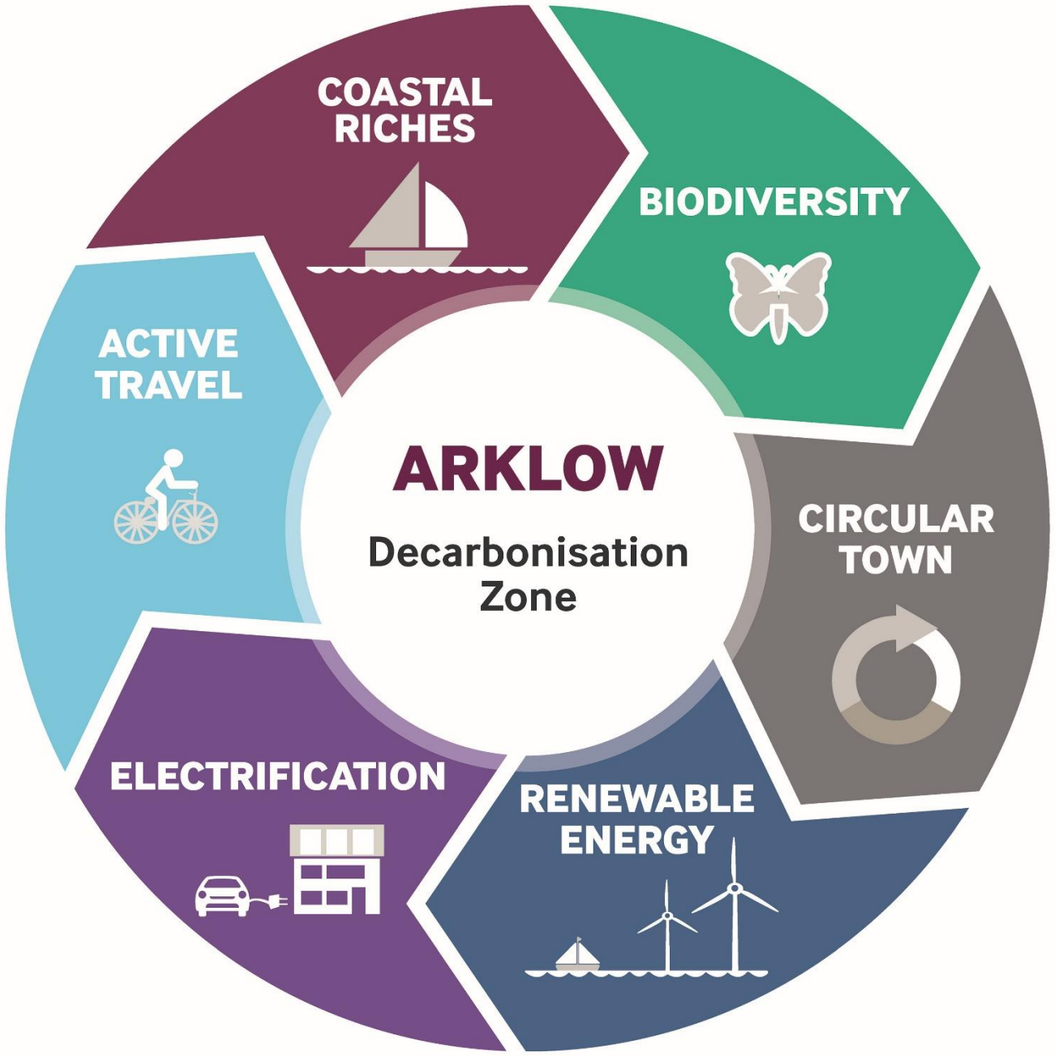
ARKLOW DECARBONISATION ZONE

Implementation Plan



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Implementation Plan
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REPORT

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Prepared by:

RPS

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Dublin | Cork | Galway | Sligo
rpsgroup.com

RPS Group Limited, registered in Ireland No. 91911
RPS Consulting Engineers Limited, registered in Ireland No. 161581
RPS Planning & Environment Limited, registered in Ireland No. 160191
RPS Engineering Services Limited, registered in Ireland No. 99795
The Registered office of each of the above companies is West Pier Business Campus, Dun Laoghaire, Co. Dublin, A96 N6T7

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1 VISION

The town of Arklow has been selected as the 'Decarbonisation Zone' for County Wicklow. This Implementation Plan sets out how the community will come together, with the support of Wicklow County Council, to lead the way for climate action and carbon reduction.

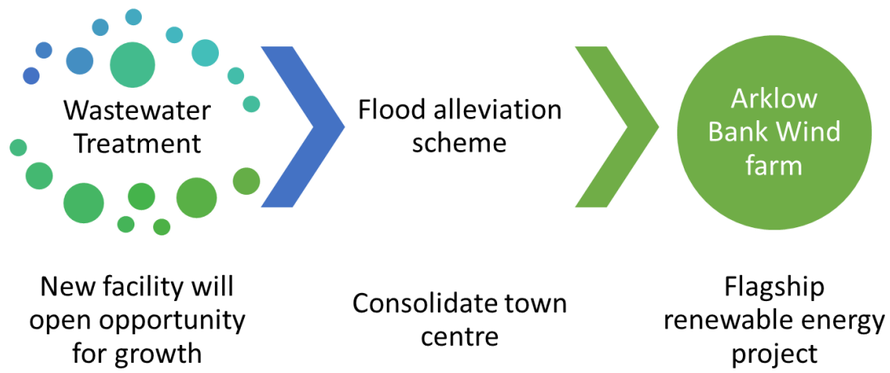
"A Decarbonisation Zone is an inspirational demonstration and test bed of what is possible for decarbonisation and climate action at a local and national level"

Ireland's all of government Climate Action Plan 2021 sets out the level of emissions reduction we need to achieve in order for Ireland to meet global commitments that were agreed at the Paris Climate Accord in 2015. The national target is highly demanding and will require significant change across all of society.

The Arklow Decarbonisation Zone will be one of a small number of communities leading the way in achieving a 51% reduction in carbon emissions by 2030.

There are eight key themes that Wicklow County Council set out when selecting Arklow as the community that would lead the way for clime action.

Arklow is poised for regeneration and improvement, with three major infrastructure projects underway or planned in the immediate future. The impetus from these projects can be captured to create momentum for decarbonisation.



TARGET

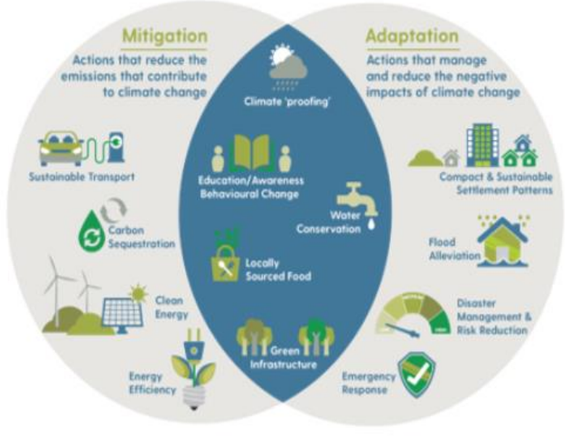
7% reduction in carbon emissions per year

51% reduction by 2030

Vision for Arklow:

Arklow as a vibrant coastal town, rich in renewable resources, and with low-carbon living at its core.

Climate Action encompasses both **Mitigation** measures (reducing greenhouse gas emissions) and **Adaptation** to climate change. Some actions can contribute to both aims. The decarbonisation Zone project will bring forward opportunities on both fronts, with a primary focus on reducing carbon emissions.



2 BASELINE CARBON EMISSIONS

Measuring the baseline carbon emissions is the first step in the decarbonisation of Arklow town. The preliminary work done in this section has provided us with the first indicators for which areas to target for innovative decarbonisation solutions for the town.

2.1 The Decarbonisation Zone Boundary

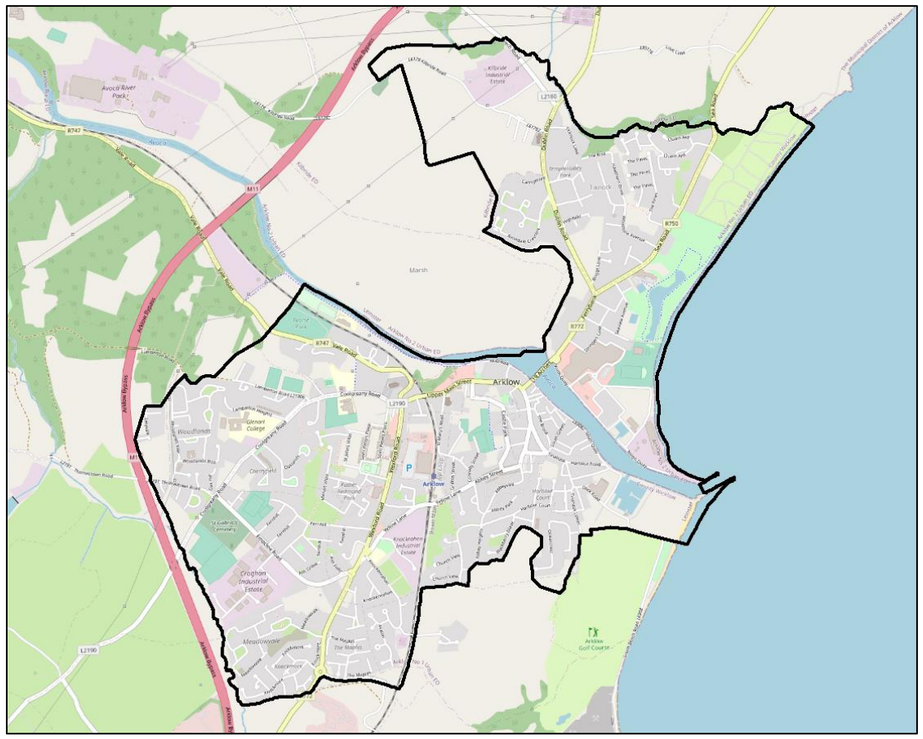


Figure 2-1: Footprint of the town for the baseline emissions inventory.

To calculate the carbon footprint, the boundary of the decarbonisation zone is identical to the CSO's Arklow 'town boundary'. This allowed us to easily retrieve from the 2016 for census of population. This was essential for developing the baseline for the residential, social housing and employment sectors while also providing important insights into active travel usage in the town. This boundary was also used to 'clip' national datasets to extract Arklow data, such as the carbon emissions from all transport links in the town provided by the National Transport Authority (NTA).

Some employment areas and other key assets for the town – such as infrastructure and recreation - are in the immediate hinterland of Arklow. These areas will still form part of the overall decarbonisation plan project.

2.2 Emissions Footprint

The baseline year for this research is 2018. This year was selected as it was in keeping with the government's Climate Action Plan baseline, and this year also represented a 'pre-COVID 19' year, so 'normal' activity levels were present across all the categories examined. For this baseline we followed the **SEAI methodology** that has been developed by CODEMA with some alterations to tailor our approach to the specific requirements of Arklow.

The total amount of carbon emissions – expressed as tonnes of carbon dioxide equivalent (CO_2eq) – is **75,266 tonnes**. This equates to an emission of **5.7t** of CO_2eq per capita, as the census records Arklow's population as **13,163** persons in 2016.

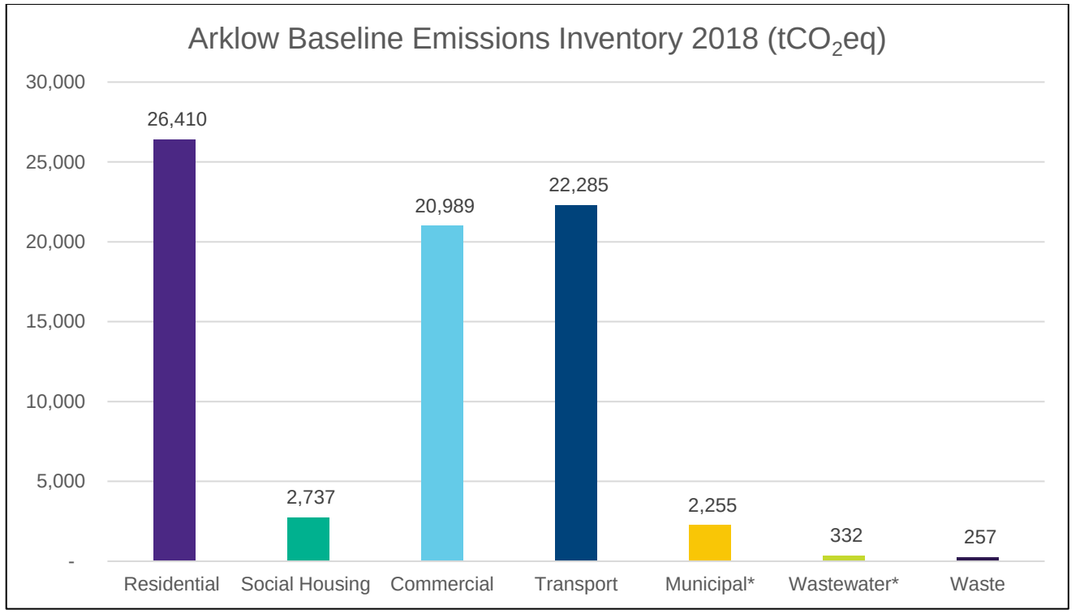


Figure 2-2: Arklow's Baseline Carbon Emissions (by category) 2018

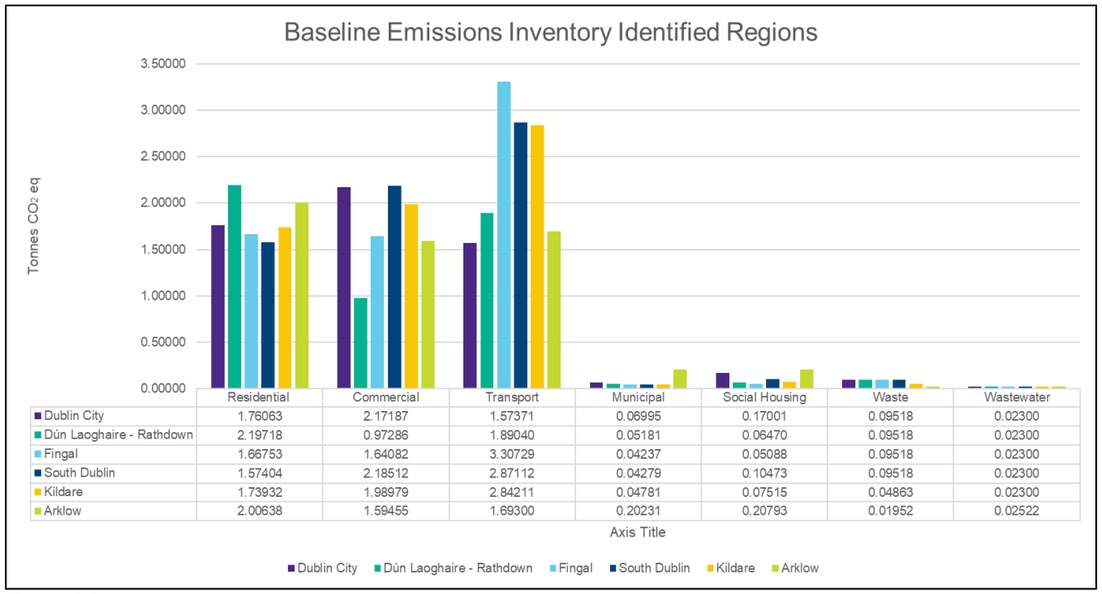
Total Carbon Emissions 2018 75,266 tonnes	**5,7 tonnes per person in Arklow**

These results also illustrate the sectors that need to be targeted as a priority for the largest benefits to take place over the shortest amount of time. The top three categories are.

- **Residential:** emissions from use of energy in the home: space heating, hot water, and electricity use (lighting, appliances etc.)
- **Commercial:** energy used to heat business, operate machinery and equipment, and other electricity use.
- **Transport:** the baseline includes all trips made by various types of vehicles (cars, commercial vehicles, buses) and is dominated by emissions from petrol and diesel engines.

The Arklow results were compared against other regions that have completed similar baseline exercises. Arklow did have some slight differences compared with other counties in the Dublin region. For example, the social housing and residential totals were slightly higher in Arklow. On the other hand, the transport emissions were lower. There is currently no wastewater treatment plant in Arklow. The new facility will be operational by 2025. The data collected for 2018 reflecting data for pumping of wastewater.

To get a complete picture of municipal emissions, we secured information on all public sector facilities in the town from data held by SEAI, who collect information on energy use by all public sector bodies in Ireland.



	Residential	Commercial	Transport	Municipal	Social Housing	Waste	Wastewater
Dublin City	1.76063	2.17187	1.57371	0.06995	0.17001	0.09518	0.02300
Dún Laoghaire - Rathdown	2.19718	0.97286	1.89040	0.05181	0.06470	0.09518	0.02300
Fingal	1.66753	1.64082	3.30729	0.04237	0.05088	0.09518	0.02300
South Dublin	1.57404	2.18512	2.87112	0.04279	0.10473	0.09518	0.02300
Kildare	1.73932	1.98979	2.84211	0.04781	0.07515	0.04863	0.02300
Arklow	2.00638	1.59455	1.69300	0.20231	0.20793	0.01952	0.02522

Figure 2-3: Comparing Arklow's carbon footprint with other municipal areas

2.3 Spatial Patterns of Energy and Emissions

A Spatial Energy Demand Analysis (SEDA) was carried out on the town to identify patterns of energy demand for the residential and commercial sector. This works was also useful to identify potential opportunity for future low carbon development.

This exercise located the high energy usage commercial areas that had the potential to co-operate to share the burden of decarbonisation across the commercial sector. This analysis was also conducted along with residential and social housing areas that could most benefit from a sustained retrofitting effort. The SEDA mapping identified clusters of social housing and their energy performance (as recorded in BERs) so that a comprehensive retrofitting scheme could be developed more effectively to target these areas most in need.

The potential implementation of a district heating scheme in the town was also helped by this analysis. The proximity of the proposed two new Data Centres and their potential to form a low-carbon heat source (by means of capturing the waste heat from the Data Centres) was also identified.

