

Chapter 9: Critical Infrastructure

Strategic Aim:

To facilitate the timely provision of infrastructure and utilities that will support sustainable socioeconomic growth and protect the quality of the environment of the town in a low carbon manner.

9.1 Introduction

The sustainable, consolidated and coherent growth of Edenderry is dependent on the satisfactory provision of critical infrastructure associated with:

- Movement and Connectivity;
- Water, Wastewater, Flooding and Drainage;
- Energy and communications; and
- Waste and Recycling.

9.2 Movement and Connectivity

Edenderry has sprawled out in its pattern of growth. The use of the private car is the predominant form of transport for trips and therefore supporting and facilitating a modal shift to sustainable transport options must be a priority over the next Plan period. The Plan, in accordance with national guidelines, will also require that at design stage, employment, education, residential and mixed-use developments consider pedestrian movement and the provision of cycleways and associated facilities.

The Sustainable Transport Strategy chapter (Chapter 8) in the County Development Plan examines county level data on modal split and identifies the need to reduce the reliance on the private car by promoting and facilitating more sustainable modes of transport and supporting the integration of land-use and transportation that would reduce the need to travel. The Council seeks to promote sustainable mobility including walking, cycling and public transport, in order to create a sustainable low carbon settlement pattern. The benefits of sustainable mobility are set out below in Figure 9.1. It is also important that Edenderry maintains good transportation linkages to surrounding urban and rural areas, which is a contributing factor to its sustainable growth.

