biomass waste facility 	<ul style="list-style-type: none"> • More information on recycling • Create a 'library of things' • Upcycling premises
 Decarbonisation	<ul style="list-style-type: none"> • Green procurement • Park and Ride facility • More frequent buses • Aerial analysis buildings leeching energy 	<ul style="list-style-type: none"> • Support businesses to establish carbon baseline • Specialise support for heritage structures • Enable investment in larger scale renewable energy project close to the city • Strong advice on retrofitting and renewables 	<ul style="list-style-type: none"> • Public lighting efficiency programme • Solar power generation • District heating • Anaerobic digester • Harness landfill gas
 Biodiversity	<ul style="list-style-type: none"> • Promote investment in forests • Community garden • Millennium Woods • Tree planting opportunities 		<ul style="list-style-type: none"> • Tree masterplan and policy for sequestration and biodiversity • Community garden
 Water		<ul style="list-style-type: none"> • Rainwater harvesting • Incentives to monitor water use 	<ul style="list-style-type: none"> • Sustainable urban drainage projects • Public water fountains
 Branding		<ul style="list-style-type: none"> • Sustainable City Charter and accredited menu of options (Gold, Silver, Bronze) • Build the business case for action 	<ul style="list-style-type: none"> • Clear pathway to decarbonise • Coordinated, clear communication • Strong, easily identifiable branding
 Collaboration	<ul style="list-style-type: none"> • Training and mentoring. Sustainability café. • Alignment with green schools initiatives • Recognise and celebrate achievements • Support the work of SECs 	<ul style="list-style-type: none"> • Build training and expertise • Role for schools • Green for micro workshops • Effective communication with the Council 	<ul style="list-style-type: none"> • Case studies • Training • Support accessing grants
 Governance	<ul style="list-style-type: none"> • Need councillors to be brought on board • Need a decarb department in the council • Forum for discussion 	<ul style="list-style-type: none"> • Clear access to larger grants and funding pots • Effective, focused and collaborative implementation 	<ul style="list-style-type: none"> • Steering committee • Measurable KPIs • Green public procurement • Climate proofing programmes

Note: A full list of the feedback collated at stakeholder workshops is contained within the appendices

05

A Vision for the Kilkenny City DZ

A Vision for the Kilkenny City DZ

Vision : every aspect of the plan is to support accomplishing the vision

“A thriving, green and healthy city for all ”

Objectives: aligned with the vision, each action must help accomplish at least one objective