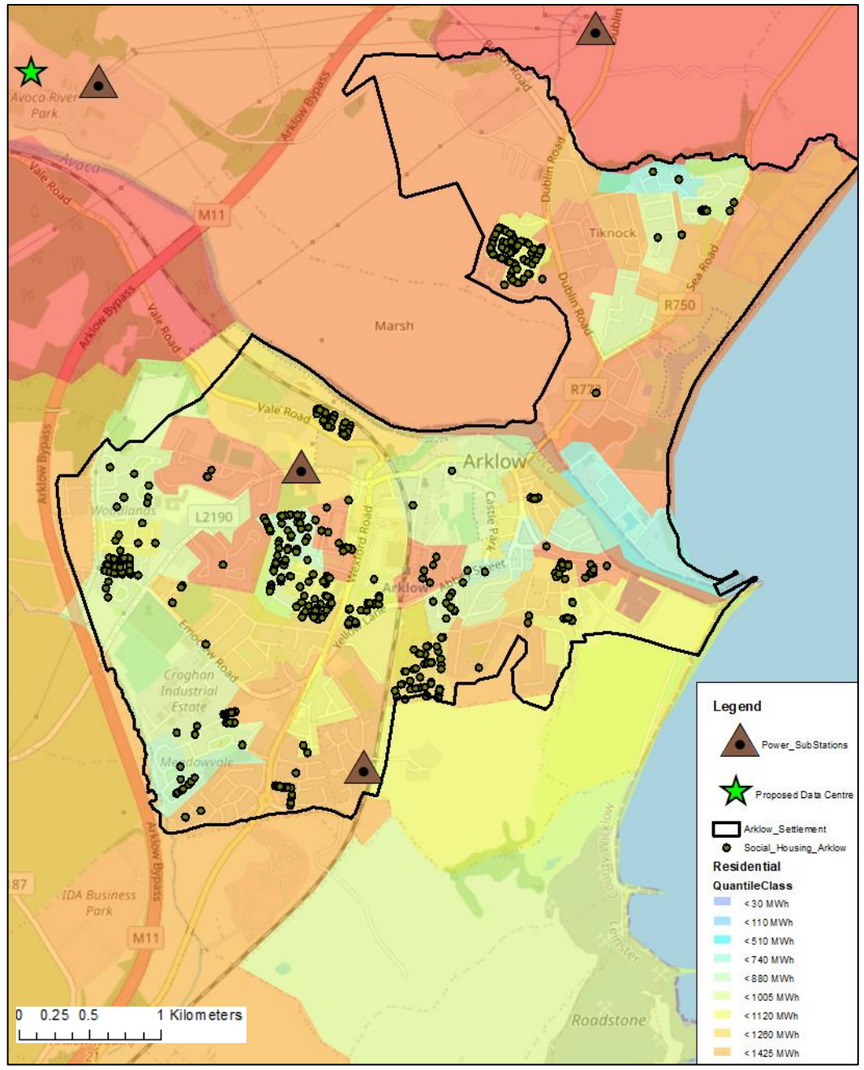


Figure 2-4: Excerpt from the Spatial Energy Demand Mapping (SEDA)

2.4 Future Carbon Trends

The level of Carbon emissions traditionally reflect trends such as growth, levels of economic activity and use of energy. The challenge for the Decarbonisation Zone is to enable improvement and growth in the town of Arklow without increasing carbon emissions.

The Decarbonisation Zone will reflect the national ambition to reduce emissions, for example through:

- Energy efficiency (less waste of electricity and heat by eliminating wasteful practices and using better technology)
- Using more renewable energy and 'low carbon' energy sources.
- Switching to active travel and reducing transport emissions
- Managing land use and regeneration to avoid high carbon emission patterns.

Arklow is also poised to develop and improve in the decade ahead. Upward pressures on carbon emissions will come from:

- Population growth (following completion of the new wastewater treatment plant, regeneration of the town core and development of new residential area is anticipated).
- Energy consumption – as industry expands and proposed large energy users such as Data Centres are developed, this can increase energy related emissions.
- Wastewater treatment – the new treatment plant in the town will itself be a significant energy user.

The Decarbonisation Zone implementation plan will include monitoring of these trends in growth their effect on the 2030 target of 51% reduction in carbon emissions.

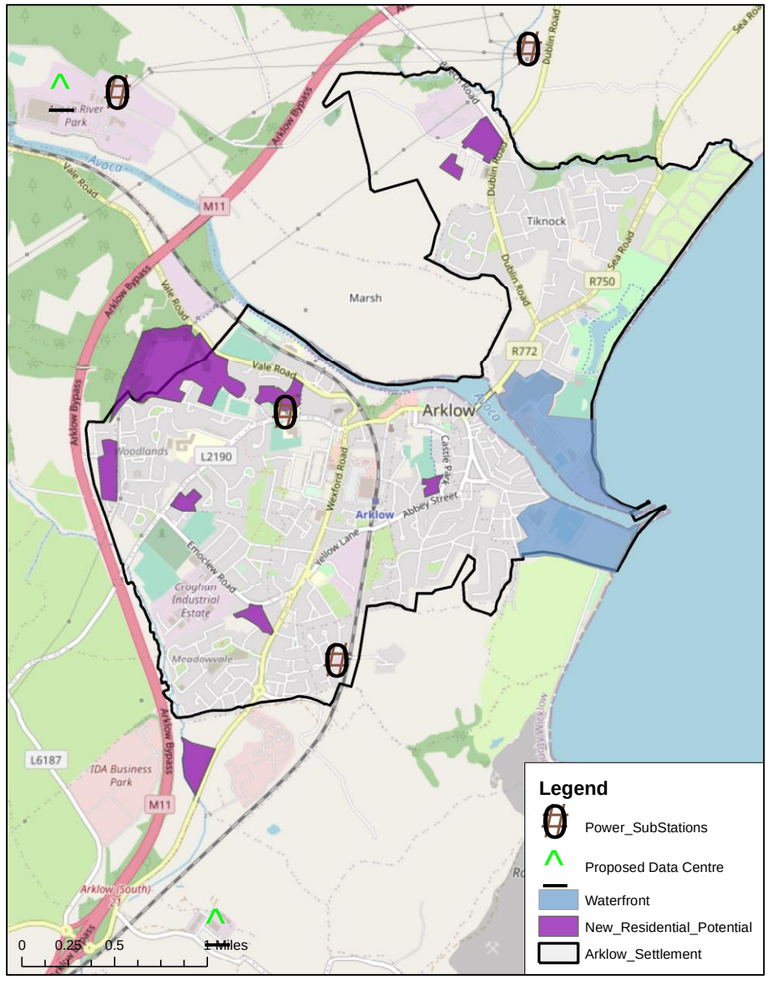


Figure 2-5: Zones identified for potential growth in Arklow

3 STAKEHOLDER ENGAGEMENT

3.1 Engagement for this DZ Implementation Plan

The first steps towards building a team approach to climate action in support of this Implementation Plan were taken in early 2022. The Wicklow County Council project team (aided by RPS consultants) set about identifying and talking with community groups and business in Arklow, along with local Elected Representatives.

STEP 1 – Gathering participants

The project team identified and contacted stakeholders – for example from existing community groups and the public participation network (PPN) - to let them know about the DZ plan and inviting them to a workshop.

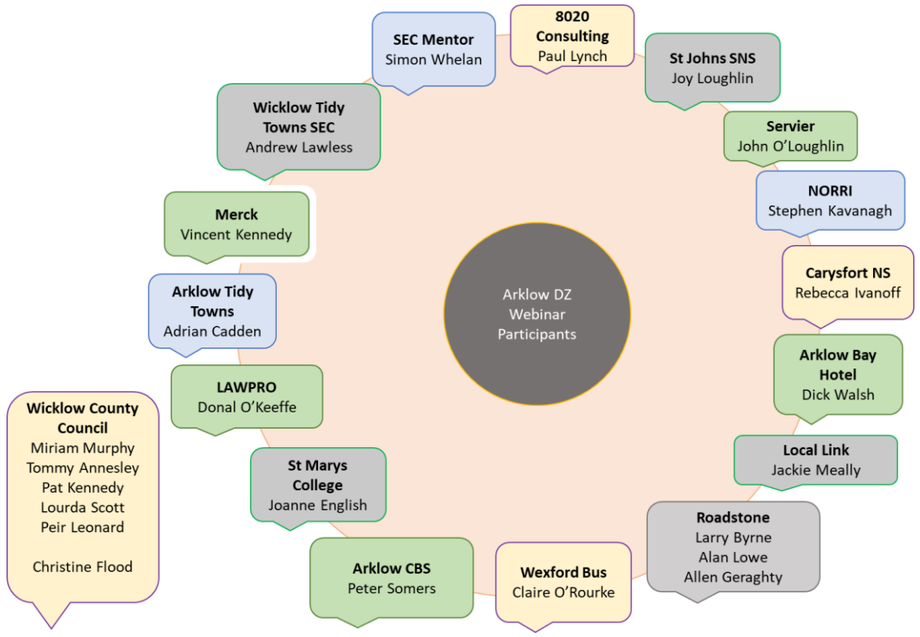


Figure 3-1: Workshop Participants February 2022

The workshop took place in February 2022, and restrictions associated with the COVID-19 Pandemic meant it took place through on-line engagement.

STEP 2 – Mapping the Stakeholders

Having introduced the DZ plan, the group set about mapping the different categories of stakeholders and built a picture of who could get involved or add support to the DZ plan.

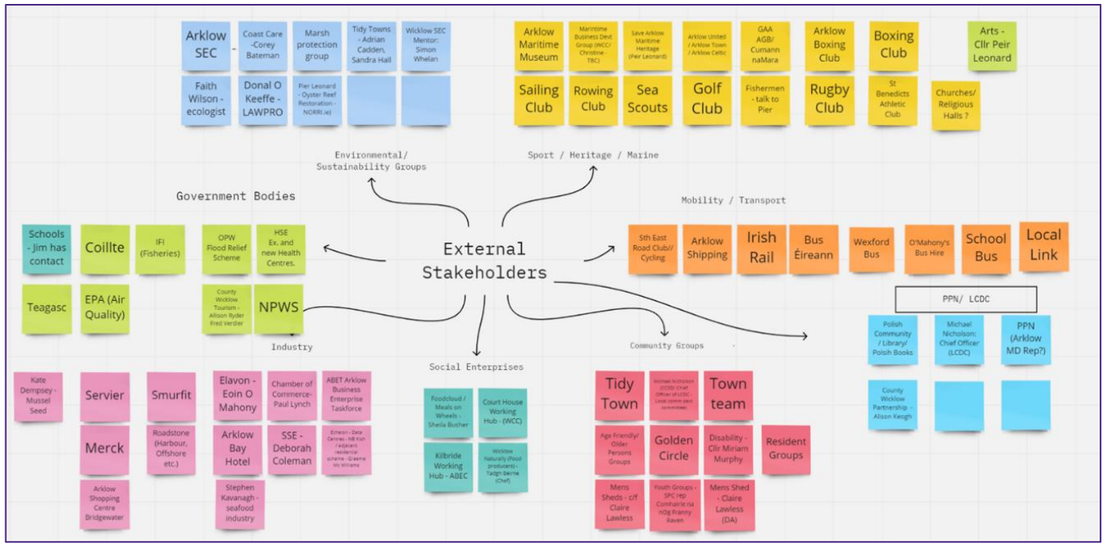


Figure 3-2: Initial Stakeholder Mapping Process

STEP 3 – Discussing the Opportunities

At the workshops, breakout groups considered the opportunities and responded with additional questions and suggestions. Some of the messages from the engagement include:

- The multiple benefits of a more sustainable town need to be highlighted: for example, switching to active travel reduces transport emissions but also improves health and well-being. In the same way, it is not just the energy efficiency of retrofitting houses that should be considered, but the improvements in comfort and health for occupants.
- Quick wins are important: some high profile and visible success stories will encourage more involvement and enthusiasm
- Arklow Bank Windfarm will be a major boost, not just renewable energy generation but also a large 'community benefit fund' will be available.
- The NORRI project (Oyster Restoration/Kelp Restoration) has the potential to demonstrate multiple benefits - for climate resilience, protecting the shoreline, carbon sequestration – and suitable sites are present near Arklow.
- Arklow Marsh: already relevant to climate resilience and flood control, there is potential to investigate carbon sequestration, and create biodiversity corridors and better connections and awareness.
- There is enthusiasm for householders and business to install renewable energy systems such as solar panels. Being able to connect to the grid and earn revenue are important aspects. There are opportunities for biogas (Anaerobic digestion) projects.
- Potential to enhance public transport and include electric buses.
- Sports Clubs can get involved in renewable energy – e.g. for flood lighting.

BREAKOUT ROOMS

CONSIDER:

1. What do you think are the main opportunities for decarbonisation in Arklow?
2. What are the priority projects you would like to see implemented?

- Arklow's Schools are already working on 'safer routes to school' and there is an appetite to install renewable energy (e.g. rooftop solar panels).
- A Just Transition: essential that the ability of householders/ small business to afford the cost of energy retrofit is considered. If Arklow is to be an exemplar, it needs to implement a just transition.
- Some businesses e.g. quarries – are already examining ways to electrify their equipment and systems as much as possible.
- Upcycling and the circular economy need to feature strongly in the DZ plan.
- The local community is acquiring a lease for the former 'Goods Store' at Arklow train station. This has potential for a demonstration/ exhibition/ education centre.

STEP 4 – Follow-up Engagement

Following the workshop stage, the project team took the opportunity to forge further connections and have follow up meetings, both on line and by telephone.

In May 2022, with COVID-19 restrictions easing, with in-person meetings and site visits with a number of stakeholders in the town, including in the education, sport and commercial sphere (Chamber of Commerce) and the new wastewater treatment plant project team (Irish Water).

Chamber of Commerce

Arklow's Chamber of Commerce has more than 70 member businesses, and the organisation is keen to be involved in the Decarbonisation Zone implementation. Companies want to get involved in carbon reduction, and with the right information and supports they can playa leading role in climate action in the town. Supports in the following areas will be beneficial:

- Renewable Energy: what practical intitiaves can be implemented what financial supports are available
- Energy efficiency: e.g. LED lighting and use of natural light – implementation case studies to illustrate technical aspects, costs and benefits.
- Electric Heat Pumps: information on changing from fossil fuels to low carbon heating.
- Travel: employee incentives for active travel/ public transport and companies adapting to EVs.

As regards carbon accounting, local business are not currently equipped to measure their carbon footprint ; they need carbon calculator tools so they have a starting point and can then look to a strategy for the reduction of their emissions.

Members also discussed the need for a scorecard so businesses that are engaged in sustainability measures can display their activities and show customers they are active in this area.

By finding and celebrating local business champions, more businesses will get on board and follow suit.

3.2 Emerging Themes and Champions

Some of the groups already engaged with sustainability and interested to lead climate action include:

Table 3-1: Groups already engaged with sustainability

Group	Emerging Focus
Arklow Sustainable Energy Community (SEC)	The SEC aims to build participation in the energy transition locally and is fully aligned with the DZ project. The SEC will be working on energy awareness, energy efficiency (e.g. retro-fitting homes and business) and renewable energy initiatives.
Arklow Chamber of Commerce	Identifying local sustainable business champions Grant aid and support channels Disseminating information to members Collaboration across companies and with community groups.
Arklow Schools	Advancing rooftop solar projects as an initial 'quick win' Longer term energy retrofitting for low-carbon schools Engaging the student body in carbon action projects
Arklow Tidy Towns Other community groups	Local action projects that improve amenities and reduce carbon emissions Community allotments enabling more people to connect with food production Biodiversity and nature initiatives.
Sports Clubs in Arklow	Potential quick win for renewable energy to serve flood lighting and changing rooms (e.g. solar panels) Engaging members in other climate action projects
NORRI project Other Coastal Groups	Research and demonstration projects for kelp restoration and oyster bed restoration Coastal eco-system enhancement and synergy with carbon reduction and improved recreational use of water
Arklow Recycling Centre and the not-for-profit sector	Circular economy initiatives and increased participation in reuse and repair Boosting charity shops as a circular economy resource for the town Engaging in innovation with local business (reuse, resource efficiency etc.).
Coral Leisure Centre and Pool	Having already improved efficiency and installed a solar panel array, the leisure centre is aiming to further decarbonise. This is one of the largest 'municipal' energy users in the town.

Solar PV rooftop array at Arklow's Coral Leisure Centre and Pool

3.3 Just Transition challenges

The ambition of the European Green Deal, the political response to climate and biodiversity loss is the ***'no-one is left behind'*** in the climate and energy transition.

It is important to consider what groups in Arklow might find it difficult to participate in the transition to a low-carbon future. The following challenges have been identified by the project team in the course of preparing the Implementation Plan. This is just an initial indication. More work will be required as part of implementation to bring all sectors of the community along together, so that no-one in Arklow is left behind.

Table 3-2: Just Transition Priorities

Town centre small business	Some town centre small businesses may already be struggling to survive in the face of competition from larger stores and online shopping. Finding the resources for energy retrofitting will be challenging.
Low-income households with a heavy reliance on fossil fuels	Whereas social housing owned by Wicklow County Council will form part of an overall public housing retrofit programme, there is a significant number of privately owned dwellings in Arklow that rely on coal and oil for heating purposes, and have limited incomes, as illustrated by CSO statistics for the town. For such households, the difficulty and cost of energy retrofit will be challenging. They risk being left behind with costly and high-emissions energy systems.
People employed in fossil-fuel related businesses	Use of fuels such as kerosene and coal will gradually reduce in coming years, meaning employment in these sectors will decline. Other traditional employment sectors such as servicing petrol and diesel engines will also be affected.