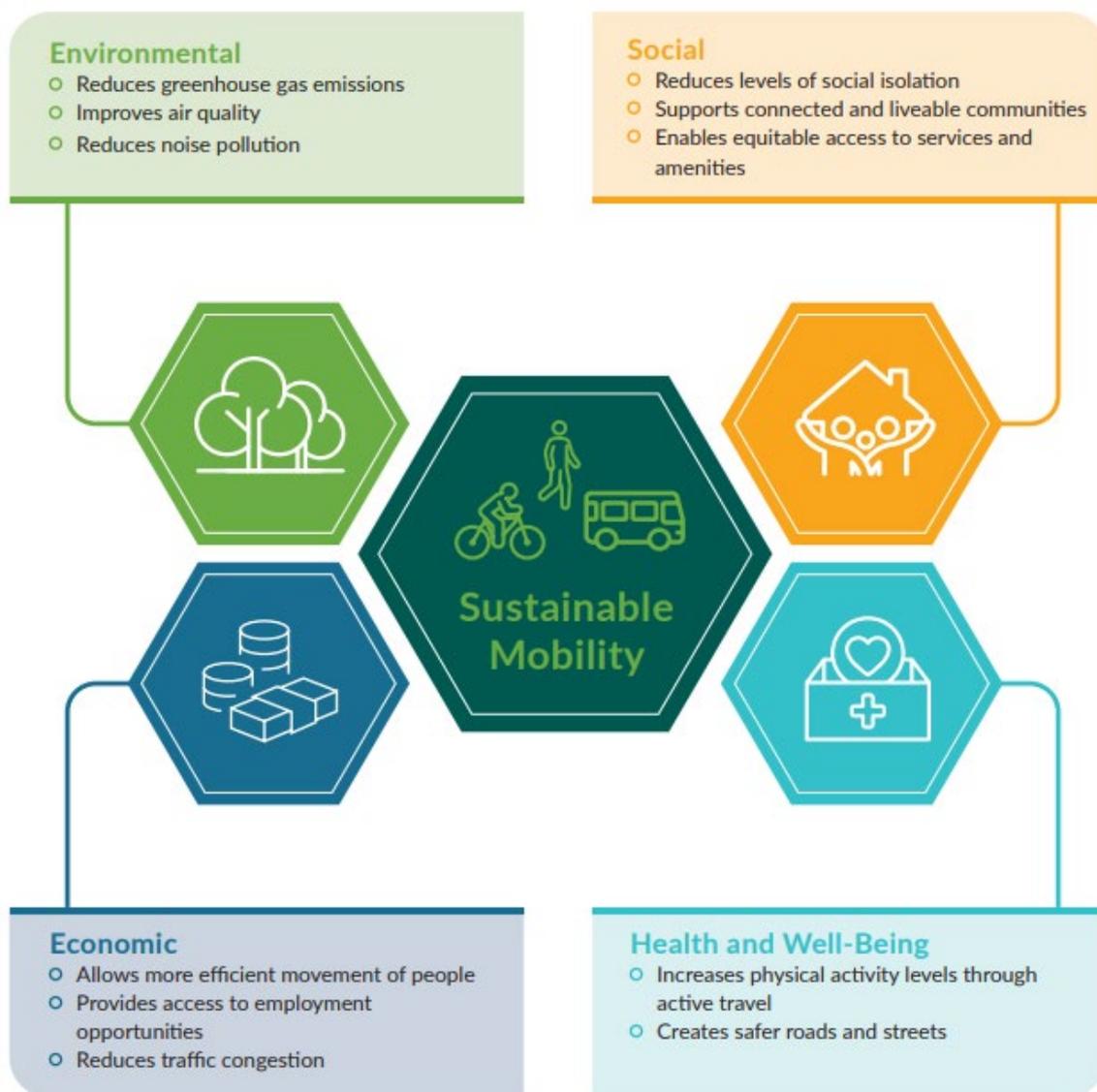


Figure 9.1 Benefits of Sustainable Mobility (Source: National Sustainable Mobility Policy, 2022)

The approach to achieve a more sustainable transport sector is based on the Avoid-Shift-Improve principle and implementing measures to:

- **Avoid:** Reduce the frequency and distance of trips.
- **Shift:** Move towards more environmentally friendly modes of transport, such as walking, cycling or using public transport.
- **Improve:** Promoting efficient fuel and vehicle technologies.

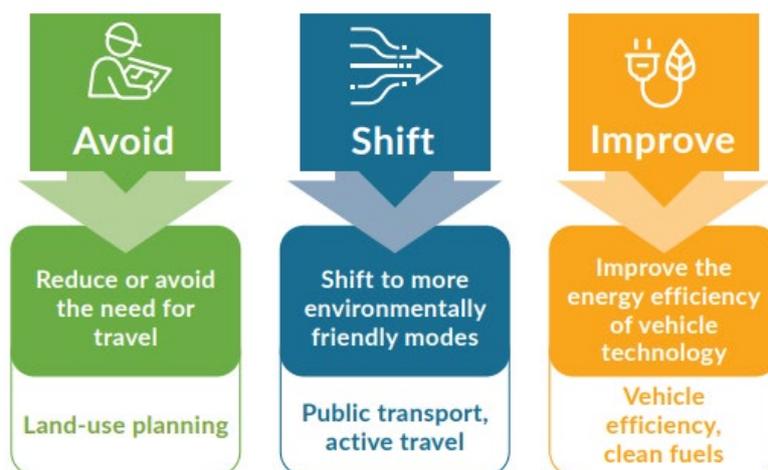


Figure 9.2 Avoid-Shift-Improve Principle (Source: National Sustainable Mobility Policy, 2022)

9.2.1 Local Transport Plan

As part of the preparation of the Local Area Plan, a Local Transport Plan (LTP) was undertaken, which forms part of this Local Area Plan in Appendix 2, and which has assisted in placing sustainable transport considerations to the forefront of land use planning decisions in the formulation of the Local Area Plan.

The LTP examined the existing and proposed transport infrastructure and service provision across all modes of transport, including active modes (walking and cycling) in the town. The assessment provides an insight into the existing transport patterns and constraints in Edenderry and also identifies the interventions that are required to effectively accommodate the anticipated increase in demand due to planned population growth, ensure the optimal transportation interventions can be planned, and drive a shift towards sustainable movement.

The outputs of the LTP include a series of proposed measures to improve the transport network of the town and have informed the contents and policy objectives of this Chapter. These proposals also include measures designed to ensure the integration of areas designated for new residential development in the town, with particular reference to developing active and sustainable modes of travel. The LTP sets out modal share ambitions also.

9.2.2 Mode Share

The Design Manual for Urban Roads and Streets (DMURS) advocates the internationally recognised 'pedestrian first' Hierarchy of Roads Users model to encourage more sustainable travel patterns and safer streets. This model recognises that by prioritising design for pedestrians first, the number of short journeys taken by car can be reduced and public transport made more accessible. DMURS recognises that the need for more walkable communities is also an issue of social equity as it is the poorest and most vulnerable in society, including children, older people and people with disabilities for whom car travel is less of an option.

Section 8.4 of the Offaly County Development Plan 2021-2027 addresses modal share within the county. Appendix 1 of the Offaly County Development Plan 2021-2027 titled Transport Modal Shift provides a list of all references to modal shift in Volumes 1 and 2 of the County Development Plan.