1. By 2030, to reduce carbon emissions by at least the 51% National Climate Objective

2. Empower and support residents, the community and businesses to make positive changes

3. Maximise the wider benefits to society and the economy of climate and biodiversity actions

4. Greater provision and use of active and sustainable travel

5. Prioritise nature based solutions and building reuse where practical

6. Innovate, demonstrate and communicate effective climate action

Principles: the rules that govern how the plan is implemented



Empower people to be part of the decarbonisation journey



Seek to create innovate solutions to challenges



Scale up solutions that are proven to work and be a good fit



Help people adopt more sustainable practices



Communicate and listen effectively



Monitor progress to better manage the process

06

Register of Opportunities

Overview

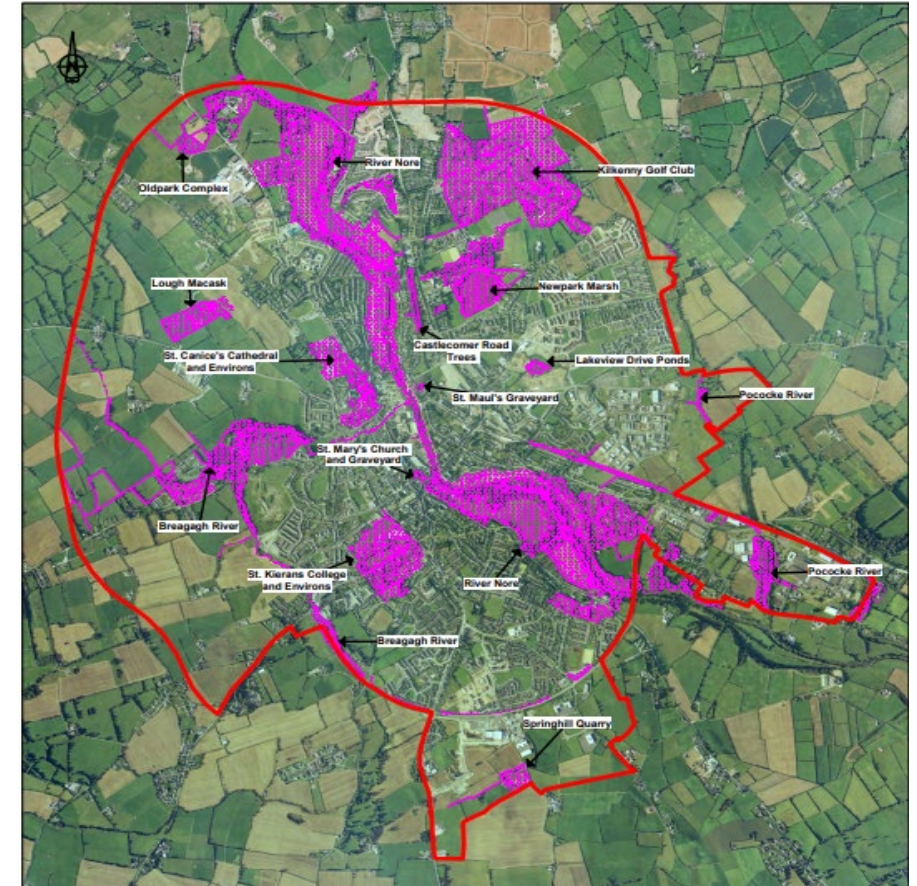
The register of opportunities identifies and compiles a portfolio of projects, actions, technologies and interventions including mitigation, adaptation and biodiversity measures, to deliver the targets set for energy and emission reductions across the DZ.

A register of opportunities has been developed for Kilkenny City DZ with the carbon reduction potential of each opportunity quantified in terms of its contribution to reducing carbon emissions across the DZ. Potential carbon reductions have been assessed against the national target of a 51% reduction by 2030. The register of opportunities has been used to inform the identification of actions.

To develop the register of opportunities for the Kilkenny City DZ, a series of actions have been undertaken:

- Evidence Base – a review of the BEI developed for Kilkenny Town DZ was conducted to provide a detailed analysis of sources of emissions. A review of national (such as the Climate Action Plan) and regional policy (e.g. RSES) was undertaken to understand the national and regional policy context, aims and objectives.
- Best practice review – A review of existing actions being undertaken by Local Authorities in Ireland and across Europe was undertaken to identify best practices and effective actions being undertaken by local authorities to increase energy efficiency and reduce carbon emissions.
- Stakeholder Engagement – A wide range of stakeholder groups were consulted to assess stakeholder needs and identify potential decarbonisation opportunities.

Opportunities provided through the register are ‘technical’ which may be quantified in terms of emissions reduction (e.g., retrofitting of dwellings, electrification of vehicles) while ‘enabling’ opportunities (e.g. behavioural change, awareness, capacity building) which are more difficult to quantify have not been included in the emissions reduction calculations. However, the implementation of enabling opportunities will support the delivery of ‘technical’ opportunities and will be key levers in meeting emission reduction targets.



Key Green Infrastructure in Kilkenny City. Source: Habitat Survey and Mapping of Kilkenny City (2010)

Register of Opportunities

The emissions inventory for the Kilkenny City DZ for 2018 was calculated as 169,878 tCO₂e, as shown on the table on the right. As set by the Department of Housing, Local Government and Heritage, the overall target of the DZ is to reduce total emissions by 51% by 2030*. This equates to reducing emissions across the DZ by 86,638 tonnes of CO₂e.

Each sector has been set a Sectoral Emission Reductions Target as set out in the Sectoral Emissions Ceilings published by the Government in July 2022**. It is important to note that if these targets were achieved across all sectors in the DZ, this would result in a total emissions reduction of 75,108 tonnes of CO₂e by 2030, as shown on the table on the right. This level of reduction would result in a 44% reduction and fall short of the DZ's reduction target of 51% (86,638 tCO₂e).