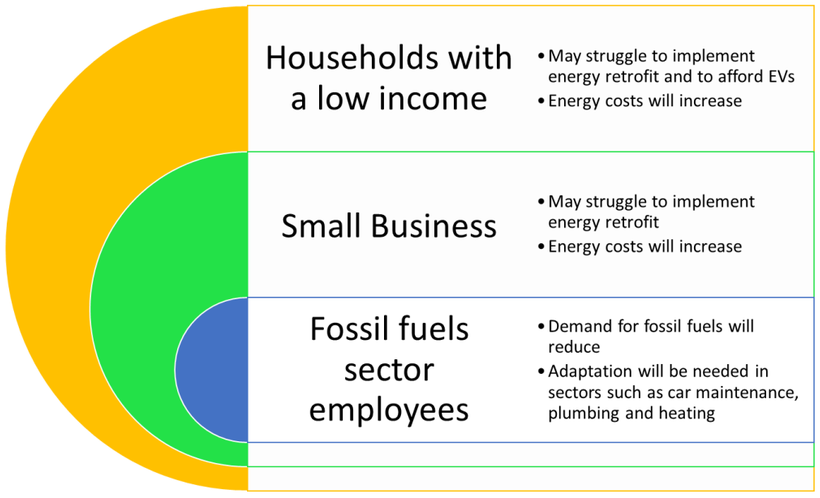


Figure 3-3: Just Transition Challenges

4 ARKLOW DZ PROJECTS

Having completed a 'Register of Opportunities' for Arklow, the following decarbonisation projects have been identified for the town in order to achieve the transition needed to meet 2030 targets and develop towards a net zero carbon town by 2050.

4.1 Residential

Residential Deep Retrofitting

Targets

- Improve BERs of all housing to B2 ratings (Currently a C2 average).
- **5,572** total houses in Arklow with over 5,000 estimated to need retrofitting.
- Reduction of **17,990 tonnes CO_2eq/year by 2030**, compared to 2018 levels . (approximately **64% reduction** across all residential houses).

Current BER Profile of Wicklow

BER Rating Range	%
A1-A3	13%
B1-B3	11%
C1-C3	34%
D1-D2	21%
E-G	21%

Priorities in Home Retrofits

- Fabric First approach to energy efficiency from SEAI.
- Solar PV installation along with EV charging points.
- Electrification of Heating.

Description of Work

- Fabric Upgrades (insulation, windows, doors).
- Draft proofing, new ventilation systems.
- New heating systems (typically electric Heat Pump).
- Low energy lighting.
- Upgrade energy control and monitoring.

Cost and funding sources for deep retrofitting all private residential houses	
Responsible	DECC, SEAI, Department of Housing, Local Government and Heritage, WCC
Cost	**€140.2 million** – estimated average retrofit cost is €27,700 per house Ranges from €75,000 for 'G' rated to €10,000 for 'B3' rated
Funding	SEAI / DECC – for houses currently at a C2 rating or lower (50%) Private funding models

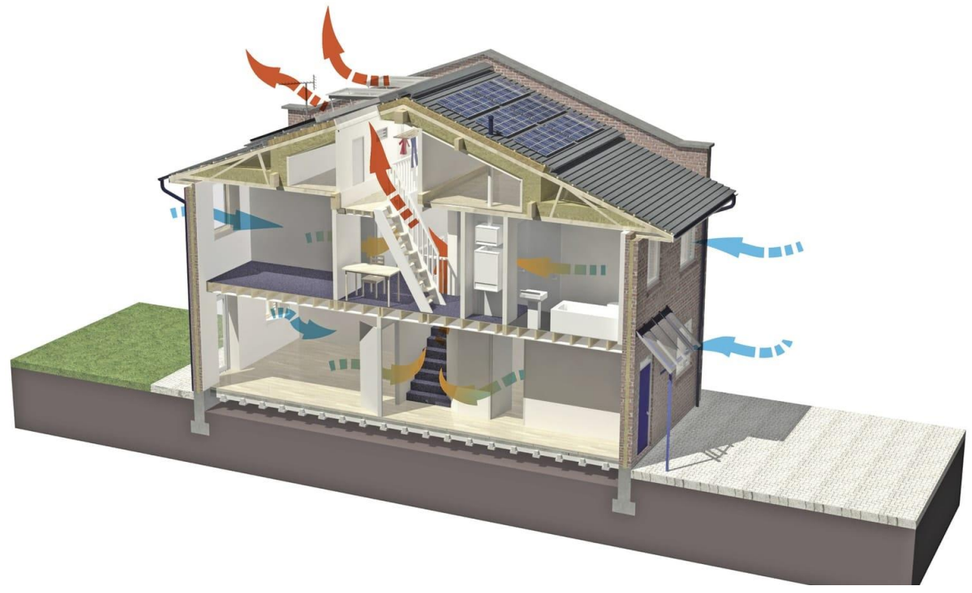


Figure 4-1: Residential Retrofit Example

Co-Benefits

- Improved standard of living with increased comfort levels.
- Warmer Homes.
- Improved Home Value.
- Less Damp.
- Better Ventilation.
- Reduced energy bills.

There is also potential to tie in with EV transition, for example using solar energy to charge EVs (see 4.6 below).

4.2 Social Housing

Social Housing Deep Retrofitting Targets

- A BER improvement across all Arklow Social Housing to at least a B2 rating.
- Carbon Reduction of **50%** compared to 2018 levels.
- From **22,285** tCO_2eq to **11,143** tCO_2eq by 2030.
- The social housing stock is under the control of Wicklow County Council. This provides the opportunity for Social Housing to be prioritised as a demonstrator for the private residential sector.

Current BER profile of Arklow Social Housing

BER Rating Range	%
A1-A3	0%
B1-B3	2%
C1-C3	59%
D1-D2	29%
E-G	10%

Figure 4-2: Social Housing Retrofit Example

Cost and funding sources for deep retrofitting all private residential houses

Responsible	WCC, SEAI / DECC, Department of Housing, Local Government and Heritage
Cost	€14.1 million – assuming average cost of €27,700 per house
Funding	SEAI co-ordinate several programmes for retrofitting. Potential for other creative funding mechanisms.

Description of the work involved

- Fabric Upgrades (insulation, windows, doors).
- Draft proofing, new ventilation systems.
- New heating systems (typically electric Heat Pump).
- Low energy lighting.
- Upgrade energy control and monitoring.

Co. Benefits – as per private housing but also reducing the rate of energy poverty and inequality.

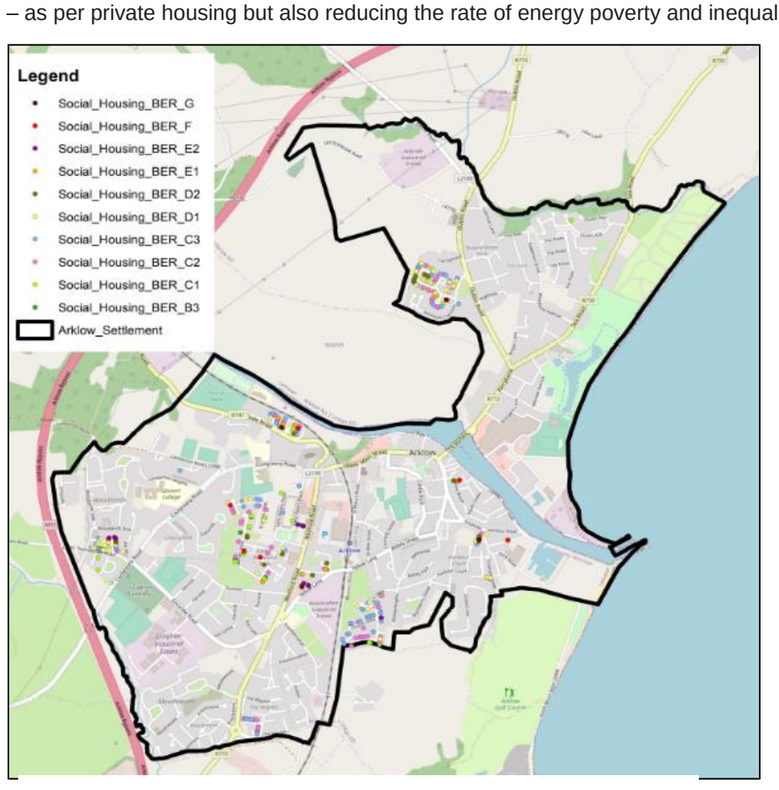


Figure 4-3: Location and BERs of Social Housing Stock

4.3 Commercial Sector

Targets

- Carbon Reduction of **6,297** tonnes CO_2eq year or **30%** compared to 2018 levels.
- An energy efficiency target for the town of 30% is considered ambitious but realisable for 2030.
- An energy efficiency target of 33% has been set for public sector buildings.

Priorities in Approach to Decarbonisation

- Energy Auditing (Understanding the energy consumption annually).
- **Changing practices** – zero or low investment initiative.
- **Fabric First** – upgrading the thermal efficiency to reduce heat loss and improve comfort levels.
- **Energy systems upgrade** – upgrading heating/ cooling systems and other equipment (e.g., replace gas or oil-fired boilers with heat pumps or biomass boilers).
- **Renewable energy sources** –reduce grid electricity demand with on-site generation (e.g. rooftop solar).
- Co-operation *within* the commercial sector.

District Heating in Arklow's Commercial Areas

- There are 522 commercial properties in Arklow (Valuations Office, 2021).
- Areas of high commercial activity highlighted to illustrate potential areas of co-operation in energy reduction through shared energy systems and infrastructure.
- The Spatial Demand Energy Analysis has highlighted the areas of highest commercial energy consumption that may potentially benefit from district heating

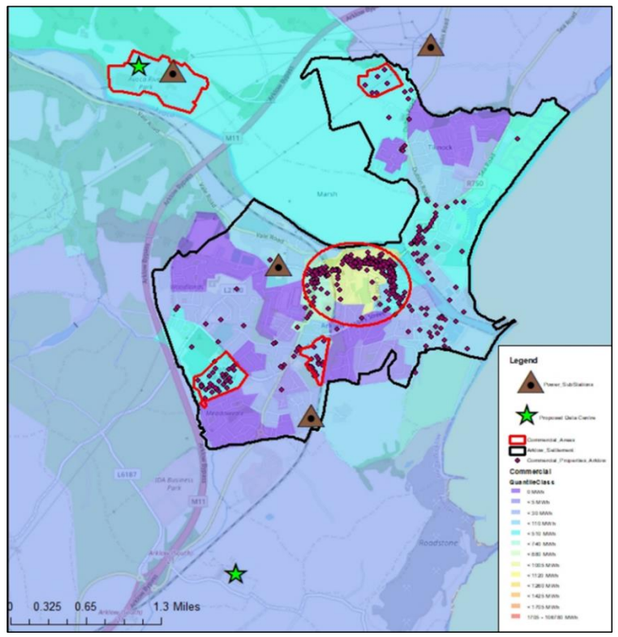


Figure 4-4: Commercial Heating Demand (using SEAI data, 2015)

District Heating Feasibility Study

A District Heating study will be required to develop a deeper understanding of the heat energy demand in the town and the viability of connecting sources of waste heat (or low-carbon heat) with end-users. The Tallaght District Heating Scheme, spearheaded by South Dublin County Council, is an example of successful public and private partnership. Waste heat from a Data Centre is used to heat the municipal buildings and the neaby T U Dublin educational campus.

Arklow Business Energy Efficiency Program

Title	Arklow Business Energy Efficiency Programme
Goal	Reduce the energy consumption in commercial property by 30% from the 2018 baseline.
Responsible	Commercial Businesses, WCC, DECC, SEAI
Funding	SEAI /DECC Private funding sources Energy Supply Company options

Description of Work

- Energy auditing to understand the energy consumption of the commrcial sector.
- Initial low-cost interventions (e.g. low energy lighting, improved energy controls and monitoring).
- Fabric upgrades (new windows, doors), maximising natural lighting).
- New heating systems and mechanical / electrical upgrades (e.g., biomass boilers, electric Heat Pump, ventilation upgrades, heat exchangers).
- Draft proofing, new ventilation systems.
- Renewable energy systems (e.g., rooftop solar, heat exchange on ventilation).

Co-Benefits

- Cost savings: most businesses can save up to 10% on their energy bills every year through some basic no- or low-cost actions, with up to 30% savings possible through investments with attractive pay back periods.
- Enhance brand and reputation: many customers now expect companies to have plans for reducing their climate impact and are making purchasing decisions on that basis.
- Increase competitiveness: by preparing your business for a decarbonised world you won't be left behind.
- Attract and retain staff: employees are increasingly looking for their employer to act around climate change.

Industrial Estates and Roof Solar Potential

- Installing solar PV modules on the large rooftops of commercial premises in town and industrial estates.
- Powering the commercial properties with maximum amount of solar energy available.
- Selling excess electricity to electrical grid, if there is an excess amount generated, to ensure all electricity generated is used. Croghan & Kilbride industrial estates in particular have significant potential to contribute to the renewable electricity production in the town.

The potential to export solar PV potential to its maximum in the town will require co-operation with ESB Networks, to establish the capacity of existing substations and circuits in the town to safely absorb renewable electricity, and to carry out any necessary upgrades.

Table 4-1: Summary of Commercial Solar PV potential

Solar PV Potential Commercial Properties	
Average Annual Electrical Energy Production (MWh)	21,597
Cost of Installation (Million €)	40
Payback Period based on electricity produced (years)	10
CO_2 Savings (tonnes/yr.)	4,017

4.4 Municipal Sector

Municipal Reduction Targets for 2030

Title	Arklow Business Energy Efficiency Programme
Goal	Reduce the energy consumption in commercial property by 50% from the 2018 baseline.
Carbon Reduction Targets	**1,128 tCO_2eq** by 2030 from the 2018 baseline of **2,256 tCO_2eq**
Responsible	WCC, DECC, SEAI
Funding	SEAI /DECC Private funding sources Energy Supply Company options

Municipal Buildings

- WCC Civil Buildings
- Healthcare Building
- Education Building
- Garda Barracks
- Leisure Centres
- Fire Station

Figure 4-5: WCC Municipal Building Arklow

Municipal Buildings Hotspots (WCC buildings only)

	Unit	2018
Electricity		
Coral Sports Swimming Pool Arklow	kWh	165,735
Civic Offices & Library, Main Street, Arklow	kWh	56,300
Croghan Industrial Estate Emoclew Arklow Recycling Centre	kWh	51,560
Coral Leisure Sports Centre Arklow	kWh	30,959
Harbour Office South Quay Arklow	kWh	22,710
Fire Station Arklow	kWh	18,150
Gas		
Coral Sports Centre Arklow	kWh (Gross)	170,172
Coral Leisure Swimming Pool Arklow	kWh (Gross)	834,589

Decarbonisation of other Public Sector Buildings and Activities

- The advanced retrofitting of buildings to improve heat retention and reduce energy demand.
- The move away from natural gas to heat and light municipal buildings.
- Many of these buildings are under the remit of WCC and can be used as an example for other large-scale consumers of energy in the town the pathways towards decarbonisation.

Municipal Vehicle Fleet

The potential for electrification of the municipal vehicle fleet

Vehicle Type	Total Annual Mileage (Km)	Total Annual CO_2eq Emissions 2022 (tonnes)
Trucks (6)	91,800	30
SUVs (6)	58,100	9
Vans (3)	40,000	8
Pick-Ups (2)	37,000	8
		55

Arklow Schools

- Solar Potential on school roofs with circa **17,770 m²** of roof space.
- If the PV maximum is achieved, this could be a source to power the town beyond the schools.
- **-336.15 tonnes CO_2eq/year** based on estimated carbon emissions of electricity generated in 2030.
- Active travel potential maximisation: Improved and safer cycling and walking access to schools from across the town.

Public Lighting

- Carbon reduction of **-110.7 tonnes CO_2eq/yr.**
- Retrofitting of public lighting (approx. 1000 streetlights) to achieve an energy efficiency of 50% by 2030.
- Works will require replacement of low/high pressure sodium streetlamps with LED bulbs.
- Co-Benefits include reduced light pollution, better quality lighting enhancing amenity and an annual financial saving from more efficient energy use.

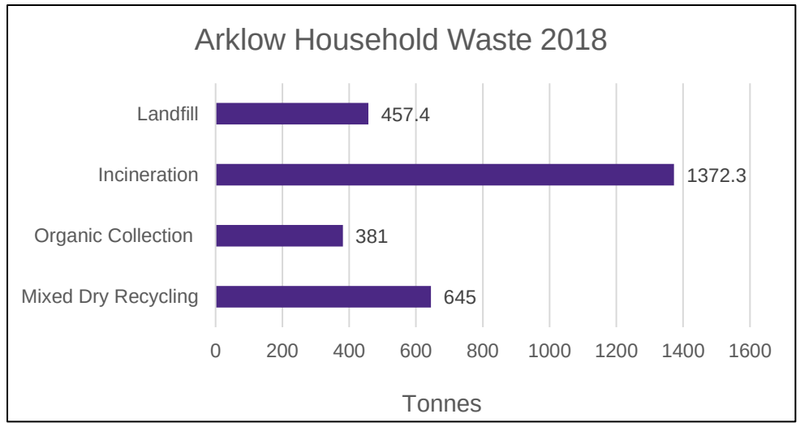
4.5 Circular Economy and Resources (waste reduction)

Targets

- Carbon Reduction target of **25%** or **-64 tonnes CO_2eq/year.**
- Reduce reliance on **'take-make-waste'** processes for households, communities, and businesses.
- Reduce waste generation and the subsequent treatment (landfill and incineration).

Arklow Baseline Waste Generation

Table 4-2: Arklow Household Waste 2018 Baseline



Areas of Priority

- Circular Economy opportunities.
- Reuse, Repair and Exchange.
- Food and Food waste.
- Textiles.
- Business and community co-operation.

Actions

- Public awareness programmes.
- Engagement and promotion events for community and business.
- Development of reuse and repair hub.
- Special programmes and initiatives in sectors such as textiles and food.
- Allotments and Grow it Yourself initiatives.

Co-Benefits

The direct emission reduction in the waste sector is relatively low but by developing more sustainable resource consumption pattern, this sector has the potential to make deep changes in the sustainability of the town.

- Employment creation by means of circular economy solutions.
- Reduced use of natural resources (raw materials, transport, etc.)
- Reduced food waste.
- Awareness and participation bonus for the town.

WCC potential starter initiatives

- Organise workshops for repair skills for textiles, furniture and promote a new approach to reuse.
- Develop training in bicycle repair and upcycling to encourage circular patterns of use.
- Launching circular economy promotions, for example using the public library (and other municipal buildings) for promotional events, displays, seminars and workshops.
- Kickstarting 'Boot Sale'/ 'Bring and Buy Sales' to encourage behavioural change and focus on re-use of second-hand products.
- Partnering with local business in a specific sector to highlight how the circular economy is working for them.
- Engaging schools in programmes such as uniform exchange days.
- Developing competitions and other novel initiatives to stimulate interest and participation.