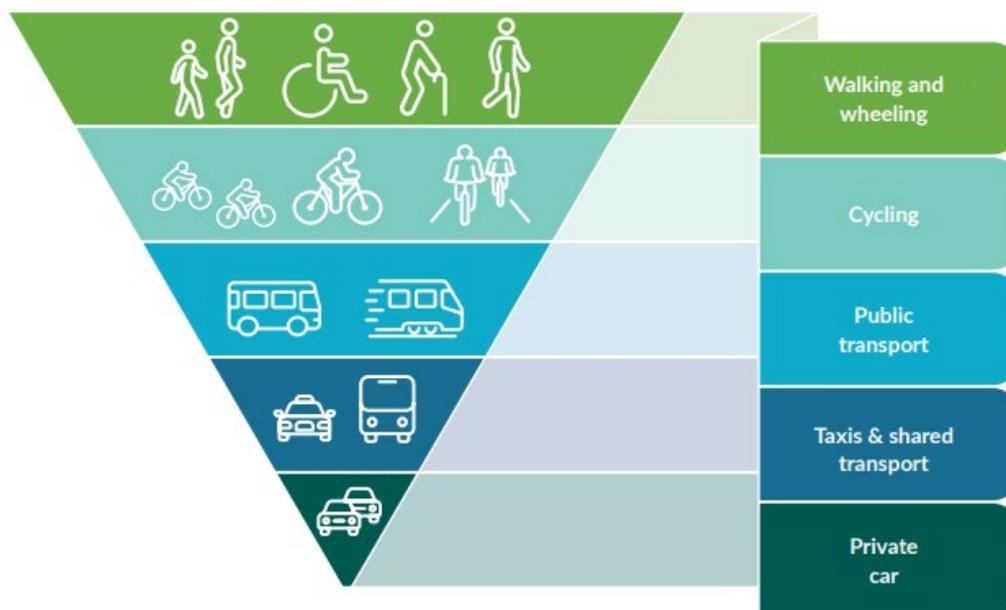


Figure 9.3 Hierarchy of Road Users model (Source: National Sustainable Mobility Policy, 2022)

The tables below show the baseline modal share and ambitions for trips generated within Edenderry for work and education purposes, based on data derived from Census 2016. This has informed objectives in this Plan to improve the modal share away from private car and in favour of walking, cycling and public transport.

Table 9.1 Edenderry Modal Share Baseline and Ambitions for Work and Education

Mode Share for Work Trips	2016 Baseline	Minimum Ambition 2029
Car	77%	70%
Public Transport	3.2%	6%
Walking	12.5%	15%
Cycling	1.6%	5%

Mode Share for Education Trips	2016 Baseline	Minimum Ambition 2029
Car	31.5%	25%
Public Transport	5.4%	6%
Walking	25.1%	30%
Cycling	0.7%	5%

The Council will work closely with other relevant agencies and stakeholders, including the NTA to develop schemes and secure funding to support modal shift ambitions as above.

Critical infrastructure necessary to improve the modal share in favour of sustainable modes of transport is further discussed under separate headings below, with identified improvement measures supported by critical infrastructure objectives set out in this Plan.

9.2.3 Walking and Cycling

The Council will endeavour to upgrade and make further provision for safer routes for walkers and cyclists in Edenderry, forming an integrated, safe, convenient, direct and comfortable network of routes.

Footpaths are provided throughout the town and the Council will seek the consolidation and incremental expansion of the existing footpath network in tandem with new development proposals.

It is the Council's intention to achieve a high level of permeability for walking and cycling in Edenderry town centre subject to funding received under the Active Travel Programme, through new build and retro-fitting, to create accessible, attractive, vibrant and safer routes.

Green Infrastructure is addressed in Chapter 6 Biodiversity and Green Infrastructure of this Plan, which also makes provision for walking / cycling in Edenderry.

Under the Active Travel Infrastructure Investment Programme, schemes completed in the town include:

- The provision of approximately 375m of new footpath and cycle track along Hare's Lane, eventually to be linked by the Junction Upgrade works (currently under construction) at the Tesco/Lidl junction to the south-east and then onto the new Inner Relief road to the north-west, and
- The provision of a cycle track, along the R402 regional road, from the exit from the Canal, after George's bridge, towards Edenderry town, as far as the junction with Sister Senan Avenue. This includes a section of segregated cycle track of approximately 480m in length.

AECOM, as part of the Cycle Design Office, on behalf of NTA, are currently developing a National Cycle Network map. This will include an overall map for County Offaly and town maps for Tullamore, Edenderry and Birr-Crinkill, detailing the existing and proposed cycle infrastructure.