As a result in order to achieve an overall 51% reduction, some sectors in the DZ will need to be ambitious and overachieve on their sectoral emissions target. Kilkenny Council will take a leading role in overachieving on their own emission reduction targets (Municipal -75%) and will work closely with all public sector bodies in the DZ to help them potentially overachieve.

The table on the right shows a projected emissions reduction of 94,616 tCO₂e based on the opportunities outlined in this plan. The opportunities outlined include those for which Kilkenny County Council has direct responsibility and those that Kilkenny County Council can influence and support.

Sector	2018 BEI (tCO ₂ e)	Sectoral Reduction Targets 2030 (% of 2018 BEI)	Sectoral Reduction 2030 (tCO ₂ e)	Projected Reduction 2030 (tCO ₂ e)	Based on the Following Opportunities
Residential	31,869	-40%	-12,748	-18,165	This reduction is based on improving BER of 60% of all private residential housing units to B2 and the installation of Solar PV on 60% of all properties. Energy efficiency improves in homes due to insulation.
Commercial	40,068	-45%	-18,031	-24,051	Improving energy efficiency of buildings, installing solar PV and swapping fossil fuels (gas and kerosene) for low carbon alternative fuels in the DZ
Public Sector	10,492	-51%	-5,351	-6,298	
Municipal	2,184	-51%	-1,114	-1,638	Electricity supply for all LA buildings in DZ is procured via renewables sources, fuel switching and energy efficiency measure reduce emissions
Transport	61,486	-50%	-30,743	-36,277	Active travel opportunities decreases the total km travelled by private car in the DZ by 20%. The electrification of 50% of private cars, LGVs and Public Transport are also operating on Low Carbon fuels / electric. HVO is used by 50% of freight in the DZ
Agriculture	16,914	-25%	-4,229	-5,243	Diversification options for farmers to reduce livestock emissions. Alternative fuel sources for farm machinery (e.g. HVO) will reduce agricultural energy related emissions.
Land Use, Land Use Change and Forestry	1,082	No national target set	No national target set	-649	Better land management practices and improved soil health leads to land absorbing carbon dioxide instead of releasing
Waste	5,783	-50%	-2,892	-2,295	Improved composting and recycling rates reduce waste emissions
Total	169,878	-44%	75,106	94,616	*numbers are rounded to nearest whole number



* Source: DHLGH Circular Letter (LGSM01-2021)

** Source: [Sectoral Emissions Ceilings](#)

Enabling Opportunities

Applying these across the sectors

Enabling the DZ plan

Branding

Innovation

Collaboration

Governance

Sector	Enabling Opportunities
Residential	<ul style="list-style-type: none"> Where a SEC has been established, ensure this existing opportunity is maximised in delivering emission reductions across the DZ . Use a DZ launch event and social media (designed in collaboration with community groups) to raise awareness and set a positive tone for action Have pilot social housing units with pioneer tenants to show the benefits of heat exchangers and create local advocates for their use Benchmark energy performance of areas of the city to create friendly rivalry and encourage climate action
Commercial	<ul style="list-style-type: none"> Develop a Sustainable City Charter with a menu of options for action and ratings to recognise improvements over time Acknowledge good work through an awards scheme for exemplars (business and community) Consider adopting a rates discount scheme similar to Waterford where companies with a decarbonisation plan in place receive an 8% rate discount.
Transport	<ul style="list-style-type: none"> Development of a centralised web-based Public Transport Information Hub to promote a modal shift from private to public transport Secure bike parking and maintenance points at various locations within the city and at all schools. Expanded bus network with low annual subscription for unlimited trips, and provide free parking at the park and ride facilities Design a high-quality 'London Tube' style map showing walking and cycling distances
Agriculture	<ul style="list-style-type: none"> Provide more community gardens (with edible forests allowing every household to plant a tree) and explore the need for community gardens and further allotment provision. Consider a new Millennium Woods, whereby every family in the city has a tree planted in their name. Increased heritage/nature interpretation across forests and historic parks Create a network of urban parks linked by green leisure routes
Waste	<ul style="list-style-type: none"> Introduce a DIY tools library for communities, or repair cafes to extend the life of appliances. Website with food suppliers within 10km, 20km & 50km of Kilkenny City Ban of single-use coffee cups and more bring centres with can crushers on site Water replenishment points in the city
General	<ul style="list-style-type: none"> Publish a quarterly climate action newsletter for communities and businesses highlighting best practices, tips and tricks and funding access Establish a Community and Business Sustainability Steering group to focus on DZ actions and implementation Align SUMP, LACAP and DZ on governance and communications plan to ensure consistent messaging Establish an annual sustainability festival - building on Bike Fest