Figure 4-6: Circular Economy Pathway

Food and Food waste

- **Foodcloud**: McDonalds, Tesco, and Lidl are companies already engaging with this web-based food sharing initiative. Other commercial businesses can get involved to distribute unused food to local enterprises and charities.
- Development of a community **allotment** and a **grow your own (GYO)** movement. This can improve understanding of food and its origins and help reduce wasteful patterns.

Reuse, Repair and Exchange

- Upgrading the Arklow Recycling Centre to become a re-use Circular Economy Hub
- Develop a person-to-person reuse and exchange. Growing the second-hand marketplace beyond online platforms such as Adverts.ie and Facebook marketplace.
- Commercial resource exchange initiatives across commercial sectors.
- Develop a neighbourhood Tool Library or similar 'Sharing' initiative.

4.6 Transport

Targets

- The goal of reducing of reducing Arklow's transport emissions by **50%** in line with the 'National Climate Action Plan 2021'.
- From **22,285** tCO_2eq to **11,143** tCO_2eq by 2030.
- Increase awareness and acceptance of the social and economic benefits in facilitating active travel in the area and reduce the current reliance of private car transport.

Priorities

1. Active Travel
2. Public Transport
3. Electric Vehicle Transition

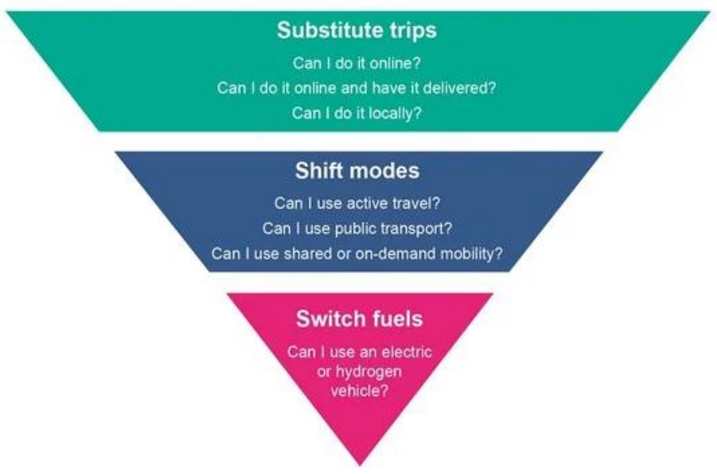


Figure 4-7: Arklow's Pathway away fossil fuel transport

Current patterns of car ownership in Arklow are set out in **Figure 4-8** and total fleet is estimated to be 5,500 cars in 2016 (CSO).

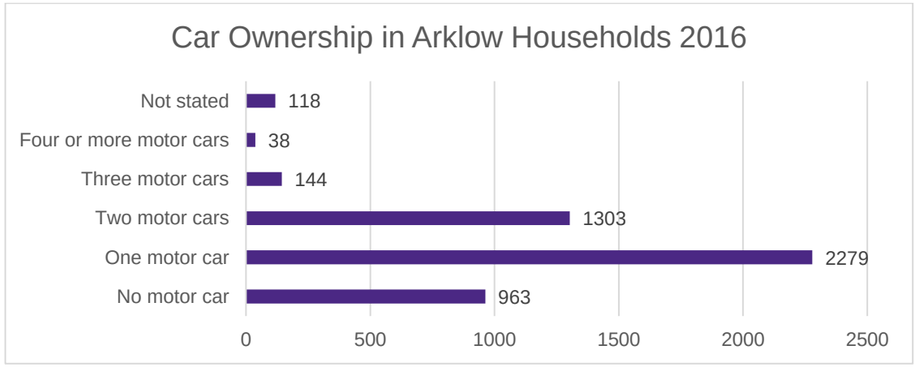


Figure 4-8: Breakdown of Vehicle ownership in Arklow (CSO 2016).

Active Travel

- Schools' morning and evening drop off (switch to active travel modes).
- A specific Active Travel Targets of 30% to school by active travel by 2025 in proposed.
- Workplace commuting in Arklow – a switch to walking, cycling and E-bikes, and car-pooling for workers in the town's businesses.
- Day-to-day trips in the town – with enhanced amenities and pedestrian and cyclist facilities, more journeys for shopping and other short trips can be done by active travel.
- Innovation such as a bike, e-bike and e-scooter share scheme to stimulate active travel growth.
- Public realm streetscape re-allocation (including bicycle parking etc.).
- A **Modal shift to active travel and public transport** could save **2,229** tonnes of Carbon in Arklow every year by 2030.

(see also Chapter 5 below for Placemaking and Active Travel).

Public Transport Opportunities

- Increase frequency of rail services from the 5 daily rail services serving Arklow on the Dublin-Wexford/Rosslare line.
- On demand / responsive public bus transport services/taxi services within the town.
- Enhanced linkages with Wexford Bus Services.
- Establishment of Specific public bus services (local link) serving the town of Arklow, and potentially increasing the range and frequency of these services if demand increases.

Electric Vehicle Transition 2022-2030

- 90% EV fleet by 2030 (80% BEV & 10% Hybrid).
- Equates to a total of 4,900 EVs in town.
- 3,400 EV charging point installations in households.
- Enhanced Public EV Charging.
- Carbon Reduction of **7,856 t/CO_2eq** by 2030.

Figure 4-9: EV Charging along Avoca River Arklow

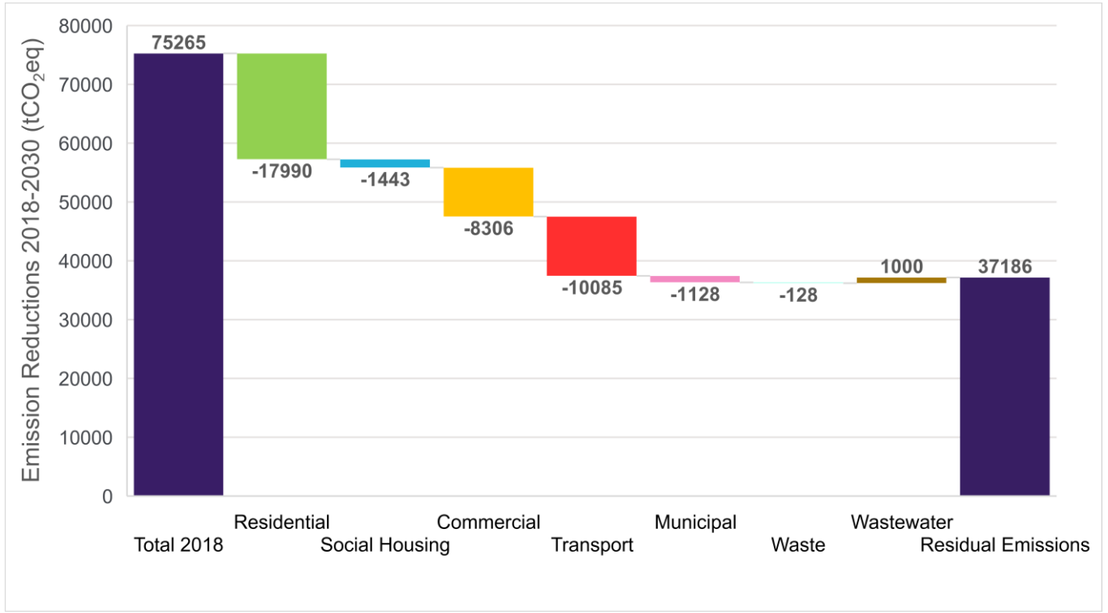


Figure 4-10: 2030 Decarbonisation Targets by Sector

4.7 Decarbonisation Pathway

Arklow's decarbonisation pathway represents a transformational process that delivers long-term emission reductions and sustainable development. To reach these targets the collaboration between the local community, businesses and the municipal authorities is essential.

The combination of actions set out in this chapter combine to achieve the goal of 51% carbon reduction by 2030. The targeting of the residential, commercial and transport sectors are of particular importance as their overall influence on the towns carbon footprint is the greatest.

The goal of the Arklow decarbonisation zone is to reduce the residual emissions of the town from **75,262 tCO_2e** to **37,186 tCO_2e** by 2030**. This will just meet the 51% target set by Government.** The early implementation of these actions can have a huge bearing on the decarbonisation zone success. Regular monitoring of the progress and annual accounting will help ensure that the 7% percent yearly target is reached could result the goal of a 51% CO_2 reduction in the local authority being achieved years in advance as illustrated in **Figure 4-11.**

The goal of a 7% of carbon reduction per year is ambitious but achievable. It's acknowledged that the decarbonisation of the town will not be linear and that there will be many challenges to overcome before the implementation of specific plans can gather momentum. The targets set out have the potential to be surpassed in many areas such as transport if the implementation of active travel initiatives and if EV penetration is as successful as set out by the 'Climate Action Plan (2021)'.

Figure 4:11 illustrates what a consistent reduction of 7% per annual would achieve by 2030, and the momentum that would be needed to achieve close to net zero emissions by 2050.

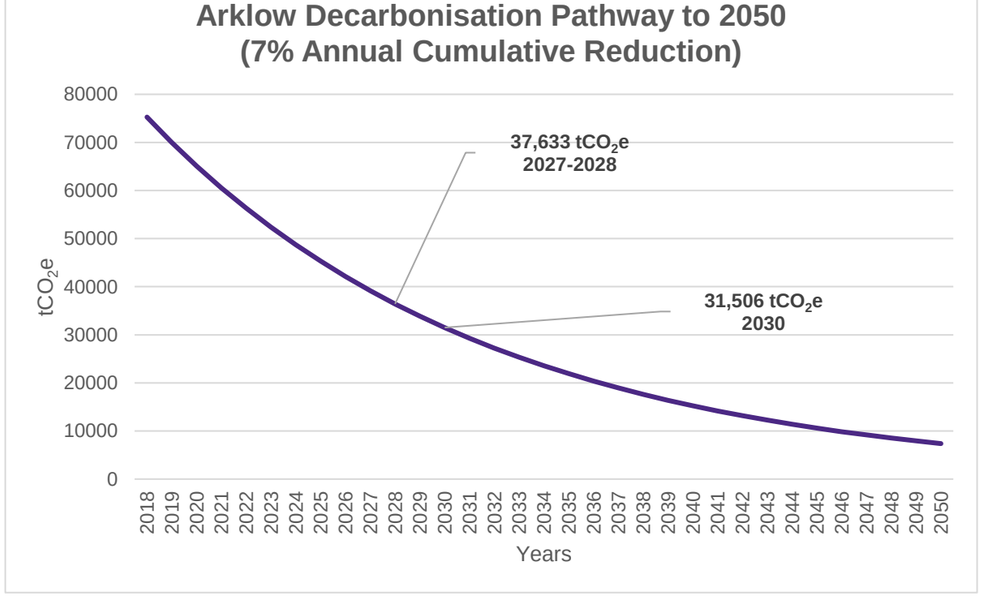


Figure 4-11: Annual Cumulative Reduction on Baseline

5 PUBLIC REALM AND PLACEMAKING

5.1 New growth and development

New growth and development in Arklow should be planned, designed, and delivered based on achieving 'Carbon Negative Growth'. This means development should not only deliver net zero growth and transport outcomes from day one but should contribute to carbon reduction on a wider scale through reducing travel demand, enabling modal shifts and facilitating the switch to cleaner fuels on the existing network. An Active Travel and Placemaking Report was prepared as part of the D7 project. This chapter focuses on some of the emerging actions for inclusion in the D7 project.

5.2 Urban Renewal

Urban renewal will be essential to reduce existing travel demand and redesign existing streets and spaces around active and public transport. It will also be necessary to enable micro-consolidation and low carbon logistics. This change is unlikely to come about through ad hoc development in built up areas, and will instead require a coordinated approach to regeneration, redevelopment and the reorientation of transport networks around sustainable modes.

For the future growth of Arklow this may mean:

- Consolidation and densification of the existing built footprint;
- Concentration of any new development within or directly contiguous with the existing town footprint.
- Reduce vacancy and tackle underuse of upper storeys within the town centre;
- Ensure renewal contributes to the creation of genuinely "mixed" neighbourhoods; and
- Re-enforce the primacy of walking, cycling and public transport in all urban renewal projects.

Figure 8: *Hierarchy of Road Users model*

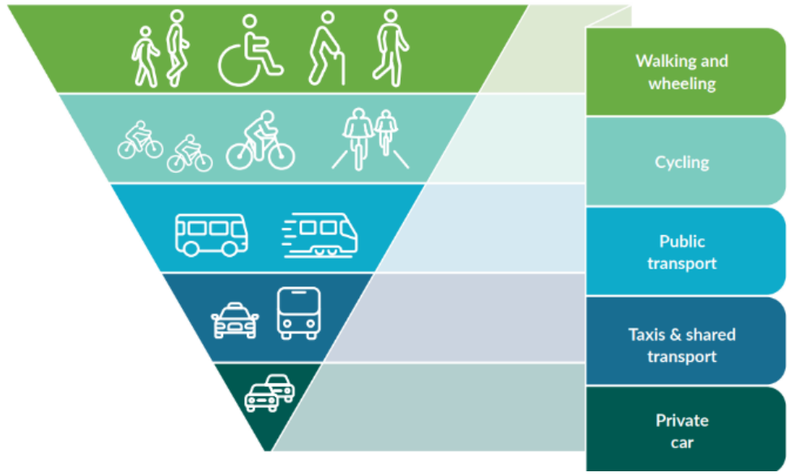


Figure 5-1: Hierarchy of Road Users (National Sustainable Mobility Policy)

5.3 Placemaking

Placemaking is an essential part of the Arklow Decarbonisation Plan. The town has many advantages that must be utilised to deliver the best result for the community. These include:

- The quality of the natural environment, including coastal location and Avoca River contribute significantly to the attractiveness of the town;
- The town enjoys a number of attractive and well used public spaces including Main Street, St. Mary's Park, the River Walk, North and South Quay and Kynoch Park / the Duck Pond on the northern side of the river;
- The Co-working space at Kilbride Industrial Estate increases employment and reduces commuting within the town; and

The improvement of the town itself will naturally contribute to the progression of active travel and decarbonisation in the area. Evidence on links between walking and the physical environment provides clear guidance on the future development of Arklow. It suggests that people walk more in places with mixed land use (such as retail and housing), higher population densities and highly connected street layouts. These urban forms are associated with between 25% and 100% greater likelihood of walking.

Arklow can become a more attractive place to live, work and to socialise with the implementation of the concept of a '15-minute city'. The prioritisation of low carbon travel can transform the town into an example for other towns within the local authority to emulate and become a more appealing place to live and to do business.

Within Arklow there is a challenge to ensure that the mix of uses, density of development and linkages is further addressed. There is a need to ensure the town is a safe, attractive and welcoming urban centre that people want to spend time in. There has been progress made in this realm already in the form of the Arklow Pedestrian and Cycle Improvement Scheme illustrated in **Figure 5-2** and this has provided a template to improve further.

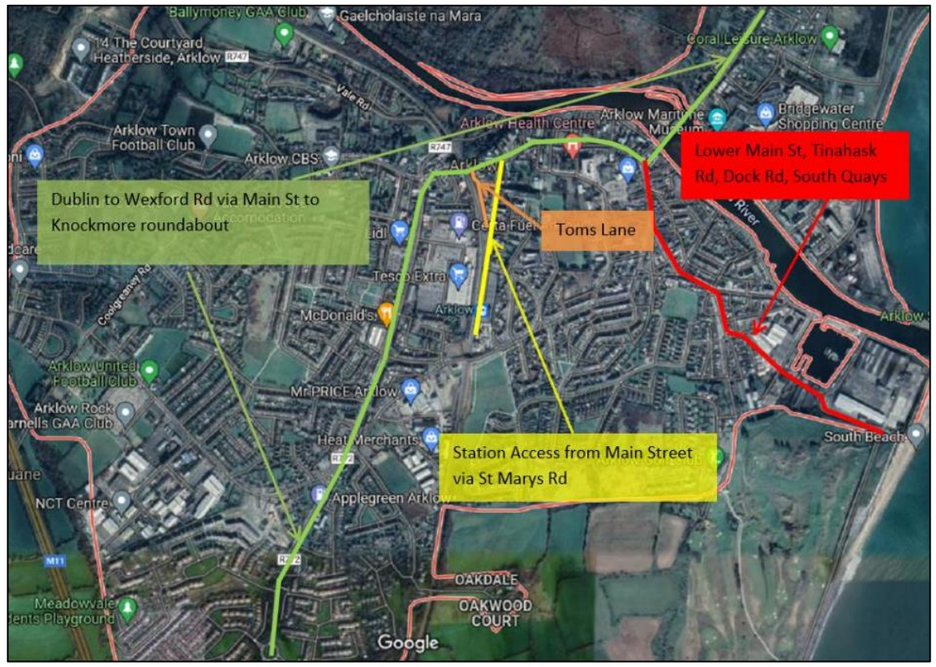


Figure 5-2: Arklow Pedestrian and Cycle Improvement Scheme (WCC)

Three key placemaking projects are particularly recommended. These are:

1- Reimagining of St. Mary's Park and the Bandstand Car Park;

2- Harbour Area; and

3- New Pedestrian / Cyclist Bridge.

5.3.1 St. Mary's Park and Bandstand Car Park

There are several opportunity sites along Main Street identified in the *Arklow and Environs Local Area Plan 2018-2024*, including sites to the east and west of St. Mary's Park and Bandstand Car Park. However, the historic significance of St. Mary's Park, its established recognition by the community as an important civic space, and its central location within the town, warrant consideration for its redevelopment – with the car park to the rear representing a significant placemaking opportunity.

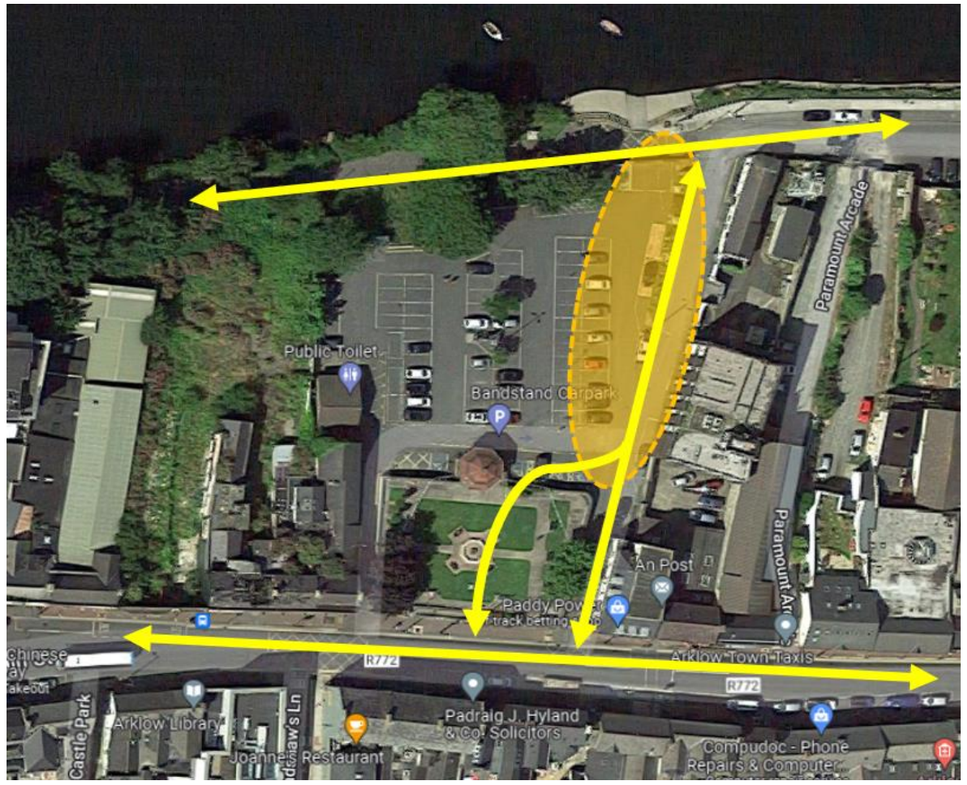


Figure 5-3: Potential Enhanced Pedestrian/Cyclist Links through St. Mary's Park and Bandstand Car Park

St. Mary's Park is already a key urban space in the centre of the town that people can easily identify. The laneways on either side of the park provide access to the riverfront which itself is developing as an active and vibrant amenity with new coffee shops and restaurants opening their doors onto the river walk.

However, given the strategic location of this site, the quantum of space utilised for car parking is considered to be a wasted opportunity. The quality of links on either side of the park are compromised by car movement and the car park itself is a large open space that has no social/amenity use. Furthermore, the link to the river is not particularly legible and there is little understanding, when walking along main street, that there is indeed a way of accessing the riverfront at this location.

While there are plans in place to improve the interface with Main Street (e.g. improved pedestrian crossing, bus stop and pedestrian steps/ramp up to the bandstand) the laneways on either side, and the car park to the rear of the park have potential to be further improved.

It is acknowledged that any improvements will need to address significant site constraints including the varying ground levels and tight vehicular entrances - both of which impact on pedestrian and cyclist accessibility. Another key constraint to consider when progressing proposals is the park's location on the site of a medieval cemetery as this may limit the extent of any proposed excavation works. While these constraints represent significant challenges, it is considered that innovative design can address these issues.

Potential improvements to St. Mary's Park may include:

- Consideration for removing parking spaces to create a larger pedestrianised public space connecting the river to Main Street and creating a more legible and enjoyable pedestrian connection between Main Street and the riverfront;
- Using this space for events such as concerts, exhibitions, farmer's and Christmas markets;
- Provision of a Mobility Hub:
- Improvement of the existing public toilet facility;
- Resurfacing, signage and other measures to emphasis pedestrian priority on laneways (particularly the eastern laneway which connects directly to the river walk);
- Provision of cycle parking, information boards, water fountains etc.;
- Landscaping to enhance biodiversity and improve visual amenity; and
- Provision of a small community garden (for example, as per the top of Castle Park road).

5.3.2 Harbour Area

From a placemaking perspective, Arklow's harbour area has significant potential. Its industrial character and maritime activity draw in people to this amenity area - to walk, run, cycle, exercise their dogs and simply enjoy the seafront. A pop-up style café operates at the harbour and is a further indicator of the attractiveness of this area. South beach is adjacent to the harbour with the dunes and links golf course alongside.

The area is zoned for waterfront development and will be the subject of a URDF application in the future as part of the Arklow Quays Regeneration Project. Links to the harbour will also be improved under the Arklow Pedestrian and Cycle Improvement Scheme.

However, pending the wider redevelopment of the waterfront area, there is potential to undertake more discrete projects that will signal these future improvements and further enhance the planned pedestrian and cycle improvements along Tinahask Lower, Dock Road and South Quay. Such projects may include:

- Provision of a multi-purpose community space for concerts, exhibitions etc. (potentially an enclosed/covered space) with permanent or semi-permanent interpretive signage to highlight Arklow's maritime history and the heritage and significance of the harbour area;
- Development of an identifiable / waymarked looped route along the river to the harbour and South Beach and back via Tinahask and Lower Main Street;
- Provision of pop-up / semi-permanent recreational facilities and amenities – e.g. an 'urban beach', potentially including a seasonal, heated floating pool within the harbour using filtered seawater;
- Improvement of facilities for local clubs (in the short-term providing additional storage facilities if required);
- General landscaping including raised planters to enhance biodiversity and improve visual amenity for low cost / high impact. There is also potential for provision of community gardens in this area, or even small allotments in raised beds;

Figure 5-4: 'Badeschiff' Seasonal Floating Swimming Pool in Berlin

5.3.3 Pedestrian/Cyclist Bridge

The 19 Arches Bridge is currently the only crossing of the River Avoca in Arklow. This stone arch bridge provides the only link between the southern (main) part of the town with Ferrybank to the north. While the bridge has pedestrian footpaths on both sides of the carriageway, there are no dedicated provisions for cyclists and the bridge is heavily trafficked at peak times.

Figure 5-5: The 19 Arches Bridge

There are significant future development areas located to the east of the bridge, on both sides of the river, on lands currently zoned for 'waterfront' development. While there are other lands identified for development within the *Arklow Local Area Plan*, the central location of the waterfront areas provides an opportunity to develop a more sustainable, compact urban form and should therefore be prioritised over lands zoned on the periphery of the town.

The provision of a pedestrian / cycle bridge to the east of the 19 Arches Bridge would link these development areas and be a great benefit in linking the amenities on the northern coast with Arklow harbour and south beach. A crossing between these future development areas is also identified by the TTA in the *Draft Transport Strategy for the Greater Dublin Area 2022-2042* which seeks to ensure a permeable cycle network.

It is considered that the initial steps in establishing the feasibility of a crossing for pedestrians and cyclists to the east of the 19 Arches Bridge should be progressed.

Figure 5-6: Potential Location for Pedestrian/Cyclist/Biodiversity Bridge

An innovative design would allow small boats and other pleasure craft to continue to pass and access the existing berths on the northern bank. There would also be an opportunity to use the new bridge to connect a biodiversity corridor through Arklow – linking the north and south beaches.

It is understood that there has also been some consideration within WCC for a potential crossing to the west of the 19 Arches Bridge. For example, a potential extension from St. Mary's Park or a link from designated opportunity sites such as the former cinema on Main Street to link to Arklow Marsh on the northern side of the river. These crossings would primarily serve as recreational links. Notwithstanding this, any additional crossing of the river would have significant benefits for the town.

5.4 The 15-minute neighbourhood

The '15-minute neighbourhood' (sometimes referred to as the 15-minute city or the 20-minute town) is one of the foundations upon which net zero transport networks can be built. The concept has become increasingly prominent since its inclusion in Melbourne's long term planning strategy in 2018, and its adoption by the Mayor of Paris, Anne Hidalgo, in February 2020.

The defining characteristic of the '15-minute neighbourhood' is that people can live locally and meet most of their daily needs within a 15-minute walk or cycle from their home. This includes, for example, access to places of work, schools, grocery shopping and places to socialise and exercise. The ability to live locally in this way reduces both the number and length of journeys made daily, resulting in significant carbon savings. It also creates the conditions for healthier, happier communities and delivers significant travel time and cost savings.

Walking and cycling become the natural choice for short trips, facilitated and encouraged by redesigned streets and public realm that prioritises community wellbeing and the movement of people over the movement and parking of private cars. Increased levels of walking and cycling contribute to better physical outcomes and improved mental health, while providing more opportunities to spend time in green space reduces the risk of anxiety and depression. The ability to access everyday needs within the local area also contributes to the creation of more equitable and inclusive communities by removing the transport barriers to jobs and services faced by

people without access to a car, and who often live far from the services upon which they rely. The 15-minute neighbourhood accords with the road user hierarchy prioritising pedestrian and cycle movement set out in the *National Sustainable Mobility Policy* recently published by the Government of Ireland.

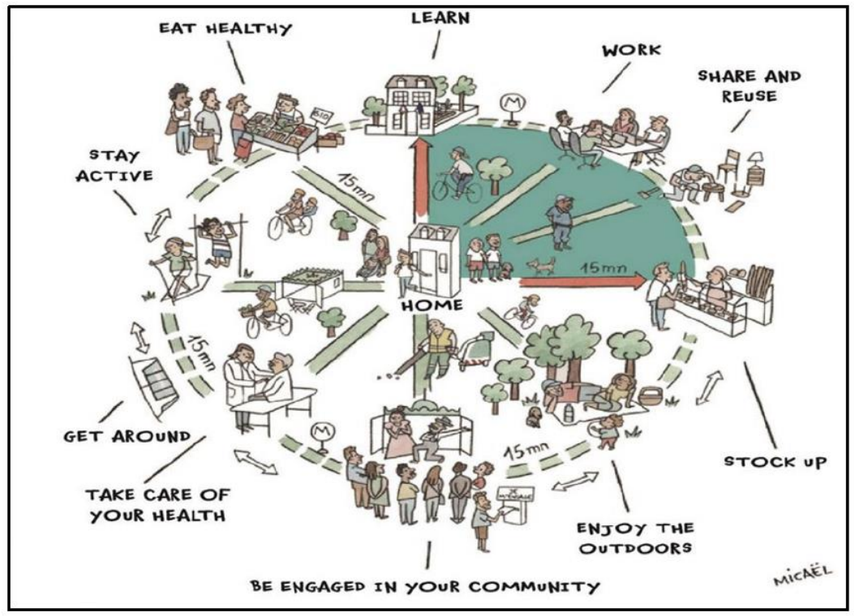


Figure 5-7: 15 Minute Town Concept

While local living is the key tenet of the 15-minute neighbourhood, providing access to affordable, integrated public transport and new forms of shared mobility such as e-Bikes, e-Scooters and EV car clubs is also important. This ensures that sustainable modes are a viable and attractive option for the medium and longer distance journeys that are responsible for most surface transport emissions. Higher density mixed-use development supports the viability of these transport networks, but the form, scale and appearance of 15-minute neighbourhoods is not entirely prescriptive and there is the potential for a town such as Arklow to function largely as a 15-minute town.

To strengthen further the status of the town as a 15-minute neighbourhood the following principles should inform town growth and development:

- New development should focus on areas within 15-minutes of the town centre;
- Key trip attractors should, in so far is possible be located in the town centre;
- Targeted enhancements of the pedestrian and cycle network should be undertaken within the town which will reduce journey time;
- There is a need for the integration and enhancement of public transport; and
- Micromobility (bicycles, e-bikes and e-scooters) should be promoted.

5.4.1 Walking

The eastern portion of Main Street is currently being redeveloped with the Court House being renovated and improvements to the public realm at Parade Ground – with a potential extension to St. Mary's Park. The remainder of Main Street (i.e. Lower Main Street) is to be redeveloped under the Arklow Pedestrian and Cycle Improvement Scheme. In this regard, the interventions in the Main Street and town centre are appropriate and no specific recommendations are proposed as part of this travel plan and placemaking study.

Improving existing links between Main Street and the surrounding streets may include upgrading Condren's Lane Upper, Paramount Arcade, the Coomie and the streets on either side of St. Mary's Park. These will all improve access to the riverfront and improve amenity. To the south, improvements may include upgrading Abbey Lane in particular.

Abbey Street has the potential to connect to Old Abbey Park and, via this park, to the large main car park on Castle Park Road / Laffin's Lane – providing a more direct link between this very important car park and the notional town centre. In all cases, these lanes are difficult to identify and can easily be passed without knowing they are there. Improving legibility is key.

Other routes that would benefit from and improved pedestrian experience include connections to the Train Station. While the Arklow Pedestrian and Cycle Improvement Scheme will improve St. Mary's Road/Station Road and Tom's Lane, there is potential to upgrade Griffith Street and Connolly Street.

There is also significant potential to improve the pedestrian link alongside St. Mary's College grounds to Castle Park where the current laneway lacks passive surveillance and does not feel safe to walk through at night.

Improvements to these key streets and connections may include:

- Footpath widening to improve the pedestrian experience and safety.
- Reduction of visual clutter (unnecessary signage) / improvement of directional signage.
- Improvement of directional signage (adopting a coordinated approach across the town).
- Improved seating opportunities.
- Improved public lighting.
- Consideration for removing some on-street parking spaces to repurpose for pocket parks / outdoor dining etc. ('parklets').
- Provision of water fountains.
- Landscaping to enhance biodiversity and improve visual amenity (consider providing planters in former on-street parking spaces).
- Improved public toilets.

5.4.2 Cycling

Cycle Lanes

All cycle lanes that have been identified in the Cycle Network Plan for the GDA should be implemented, with priority given to those identified under the Arklow Pedestrian and Cycle Improvement Scheme.

Cycling Infrastructure

The provision of secure bicycle parking proximate to key destinations is crucial to the promotion of cycling as this reduces journey time and addresses concerns regarding bicycle security. The following are recommended:

- Provision of additional cycle parking facilities at all key destinations;
- Provision of high profile cycle parking facility of increased visibility and attractiveness);
- Improvement of directional signage;
- Provision of bicycle counters at location(s) of highest usage (provides data and promotes usage / visibility of cycling); and
- Public bicycle repair/maintenance stations

While cycle share schemes are associated with cities there are examples of such schemes working in smaller urban centres. The move towards stationless cycle share schemes has assisted this.

The use of e-scooters is burgeoning and as greater legislative certainty around their use is provided through the enactment of the Road Traffic and Roads Bill 2021 there is expected to be a significant role for shared e-scooters. The following are recommended:

- Investigate further the roll out of a bicycle share scheme in Arklow; and
- On completion of the legislative process investigate further the roll out of an e-scooter share scheme in Arklow.

Figure 5-8: 15-Minute Cycle (left) and Walking (right) Isochrone for Arklow

5.4.3 Integration of Sustainable Travel / Placemaking Measures

The recommendations above can be delivered in a co-ordinated way to deliver very visible markers of the transition to zero carbon within Arklow. The provision of a mobility hub can integrate some or all of the following:

- Bicycle stands.
- Bicycle repair/maintenance station.
- Bicycle and/or e-scooter sharing.
- Charging facility for e-scooters..
- Fast charging car station.
- Car sharing.
- Public space.

The bundling of sustainable transport provisions has practical benefits in facilitating intermodal connectivity, cost benefits in delivery and raises visibility of the shift to more sustainable transport modes.

The provision of mobility hubs, initially in the town centre, is recommended.

6 ENGAGEMENT AND PARTNERSHIP

6.1 Stakeholder Engagement Plan

The success of the Decarbonisation Zone depends on creating a motivated and active local community, with projects that are driven by local champions, and achieving a sense of local ownership and pride.

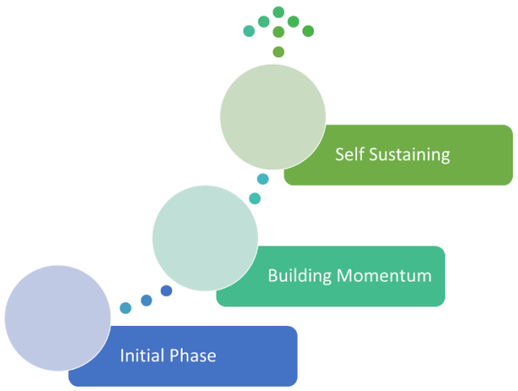


Figure 6-1: Building momentum through engagement.

In the initial stages, bringing people on board and raising awareness takes effort and investment of resources. This means having people in place who can communicate and engage with local residents and businesses. It also means taking a creative approach to gaining peoples interest and inviting them to come forward and get involved.

As momentum builds, the project moves more into implementation of projects, which naturally increases levels of interest and support. As more people get involved, and success stories are achieved, a momentum will build behind the overall project.

Eventually, a successful programme will have a strong sense of ownership among the people of Arklow, and the initiatives and projects that are developed will sustain participation and involvement.

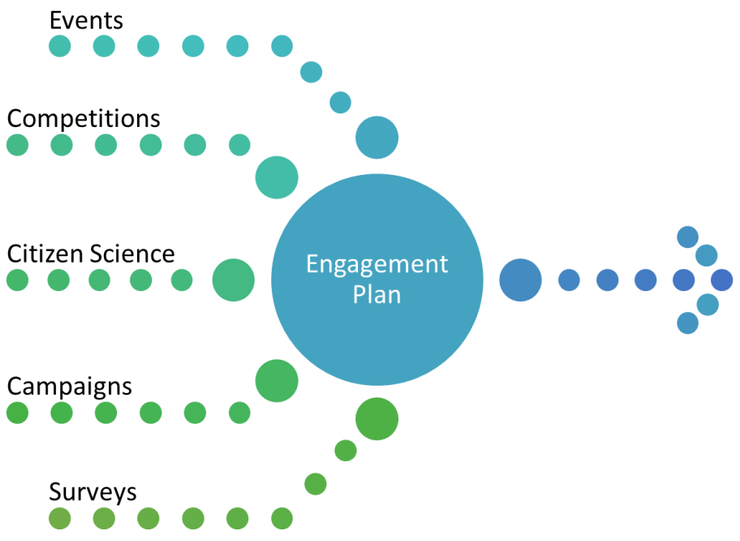


Figure 6-2: Examples of tools that can be used as part of the engagement plan.