04

Appendices

Enabling Opportunities List

Governance and Leadership

1. Only disabled and elderly parking for staff and Councillors at County Hall. Subject to creation of park and ride facility.
2. Implementation group with a clear focus on getting projects done
3. Minutes of implementation group published. Quarterly progress newsletter. Regular social media posts.
4. Annual conference where Implementation Group presents progress. Presentations on best practice projects across Kilkenny and Ireland.
5. Strong branding and communications of what is being done
6. Research trip by key leaders to Vitoria Gasteiz, Isle of Eigg, Clonakilty, etc.
7. Support the work of the city's SECs.

Community

8. Increased heritage/nature interpretation across forests and historic parks
9. Locals empowered through information on how to reduce plastic use
10. Shared community construction of green infrastructure, e.g. community forest
11. Annual sustainability festival. Building on Bike Fest.
12. Sustainability competition between areas within the city
13. Community conference to launch plan and enable a positive start
14. Sustainability cafe. A place for conversation and learning.

Business Sustainability

15. Website with food suppliers within 10km, 20km & 50km of Kilkenny City
16. On-site composting of food waste at hotels with gardens
17. Fruit, vegetables and herbs grown in own hotel garden/green areas
18. Assistance given to enable remote work
19. Banning of single use coffee cups
20. Circular economy possibilities study. Evaluate opportunities in Kilkenny.
21. Encourage any farmer operating in the DZ to join Origin Green
22. Encourage more vegetarian options in restaurants/bars/cafes/hotels
23. Glass imploder
24. Water replenishment points in the city
25. Gold/silver/bronze business sustainability scheme that businesses can aim for. Supported with strong advice
26. Communal wind farm or preferably solar farm that businesses can invest in
27. All Council supported festivals to follow Fáilte Ireland's sustainability guidelines
Lower water pressure in hotel and B&B showers from 15L/min to 8L/min

Enabling Opportunities List

Built Environment and Transport

28. Secure bike parking and maintenance points at various locations within the city and at all schools
29. More school cycle buses
30. Cargo bike scheme for businesses, NGOs and households
31. Free bike maintenance training
32. Expanded bus network with low annual subscription for unlimited trips. Free when using the train.
33. More local link buses and routes from the county to the city.
34. Smart bus stops with digital display of expected arrival times in villages
35. Expansion of school bus service
36. Where feasible, all new buses to be electric
37. Promotion and facilitation of car sharing
38. Promotion and facilitation of car pooling
39. Free parking at the park and ride facilities
40. High quality 'London Tube' style maps showing walking and cycling distances
41. Street scale BER assessments, energy audits, advice. Low cost/free.
42. Tool library and communal repair workshop. Communal repair training.
43. More bring centres with can crushers on site

Nature and Greening

44. Create semi-natural green belt forest park around the edge of the city
45. Create organic orchards and edible forests. Every household to plant a tree
46. Expand allotment provision
47. Community gardens created
48. Work with the OPW and HSE to examine how their land can be used to encourage biodiversity and plant native trees
49. Trees (preferably native) planted wherever feasible along every possible street
Inserting native plants wherever possible in the public domain
50. Create network of urban parks linked by green leisure routes
51. Where possible, all green areas - including in housing estates - managed for biodiversity
52. Homeowners to be encouraged to manage their gardens for biodiversity and organic food production



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