Figure 6-3: Engagement events and initiatives drawn from the EU Green capitals programme

An early action for Wicklow County Council in leading implementation will be to develop an **Engagement Plan** for the project. This plan will draw on the initial feedback from stakeholders already coming forward (see Chapter 2) but will go much further to enable dialogue and stimulate participation. The proposed approach to engagement will evolve over time as momentum grows.

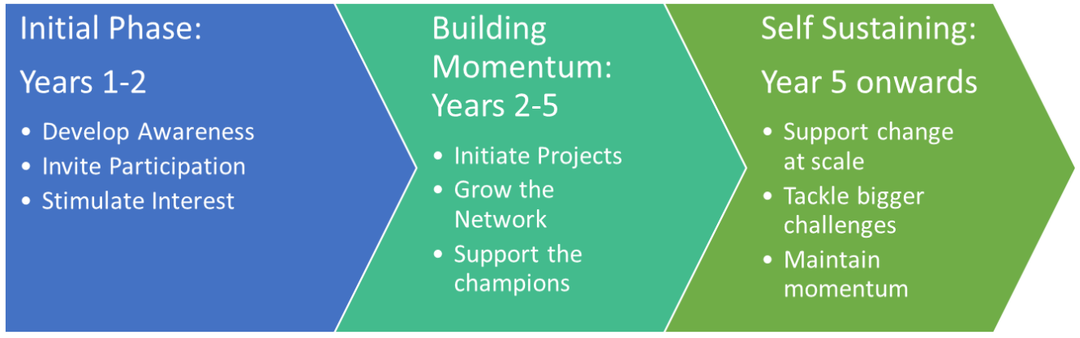


Figure 6-4: Evolution of the Engagement Plan as the Decarbonisation Zone develops.

Engagement activities will be focussed on the citizens of Arklow and the community groups, businesses and other key sectors such as schools and sports groups. But there is also a wider role for the decarbonisation zone, which will provide leadership for all of County Wicklow. Some projects or activities might be suitable for the wider catchment of the town, the Arklow Municipal District, or for the entire county.

Figure 6-5: Engagement can happen in a variety of places and spaces

Left : Coastal Observation and Seabird Survey (COASST) volunteers tag a sooty shearwater on the coast of Washington state, USA. Right: Volunteers at the 'Tool Library' in Ashville, North Carolina, USA.

Figure 6-6: Summary of approach to engagement.

6.2 Partnerships

Rather the 'going it alone', Arklow will benefit from building partnerships and collaboration in its decarbonisation journey. Project partners will enable greater momentum and provide energy, support and funding towards implementation.

Community Groups:

Initial stakeholder engagement carried out in early 2022 has identified a number of local group already engaged in climate action and willing to help deliver the decarbonisation plan. Community groups are already concerned with local improvement, and often are focussed on environmental improvement. Because they typically have an established network, organisational skills and a track record of achieving results, creating partnerships with these groups is very important for making the DZ a success.

Clubs:

Existing clubs in Arklow – for example sports such as GAA, soccer, tennis, sailing –have an active membership base and will also be interested in how the club itself can reduce energy consumption – e.g. in the club house or operations - and contribute to climate action. They can develop their own initiatives or form successful partnerships with other groups or with companies.

Business:

As well as collaboration with the Chamber of Commerce, initiatives that engage the business community will be essential. For example, the larger employers in the town have a significant carbon footprint, and energy efficiency initiatives will lead to carbon reduction. More importantly, partnership can engage the workforce in these companies – for example in active travel to work, in voluntary activities – and be effective in mobilising action.

Individual businesses may also consider co-funding projects or competitions.

CARO – Climate Action Regional Office

Ireland's four CARO offices assist local authorities in the region to drive climate change action locally and to lead by example. CARO will be in a position to provide advice, support and help develop expertise and help Arklow forge other partnerships in the drive for decarbonisation.

National bodies and agencies

Already partnerships are working to improve Arklow: for example the Green Schools Programme is led by An Taisce and is making a positive difference for environmental awareness among pupils in Arklow's primary and post-primary schools. The National Transport Authority is working with Wicklow County Council to build new cycle-lanes and improve public transport. The Sustainable Energy Authority of Ireland (SEAI) is supporting renewable energy and retrofitting projects, as well as supporting groups such as the Arklow SEC.

There will be further opportunities to work closely with bodies such as the EPA, Inland Fisheries Ireland, Irish Water and many other bodies on projects that meet Arklow's aims, but also contribute to addressing challenges at national level.

Research/ innovation bodies:

Because the decarbonisation Zone will explore innovative ways to transform the town for the better, there is an opportunity to partner with third level colleges (or other research institutes). Such bodies bring some technical experience and can help design interesting projects or campaigns. They are skilled at developing surveys and assessing information. A further benefit is the potential to form part of wider research programmes at national or international level, which opens up not just a learning opportunity but potential for funding.

Partnerships with other leading towns across Ireland

Arklow will be one of a number of 'leadership towns' for climate action across Ireland. Portlaoise is designated as a 'low-carbon demonstration town'. Other towns of a similar scale as Arklow will be facing similar challenges. Some partnership or information sharing with these towns has potential to pay dividends.

International opportunities

Arklow has already developed international partnerships by being twinned with both Aberystwyth in Wales and Châteaudun in France. Building on these partnerships in the field of climate action is another possibility that can be explored.

7 COMMUNICATIONS

7.1 Developing a Communications Plan

Citizen engagement will be the backbone of the successful decarbonisation project. Having an effective communications strategy will be essential to reach into the community, in order to develop support and enthusiasm that will be necessary to transform the town.

Wicklow County Council will develop this communications plan. The communications plan will complement the engagement strategy described in the previous chapter. The more projects, events and initiatives that take place, the greater the opportunity to reach deeper into the community and gather further support and encourage even more participation.

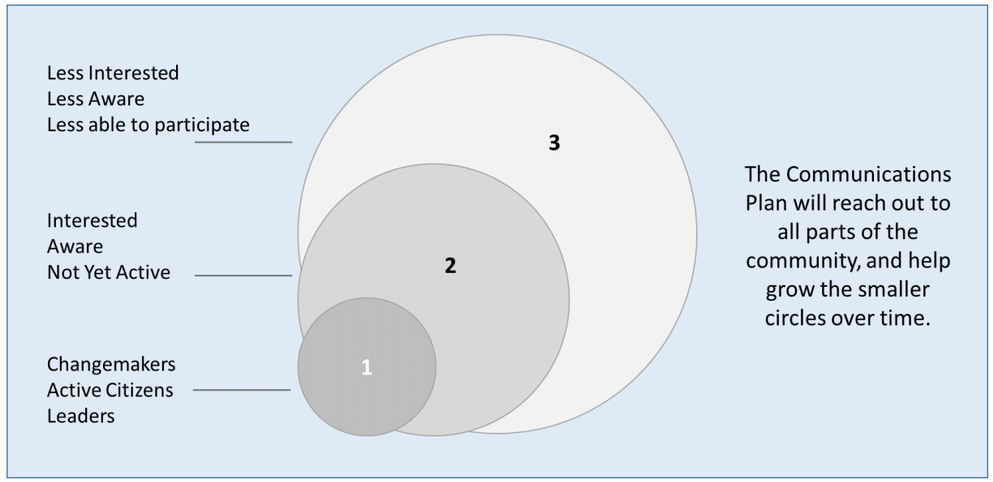


Figure 7-1: Communicating with different audiences

- The primary audience for communication is the citizens of Arklow (encompassing homes, business, community groups etc.)
- The DZ will be a beacon for the whole county and beyond, so a wider audience also has to be addressed.
- On a practical level, it is important that within Wicklow County Council itself there is effective communication of the DZ project goals, structure and its progress.
- Communication with supporting bodies such as government departments and agencies such as the Climate Action Regional Office (CARO) and the SEAI is also important, so that progress is celebrated.

7.2 Starting Point: defining the identity of the Arklow Decarbonisation Zone.

There is an opportunity to create a new and unique identity or 'brand' for the DZ project. This will be unique to the town and will capture people's attention both visually and in how it sounds. Successful programmes from other towns around the world put their own 'stamp' on the project, and Arklow will do the same. The technical term 'decarbonisation zone' will gradually give way to this new unifying identity.

This new brand will unify support for the scheme and be owned by all stakeholders and participants.

Figure 7-2: Examples of local Climate Action Plan identity

7.3 Communications Channels

Finding the best channels to communicate with stakeholders in the town (and in the wider community of County Wicklow and beyond) is important. A combination of traditional and new channels will be used. There is no magic formula: the Arklow Forum can advise on preferred communications channels as the DZ project gains momentum. Innovation and creativity can be used to achieve a high impact in a cost effective way. For example, partnerships with local schools, charities, business or communities of faith is a potential way to reach into a new audience and stimulate awareness and participation.

Figure 7-3: Examples of different Communications Channels

8 TOURISM AND THE DECARBONISATION ZONE

Given its rich heritage, beautiful setting and natural amenities, the tourism potential of the town is largely untapped. Improvements in water quality from the new WWTP can be a pivotal moment for reinvigorating the town as a destination for day-trips and holiday makers. The DZ project can work in tandem with tourism

- Greater footfall in the town centre and waterfront
- Desire to enjoy the beaches, river and amenities
- Eco tourism opportunities: coastal projects, marsh, and heritage

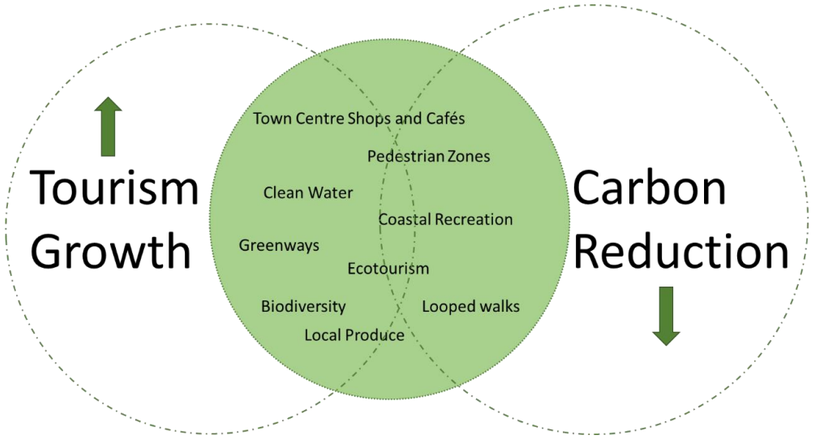


Figure 8-1: Developing tourism in tandem with reducing carbon

Pedestrian zones, cycleways, coastal walkways and looped walks, greenways: all of these facilities attract tourists and benefit townspeople as well. They will reduce the transport related carbon footprint of the town.

As tourism grows, it can also add to the carbon footprint, by consuming more energy and resources. The community can anticipate and manage this, by developing tourism around a low-impact theme e.g. by:

- Accommodation: Hotels and guest houses: investing in energy reduction and adopting sustainable practices and certification. Enabling EV charging.
- Transport: enticing visitors who arrive by train or bus and encouraging walking and cycling to explore the town. Making public EV charging points available.
- Mobility: developing bicycle hire and other low carbon transport options, open to visitors
- Food: encouraging locally sourced food and seasonal menus
- Food waste: adopting a zero-food waste goal in the town's restaurants and cafés
- Litter: prioritising good practice: reusable rather than disposable packaging

Tourism bodies and planners will form part of the overall DZ Forum. Arklow's sustainability and low-carbon town theme needs to permeate all marketing material, websites and brochures.

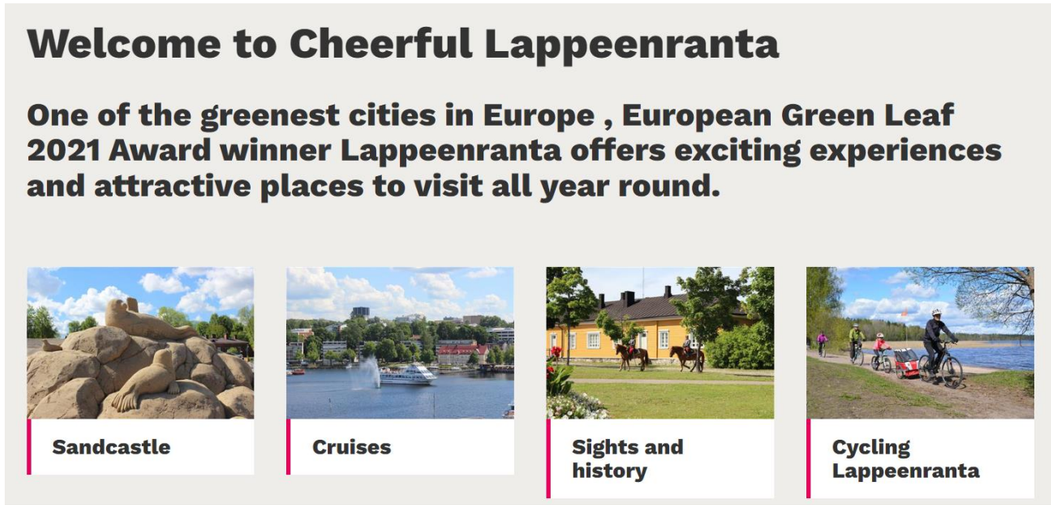


Figure 8-2: Examples of tourism and climate action synergy in a green town.

https://www.visitlappeenranta.fi/en

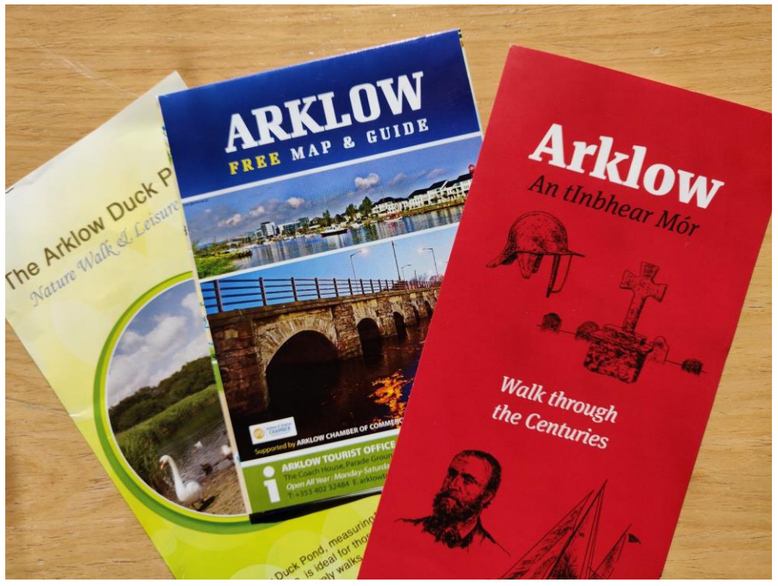


Figure 8-3: Some existing tourism guides for Arklow

9 LEADERSHIP AND GOVERNANCE

This chapter indicates how the Implementation Plan will be made a reality, by creating a suitable governance model and setting out the role of Wicklow County Council in leading the project.

9.1 WCC Commitment

Wicklow County Council will provide leadership.

The Council will support the town as it takes on the climate action challenge.

How will we do that?

- Initiating discussions and bringing groups together
- Identifying funding options and assisting with applications
- Reporting on progress and celebrating success
- Prioritising climate action with WCC activities and services
- Communicating with the community to encourage participation

WCC will lead by implementing climate action projects in areas where it has direct responsibility and control.

9.2 WCC Implementation Structure

In order to support the town, the following structure is proposed:

WCC Climate Action Team

Role – upward: strategic: co-ordination across directorates: liaise with CARO and Dept.

Delivery aspects: local support, marketing, events, stakeholder liaison, etc.

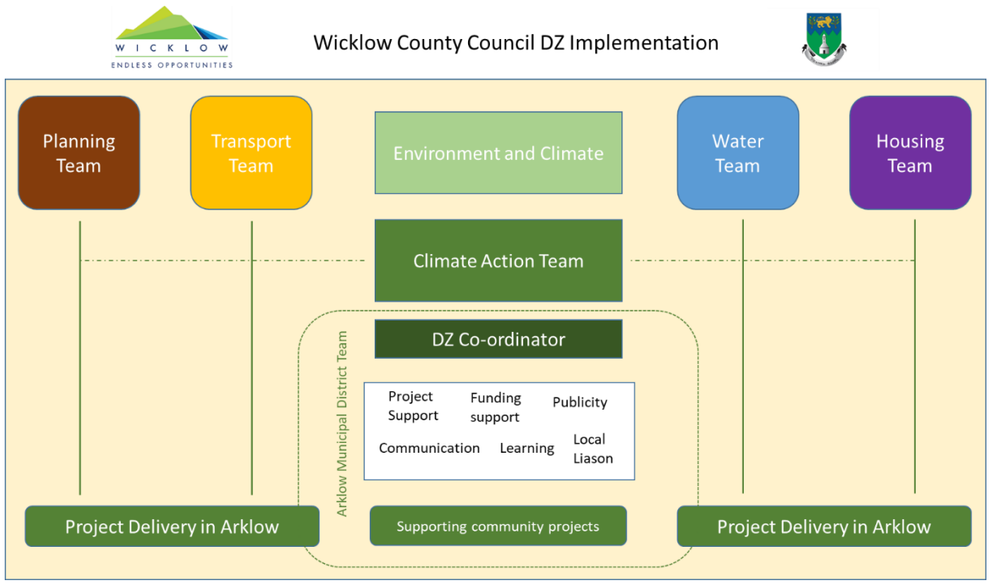
Core Team – how it will be organised, structured, and resourced.

Our Own Projects

Projects under the responsibility of Wicklow County Council actions will be delivered through the existing teams in housing, transport, etc. An example will be carrying out the retro-fitting of social housing in the town that is owned by the Council. The Climate Action Officer can play a support and co-ordination role so that the focus on the DZ is maintained and actions are co-ordinated.

Project Support Team

WCC will create a point of contact based in the Arklow MD office, by appointing a Project Team to coordinate the DZ implementation activities. This team will act as a pivot for the multiple DZ activities, including activating projects and development and delivery of the engagement and communication plan. The role will include creating new partnership and assisting local groups to access relevant funding. This team will be led by a Project Co-ordinator. Funding of such a team from central resources is anticipated under the Climate Action Plan 2021.



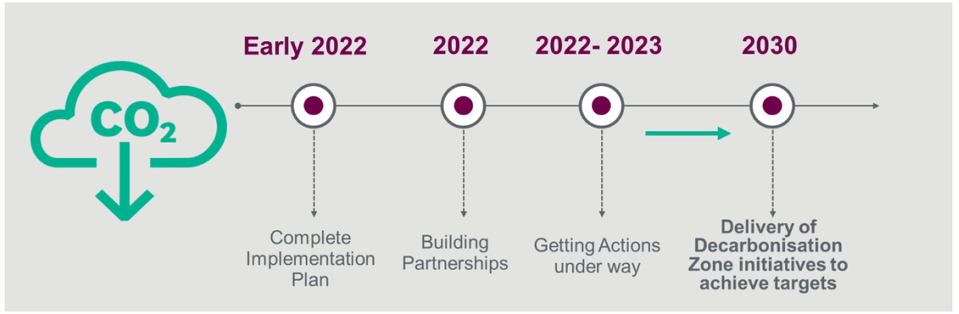
9.3 Governance at Community Level

Success of the DZ will rely on community ownership and engagement. In order to empower the community to embrace the challenge and to take responsibility, a new collaborative structure is proposed: the Arklow DZ Forum.

The forum will create a structure to bring together the people who will lead the town forward: sustainable energy communities, biodiversity champions, business and industry, the education sector and other community groups (both existing and new).

With Wicklow County Council in the role of convenor and co-ordinator, the proposed forum will:

- Meet quarterly to advance the DZ goals
- Co-ordinate actions, and seek ways to collaborate on projects
- Review progress and help define the strategic direction of the DZ project
- Build knowledge and share experience
- Identify what resources the participants need to support implementation



DECARBONISATION ZONE IMPLEMENTATION

9.4 Planning and the Decarbonisation Zone

Forward planning has a huge role to play in making Arklow a low carbon town.

The heart of a sustainable town is a compact and vibrant town centre. Compact development – making best use of the existing built footprint of the town – is a key aim of our National Planning Framework.

With a new wastewater treatment plant in place from 2024 onwards, new opportunities and demand for development will open up in Arklow. The planning system will influence the location and form of this development.

The decarbonisation zone will embrace the following:

- Refurbishing empty and underutilised buildings
- Creating regeneration projects for suitable parts of the town – for example around the docks
- Planning for district heating networks and low carbon heating systems – particularly in the vicinity of proposed Data Centres.
- Enabling connections, pathways and permeability that encourage walking and cycling
- Encouraging circular building and construction design solutions
- Identifying zero carbon neighbourhoods
- Requiring biodiversity protection and enhancement

Revision of the current Arklow Local Area Plan (2018-2024) will be required to incorporate the DZ programme. This will enable development of a comprehensive and co-ordinated local planning policy with low-carbon objectives.

9.5 Implementation and Monitoring

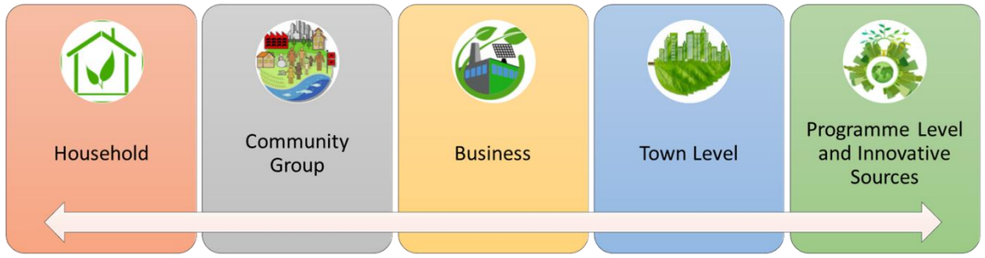
The figure opposite indicates that DZ planning and preparation will continue during 2022, including building more partnerships across the town and with other stakeholders. Action will get underway in earnest in 2023. A monitoring and reporting plan, identifying key performance metrics, will be developed to enable progress to be mapped.

10 FUNDING ARKLOW'S TRANSITION

10.1 Supports available to Households, Communities and Businesses to help the transition towards a decarbonised town

This section sets out the range of funding supports, grants and schemes that are available to Arklow and its stakeholders through various institutions. There are a range of supports, grants and funding streams available to households, public sector bodies, research agencies and community organisations that can help in realising a wide array of different projects that can aid in Arklow realising its ambition. Businesses, including commercial enterprises, non-governmental/not-for-profit entities, SMEs and sole traders are also well served by funding streams to either aid their own transition to becoming a carbon-neutral entity, or to fund research and innovation into technologies that can be scaled up to provide solutions, potentially on a European level. The section highlights that funding for decarbonisation projects, regardless of the scale, is available to all members of society, from corporate businesses and state agencies, through to community action groups and individual households.

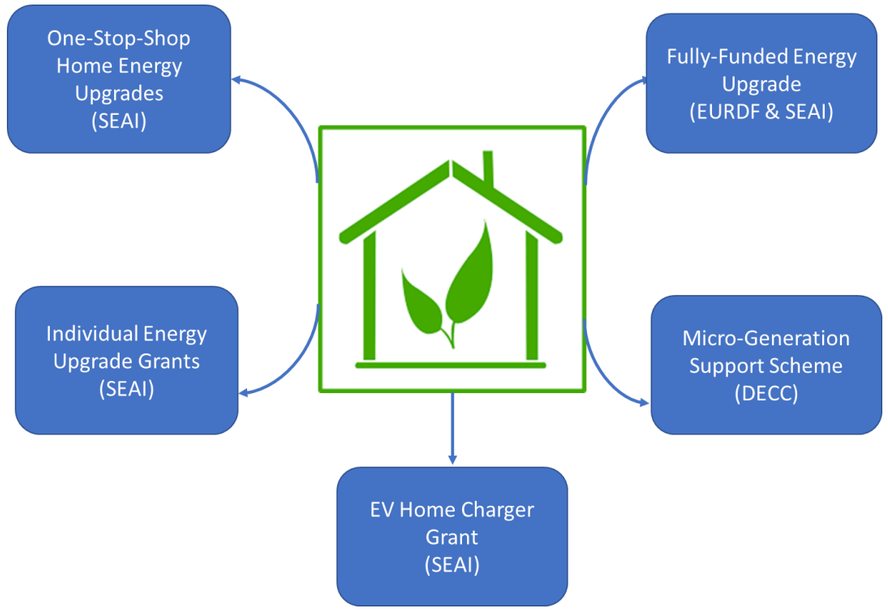
The following section presents an outline of potential funding streams at different scales, representing those available at households, businesses, community groups, Town, and programme level which can potentially offer pathways and solutions for Arklow and its stakeholders. Appendix A outlines a further detailed, non-exhaustive list of potential avenues for receiving grant aid that can help businesses, communities, and individuals.



10.2 Funding Streams for Households

Funding for households is typically focused on home energy retrofitting and upgrading to ensure the highest possible levels of energy efficiency are achieved from the domestic dwelling. The SEAI provide grants for either individual energy upgrades, or a suite of supports for a more comprehensive package of upgrades.

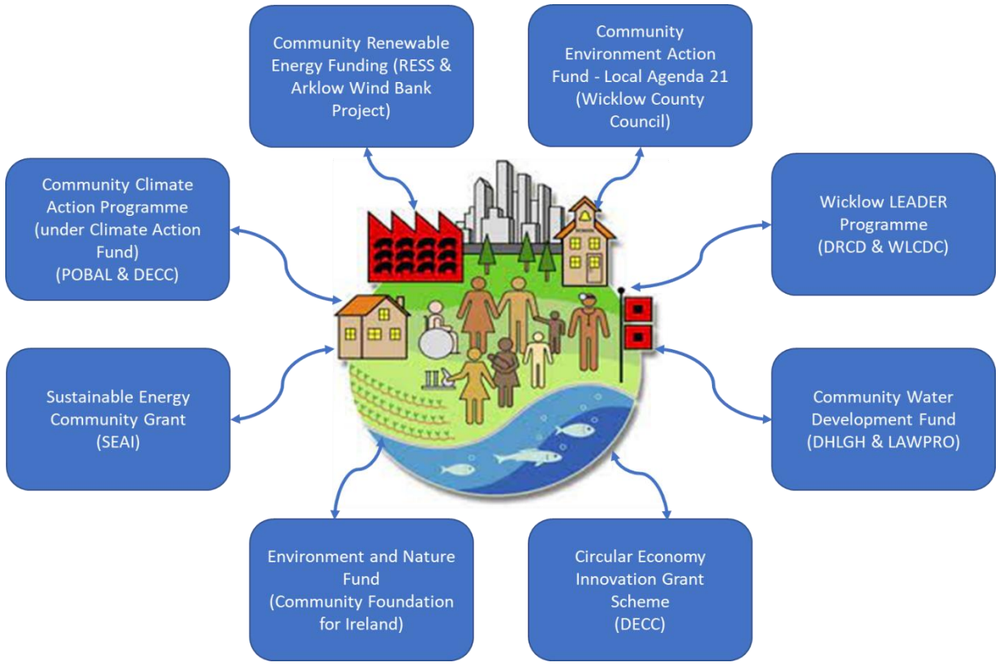
The Micro-generation Support Scheme offers households and businesses the opportunity to generate an income, via a Clean Export Guarantee (CEG), through selling excess electricity generated from a renewable source back to the electricity grid, regardless of what energy provider they have a supply contract with. Innovative supports schemes such as the MSS, coupled with retrofit and energy supply upgrade grants provided by the SEAI present an opportunity for households within Arklow and nationwide to improve their domestic energy efficiency whilst having the required capital costs associated with this transition alleviated through various grants.



10.3 Funding Streams for Community Groups

As Ireland moves forward on a renewable energy pathway, the role of local communities is increasingly important, and it is recognised that community groups and organisations can play a leading role in transforming their town. Funding is available from various sources and local authority, national and international level to ensure that community groups who have a desire to pursue change and develop projects in the area of climate action, sustainable energy development, circular economy, and environmental improvements can be funded and facilitated.

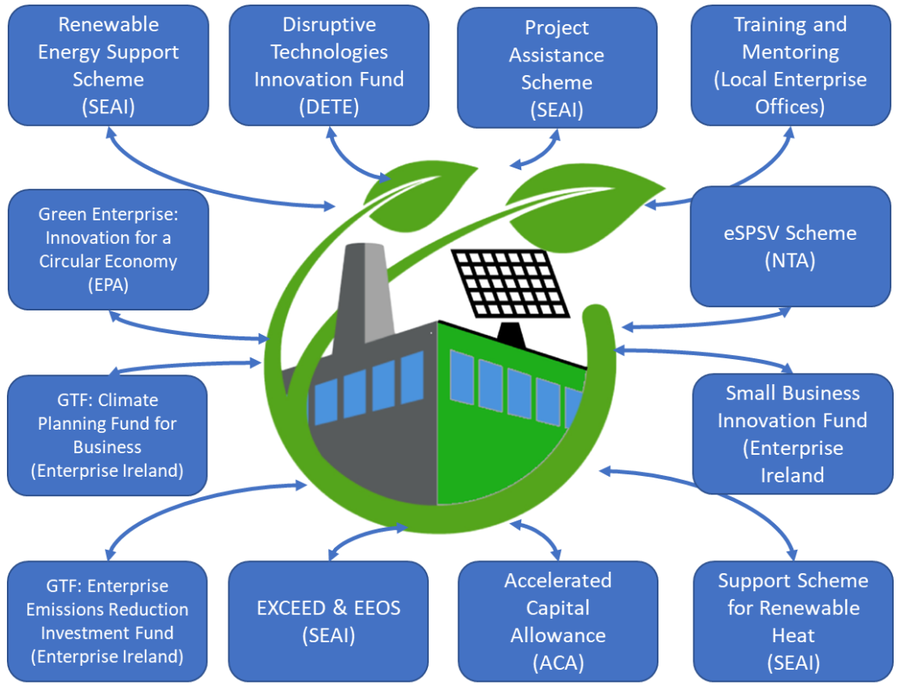
The Arklow Wind Bank project and Renewable Energy Support Scheme (RESS) present community group and project funding opportunities for Arklow. A key feature of the Arklow Wind Bank Project is to provide a Community Fund once the project is operational, for communities throughout Wicklow and north Wexford. A key feature of the RESS is that a Community Benefit Fund must be established and used for the wider economic, environmental, social and cultural well-being of the local community.



10.4 Funding Streams for Business

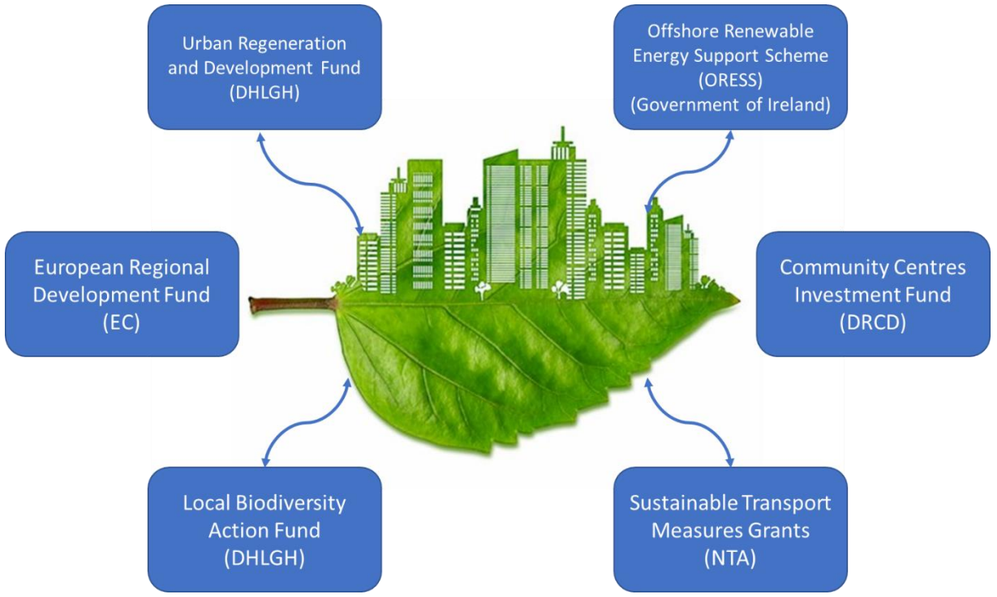
The transition to low carbon has become a defining force for business. The transition represents challenges for commercial enterprises, but it also presents opportunities. As such, the funding streams available for businesses reflect both these challenges and opportunities. The Green Transition Fund (GTF), which is part of Ireland's National Recovery and Resilience Plan (NRRP) and which is funded by the European Union helps businesses make a plan particular to their company to give them clarity on what exactly needs to be done, whilst also offering investment support in implementing those changes.

Similarly, businesses are provided with support to innovate and develop potential solutions to the climate change crises. Investment funds such as the Disruptive Technologies Innovation Fund and the Green Enterprise: Innovation for a circular Economy fund ensure that businesses have the opportunity to become a driver of change towards a more sustainable environment. These funding streams for businesses are supported by Skillnet Ireland who, through their Climate Ready programme, help offer leadership and skills support for enterprises who want to develop their operational and strategic sustainability.



10.5 Funding Streams at Town Level

The sustainable development of towns such as Arklow as it transitions into a DZ is very important to ensure that social, economic and environmental goals of the town are realised. There are various funding streams available to Arklow and Wicklow County Council at National and European level which can help it decarbonise. For example, Sustainable Transport grants available from the NTA, alongside public realm improvement grants that can could from the URDF can help ensure Arklow becomes a town that is less reliant on cars whilst becoming a safer, healthier, and more friendly place to live and do business. As part of the discussion around the Arklow Wind Bank project, the Government are currently determining the parameters for a Community Fund for offshore wind (ORESS). When this new funding stream comes online, it will likely be transformative for Arklow and other coastal communities in Wicklow and north Wexford.

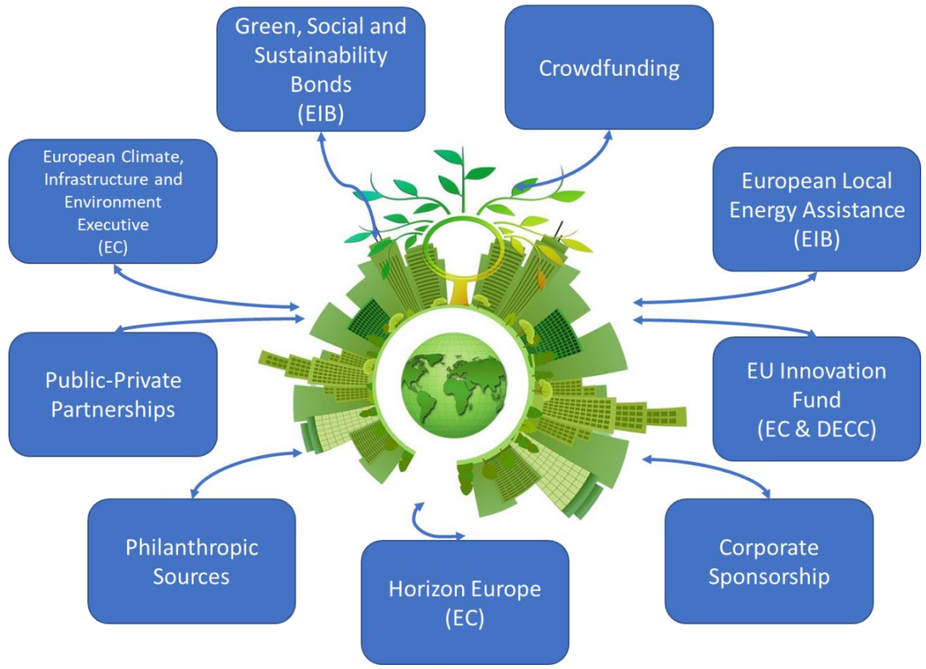


10.6 Programme Level and Innovative Funding Streams

Funding and environmental programmes establish at National and European level are very important for providing a structure and framework for the future development of Arklow as a DZ. The scale of funding available from European programmes such as Horizon Europe and the EU Innovation Fund, allow Arklow and Wicklow County council to scale up the ambition for what is possible for the town.

Sustainable financing methods outlined in the European Investment Bank ensure that large sums of capital are available for large scale projects which may be of interest. Sustainable Investment and banking directives such as the Corporate Sustainability Reporting Directive are directing private sector investment into more green and sustainable projects, particularly at large scale.

Innovative and novel funding sources, such as Corporate Sponsorship and partnerships (e.g 'Now' Dublin Bikes), crowd funding, and philanthropic sources can help bridge funding gaps and develop innovative programmes that can aid the decarbonisation plans for Arklow.



Appendix A
Funding Resources

Funding Recipient	Funding Channel Name	Source	What is entailed	Process	Scale (max value)	Relevance to Arklow
Business	Green Enterprise: Innovation for a Circular Economy	Environmental Protection Agency (EPA)	Businesses with 'business ready' innovative concepts to apply Circular Economy Principles	Periodic call for Application (Annual)	Medium (max €100k)	Support for local innovation businesses develop circular solutions in product and service design, production, distribution and use of resources.
Business	**Green Transition Fund**: Climate Planning Fund for Business (CPFB)	Enterprise Ireland	CPFB replaces the Climate Enterprise Action fund. Provides financial support programmes to businesses going green, including: Climate Action Voucher; GreenStart grant; GreenPlus grant; Strategic Consultancy	Available on application (subject to certain criteria)	Small to medium (€1.8k - €50k)	Various funding mechanisms under the CPFB target companies of different sizes and at different stages of engagement in their decarbonisation journey
Business	**Green Transition Fund**: Enterprise Emissions Reduction Investment Fund	Enterprise Ireland	Fund supports capital investment and research, development and innovation, typically aimed at larger SMEs and manufacturing companies. Various programmes within the fund, including; **Capital Investment for Energy Monitoring & Tracking (EM & T) Systems**; **Capital Investment for Decarbonisation Processes**; **Innovation Vouchers; Exploring Innovation Grant**; **Research and Development Grant**; **Agile Innovation Grant**	Available on application (subject to certain criteria)	Small to large (€5k - €1m)	The Enterprise Emissions Reduction Investment Fund is targeted at companies of different sizes and stages of engagement in their decarbonisation journey: to put in place energy monitoring systems, thereby establishing the carbon footprint of their enterprise; to make investments in decarbonising their manufacturing processes; and to support Research, Development and Innovation (RD&I) in low carbon products and processes
Business	Excellence in Energy Efficiency Design (EXCEED) Grant	Sustainable Energy Authority of Ireland (SEAI)	EXCEED promotes energy efficiency in business and can help fund the energy-efficient design of heating, cooling, refrigeration, compressed air and business processes.	Available on Application	Large (up to €1m)	The program aims to influence and deliver new best practices in energy efficient design management and is suitable for all types of business at all scales.
Business	Accelerated Capital Allowance (ACA)	SEAI	ACA is a tax incentive scheme that allows a sole trader, farmer, or company that pays corporation tax in Ireland to deduct the full cost of energy-efficient equipment from their profits in the year of purchase	Normal self-assessment tax provisions apply	Small to Large (subject to register of items)	ACA is suitable for all size of company, as it is a tax incentive scheme that allows a sole trader, farmer, or company that pays corporation tax in Ireland to deduct the full cost of energy-efficient equipment from their profits in the year of purchase

Funding Recipient	Funding Channel Name	Source	What is entailed	Process	Scale (max value)	Relevance to Arklow
Business	Support Scheme for Renewable Heat	SEAI	The SSRH can help your business adopt renewable heating systems by providing grants for air-source heat pumps, ground-source heat pumps and water-source heat pumps	Available on application	Installation grant funding of up to 30% alongside operational support for up to 15 years based on useable heat output	The scheme helps bridge the gap between the installation and operating costs of renewable heating systems and fossil fuel alternatives, and is open to commercial, industrial, agricultural, district heating, public sector and other non-domestic heat users.
Business	Electric SPSV (eSPSV) Scheme	National Transport Authority (NTA)	If you own a small public service vehicle (SPSV), such as a taxi or a hackney, you may be eligible for the eSPSV scheme to get a grant towards the cost of a new, full battery eSPSV	Available on application	Medium (up to €25k)	The eSPSV Scheme provides funding to help convert existing public service vehicles into electric models, potentially de-carbonising the fleet and reducing emissions
Business	Training and Mentoring programmes	Local Enterprise Offices	There are training and mentoring supports to help develop better sustainability awareness and practices in your business, including**; Green for Micro**; **Climate Ready**; **Water Conservation for Business**; **SEAI Energy Academy and Energy Show**	Available on application (typically for micro-companies)	Free	A range of training, upskilling and mentorship programmes aimed at sole traders and micro-companies (<10 employees) aim at providing support and information for them to help act in areas such as the circular economy, climate adaptation and mitigation, water conservation and energy efficiency
Business	Project Assistance Scheme	SEAI	Grants offer to businesses and public sector bodies who are seeking to develop and achieve significant energy savings and build good procurement practices.	Currently Closed (revised version, the Energy Contracting Support Scheme to be announced in 2022)	Medium (€15k - €37.5k	This grant can assist some of the larger organisations to reduce their energy costs, enhance their image and improve their competitiveness by identifying and targeting energy efficiency upgrades.
Business	Disruptive Technologies Innovation Fund (DTIF)	Department of Enterprise, Trade and Employment (DETE)	Aimed at research organisations, multinationals, and SMEs, the DTIF seeks to inspire enterprise participation in the development of disruptive technologies.	Periodic call for Application	Large (minimum funding of €1.5m)	The fund drives collaboration between research base and industry, and focuses on the manufacturing sector, ultimately looking to alter markets, the way businesses work, and develop new products, employment and business models
Business	Small Business Innovation Research (SBIR)	Enterprise Ireland	The SBIR enable public bodies to purchase research to stimulate innovation when goods or services are currently not available in the marketplace	Periodic call for Application	Small to Medium	The SBIR is a highly competitive three-phase award system which provides qualified small business concerns with opportunities to propose innovative ideas that meet the specific research and development needs of the public sector.

Funding Recipient	Funding Channel Name	Source	What is entailed	Process	Scale (max value)	Relevance to Arklow
Business	Irish Aid Enterprise Fund for International Climate Action (EFICA)	Department of Foreign Affairs (DFA)	EFICA intends to provide grand funding to Irish companies, researcher and NGOs, working alone or as part of international partnerships, for climate related activities in developing countries which have a commercial or enterprise focus, and aims to promote the mobilisation of private finance for climate action.	Available on Application	Small to large (max grant €300k)	This fund is suitable for businesses and NGOs in Arklow who are working the climate change sector in developing countries.
Business - Farming	Financial supports for sustainable farming	Department of Agriculture, Food, and the Marine (DAFM)	There are various financial supports available for sustainable farming, including; Results Based Environment Agri Pilot Programme (REAP); Woodland Support Fund; Green, Low-Carbon, Agri-Environment Scheme (GLAS), Organic Farming Scheme; Targeted Agriculture Modernisation Schemes (TAMS); Organic Processing Investment Grant Scheme; Smart Farming Programme	Available on application (subject to certain criteria)	Small to large (dependent on scheme and land holding)	There are various schemes and supports available to small, medium, and large farmers to help them on their way to becoming more environmentally friendly practices. These range from grants for upgrading machinery to more eco-friendly machinery, to helping promote organic food production and provide payment to farmers to help tackle climate change, preserve biodiversity, protect habitats, and promote environmentally friendly farming.
Business & Community	Renewable Energy Support Scheme (RESS)	SEAI	The RESS is designed to promote investment in renewable energy generation throughout Ireland, alongside helping to deliver increased renewable technology, diversity and community ownership and partnership.	Periodic call for auctions	Large (€100k +)	A key feature of the RESS is that a Community Benefit Fund must be established and used for the wider economic, environmental, social and cultural well-being of the local community.
Community & Not-for-profit	Community Climate Action Programme (Under Climate Action Fund)	Department of Environment, Climate, and Communications (DECC) & POBAL	Support to empower communities to share and build low carbon, sustainable communities in a coherent way. **Strand 1** issued directly to Local Authorities to support communities. **Strand 2** focuses on Climate education, capacity building, and learning by doing	Periodic call for Application	Medium to large (€50k - €500k)	Build capacity and know-how within Arklow to develop low carbon communities and engage in climate action
Community Groups	Community Environment Action Fund - Local Agenda 21	Wicklow County Council	A fund which promotes sustainable development at a local level by funding small scale, non-profit environmental projects which make a difference in local communities	Periodic call for Application (Annual)	Small (<€5,000)	Support for small scale local community group projects which focus on environmental awareness around topics such as waste, biodiversity, water conservation and climate change.
Community Groups	LEADER Programme Funding	Dept of Rural and Community Development (DRCD) & Wicklow Local Community Development Committee (LCDC)	The LEADER programme helps rural communities across the EU to actively engage and to direct the local development of their area through community-led local development	Available on Application	Small to large (€5k - €200k)	The LEADER Programme accepts applications based on a wide range of projects, including projects which improve local biodiversity and renewable energy.

Funding Recipient	Funding Channel Name	Source	What is entailed	Process	Scale (max value)	Relevance to Arklow
Community Groups	Community Water Development Fund	Department of Housing, Local Government, and Heritage (DHLGH) & Local Authority Waters Programme (LAWPRO)	The Community Water Development Fund supports community groups to enhance the quality of local streams, rivers, lakes, and coastal areas.	Periodic call for Application (Annual)	Small to medium (€500 - €25k)	The Community Water Development fund provides access to funds for improvements to be made allowing the Arklow Avoca Riverwalk and harbour areas
Community Groups	Sustainable Energy Community Grant	SEAI	The SEAI Community Grant supports energy efficiency community projects through capital funding, partnerships, and technical supports, which in turn supports the upgrading of homes, community buildings and businesses across Ireland to become more energy efficient.	Available on Application	Small to large	Community Grants are desired for projects which have multiple elements, a mix of sustainable solutions, and innovative and ambitious and present justified energy savings, and therefore presents a way for providing multiple benefits for a town such as Arklow.
Community Groups	Environment and Nature Fund	The Community Foundation for Ireland (CFI)	The CFI is providing grant funding for community groups to engage an ecologist and develop a Community Biodiversity Plan (CBP) for their areas.	Currently Closed (call for applications)	Small to medium (€5k - €10k)	Grant support available for community groups in Arklow to engage the services of an ecologist to develop a community biodiversity plan.
Community Groups & Business	Circular Economy Innovation Grant Scheme (CEIGS)	DECC	Support innovation and demonstration CE projects by social enterprises, voluntary and community organisations and SME's <50ppl	Periodic call for Application (Annual)	Medium (€10k - €50k)	Support for innovative CE business, charity or community group projects
Household	Individual Energy Upgrade Grants	SEAI	Individual energy upgrade grants available, including grants to upgrade attic insulation, wall insulation, heating controls, heat pump, solar thermal and solar PV.	Available on application (subject to certain criteria)	Up to 80% of the cost of the upgrade for a typical family home	This option would suit homeowners and landlords who choose to manage their own home energy upgrade from planning to grant applications and facilitates a quick turnaround which can rapidly make a difference.
Household	One Stop Shop Home Energy Upgrade	SEAI	The One Stop Shop offers homeowners all the services required for a complete home energy upgrade allowing for registered private operators to develop fully managed solutions, navigate a wider range of grants where the grant values are deducted upfront from the cost of works, and provide project management services that minimise disruption.	Available on application (subject to certain criteria)	Up to 50% of the cost of a typical family home upgrade	The One Stop Shop is suitable for homeowners and landlords who want a fully managed solution which provides multiple energy upgrades which can achieve a minimum B2 BER.
Household	Micro-generation Support Scheme (MSS)	DECC	MSS is a government support scheme which provides a range of supports to assist households to develop renewable energy for self-consumption whilst also establishing a framework which introduces payments to micro-generators for exported electricity – a Clean Export Guarantee (CEG) tariff.	Available on Application	Grants available for installing micro-generation technology and income based on quantity of electricity exported	Arklow residents can avail of financial incentives to install micro-generation renewable technology which can simultaneously reduce home operational costs

Funding Recipient	Funding Channel Name	Source	What is entailed	Process	Scale (max value)	Relevance to Arklow
Household	Fully Funded Energy Upgrade	European Union Regional Development Fund (EURDF) & SEAI	The Fully Funded Energy Upgrade is aimed at qualifying homeowners in receipt of certain welfare benefits, and where their homes meet certain criteria in terms of age and energy performance.	Available on application (subject to certain criteria)	Free (subject to certain criteria)	The Fully Funded Energy Upgrade is aimed at qualifying homeowners in receipt of certain welfare benefits, and where their homes meet certain criteria in terms of age and energy performance.
Household	Electric Vehicle Home Charger Grant	SEAI	A government funded support scheme assisting residents and homeowners to install an EV charge point on their property	Available on application (subject to certain criteria)	Small (Up to €600)	Opportunity for residents to claim up to €600 towards the purchase and installation of an electric vehicle home charger unit
Programme Level	European Local Energy Assistance (ELENA)	European Investment Bank (EIB)	ELENA is a joint initiative by the EIB and the EC under the Horizon 2020 programme. It provides supports to public and private operators under three different sectors - Energy efficiency, sustainable residential, and urban transport and mobility.	Available on Application	Large Scale (>€30m)	ELENA provides an opportunity to access funding for various programmes which can contribute to the improvement of Arklow, including public lighting energy efficiency upgrades etc.
Programme Level	EU Innovation Fund (IF)	DECC	The Innovation Fund provides around €10bn of support up to 2030 for the commercial demonstration of innovative low-carbon technologies, aiming to bring to the market industrial solutions to decarbonise Europe and support its transition to climate neutrality. It focuses on highly innovative technologies, big flagship projects, innovative low-carbon solutions, and small-scale projects that can bring on significant emission reductions.	Periodic call for application	Large Scale (dependent on call)	IF provides Arklow with the opportunity to leverage its position to develop innovative and flagship projects that can help the town on its decarbonisation journey.
Programme Level	Horizon Europe (previously Horizon 2020)	European Commission (EC)	Horizon Europe is a key funding programme for research and innovation, focusing on tackling climate change, helping to achieve the UN's Sustainable Development Goals, and boost the EU's competitiveness and growth.	Funding and Tender Streams open	Small to large scale	Support further innovation in Arklow in terms of climate change and UN's Sustainable Development goals.
Programme Level	European Climate, Infrastructure and Environment Executive (CINEA) (formerly EASME)	European Commission (EC)	CINEA is the EU's focal point for green projects in Europe and plays a key role in supporting the EU Green Deal through the efficient and effective implementation of its delegated programmes across the climate and environment, energy, transport and mobility, and maritime sectors.	Ongoing calls for proposals and tenders	Small to large scale	CINEA offers potential funding stream covering a wide variety of sectors, and is available to all bodies, public and private

Funding Recipient	Funding Channel Name	Source	What is entailed	Process	Scale (max value)	Relevance to Arklow
Programme Level	Climate Awareness Bonds (CABs), Sustainability Awareness Bonds (SABs), and Green, Social and Sustainability Bonds (GSS)	European Investment Bank (EIB)	Proceeds from CABs are allocated to projects that contribute substantially to climate change mitigation, currently in the fields of renewable energy, energy efficiency, low-carbon transport and innovative low-carbon technologies. SAB proceeds are allocated to projects that contribute substantially to environmental and social objectives beyond climate change mitigation	Subject to investor demand	Large Scale	Large scale and transformative climate-related projects which require significant capital investment can raise funds through the issuance of bonds via the EIB
Town Level	URDF (Urban Regeneration and Development Fund)	DHPLG	Support compact growth and sustainable development of Ireland's cities and large urban centres. Major regeneration projects such as public realm improvement, parks and town upgrade	Periodic call for Application	Large (€888 - €***)	Suitable for major projects such as regeneration of Arklow Docks, or Town Centre Public Realm Upgrade
Business	Energy Efficiency Obligation Scheme (EEOS)	SEAI	The EEOS allows energy suppliers or distributors who sell large amounts of energy, to offer supports to make homes or businesses more energy efficient. By offering supports to make a home or business more efficient, and for every unit of energy saved through these projects, they achieve energy credits towards their targets.	Available on application (through the energy supplier)	Small (<10k)	As the Arklow Bank Wind Farm are able to receive energy credits for assisting in homes and businesses upgrading their homes through improving insulation, glazing, and heating.
Town Level	Community Centres Investment Fund	Department of Rural and Community Development (DRCD)	This fund will provide funding for the improvement and refurbishment of existing community centres in both urban and rural areas.	Periodic call for Application (closes July 14th)	Small to large (€10k - €30k)	Community Centre Investment fund can help fund the retrofitting and upgrading of community centre to make it more energy efficient and cheaper to run.
Town Level	Local Biodiversity Action Fund	DHLGH	The Local Biodiversity Action Fund supports locally led projects that align with actions under the National Biodiversity Action Plan and supports the national rollout of the Biodiversity Officer Programme.	Available on Application (to County council Biodiversity or Heritage Officers)	€1.5m available nationally for 2022	The Local Biodiversity Action Fund offers funding to assist local authorities in the implementation of actions in the National Biodiversity Action Plan, which offers potential for biodiversity improvements in Arklow.
Town Level	Offshore Renewable Energy Support Scheme (ORESS)	DECC	ORESS is an important enabler of offshore renewable electricity (wind) development which will play a major role in securing a supply of sustainable electricity for homes and businesses all over Ireland and enable the country to meet its climate goals.	Available through Auction (tbc)	Large Scale	The ORESS will contain a Community Fund element, which is yet to be determined. Arklow Wind Bank Phase 2 will establish a fund which will be used for the wider economic, environmental, social and cultural well-being of the local community.

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Town Level	Sustainable Transport Measure Grants and Active Travel	NTA	Developing high quality walking and cycling facilities will encourage more people to switch to active travel and will contribute to tackling climate change	Available on Application	Large Scale (€500k+)	Providing active travel opportunities for residents of Arklow can help combat climate change, bring communities closer together and make walking and cycling attractive, safe and accessible for all