The provision of a formal walking and cycling path along the existing Grand Canal towpath from the Harbour in Edenderry to Tullamore and on to Shannon Harbour is welcomed and a well utilised amenity. As set out in section 3.4.2.2 of Chapter 3, it is a goal to construct a pedestrian and cycle bridge across the Grand Canal spur linking the Grand Canal towpath with Blundell Park, which will improve permeability between two of the town’s main attractions.

The provision of (upgraded) pedestrian / cycle links is encouraged, yet subject to funding:

- Along the cordoned off section of Cokery Lane,
- From Edenderry GAA Weaver’s Field southwards,
- Along part of Tyrrells Lane,
- From the Grand Canal Spur westwards towards St. Mary’s graveyard with access out onto St. Mary’s Road,
- Upgrade of links from the Lidl roundabout to Boyne Meadows housing development,
- Upgraded links between Hare’s Lane north westwards through Clonmullen Drive to the junction with the recently constructed Inner Relief Road, and
- From the Edenderry Business Campus roundabout located at Monasteroris in towards the town.

9.2.4 Public Transport

9.2.3.1 Bus

Local Link bus services support rural communities in providing for social and economic connectivity between Edenderry and other settlements within / outside the County as well as from within its own rural hinterland. The Council will continue to support and encourage operators to extend local services, where feasible.

Table 9.2 Local Link Bus Timetable that traverses through Edenderry

Bus Number	Route Area	Day
2324	Daingean – Maynooth (via Edenderry)	Monday to Friday (Maynooth University terms only)
2327	Castlejordan area - Edenderry	Monday and Friday
2331	Edenderry - Tullamore	Wednesday
2347	Tullamore – Walsh Island (via Edenderry and Mount Lucas)	Monday to Friday

TFI Transport Ireland (Go-Ahead Commuter) has routes that serve Edenderry, namely; Route 120: Edenderry – Prosperous – Clane – Celbridge – Dublin.

Kearns Transport provides a bus service on route 820, which runs from Edenderry to Enfield via Carbury.

There are plans to install upgraded infrastructure to provide a wheelchair accessible bus stop upon JKL Street; further to the receipt of funding under the NTA Accessibility Retrofit Programme.

9.2.3.2 Rail

In the year 1877 a branch of the Midland and Great Western Railway was built between Edenderry and Enfield County Meath, linking the town to the main Sligo-Dublin rail route until 1963. The line provided both passenger and goods service until 1931, and goods only until it closed. Little remains of the line, except for occasional landmarks, such as the station house on the Dublin Road Edenderry, which is now a commercial business. Section 8.5.2 of the Offaly County Development Plan 2021-2027 states that *‘the provision of a rail link from Mullingar directly to Clara would create an integrated rail network linking Longford, Mullingar, Ballinasloe, and Athlone with Tullamore, Portarlinton, Kildare and Portlaoise. The final link in the network could involve the provision of a new rail line from Enfield to Edenderry with a continuation to Portarlinton (possible junction at Garryhinch). This rail line, if provided, would be of great strategic importance in the context of the midlands. Many of the wayleaves between Portarlinton and Enfield are in the ownership of Bord na Móna’*. Alternatively or in conjunction with the re-establishment of the Edenderry – Enfield rail-line and service, the former railway line / adjacent lands could be considered for use as a cycle link between the two towns.

9.2.5 Roads

The Council acknowledges the strategic function, capacity and safety of the regional road network traversing through Edenderry, which comprises of the R402 regional route and strives to maintain it to a high level to ensure quality of service, safety, accessibility and connectivity to transport users.

The R402 serves as the main artery through the town and is subject to through traffic including commercial vehicles giving rise to congestion in the town centre. It is essential in addition to alleviating congestion and associated nuisance that alternative routes are delivered. A by-pass circumventing the town remains a long-term objective of this Plan. However, in the shorter-term it is considered necessary to make provision for further inner relief roads that will not only alleviate congestion but will distribute traffic more evenly throughout the town and make provision for access to backland areas and facilitate more compact growth.

Recent new link roads constructed within Edenderry comprise of:

- Blundell Avenue (the Granary Court to the Fairgreen link), which presents an opportunity to open up the JKL Street backlands, creating a thriving part of the town centre, and
- Edenderry inner relief road from Clonmullen Lane to St. Conleth’s Road via Clonmeen Rise.

A future link road that is approved and pending construction for the town includes:

- The Edenderry relief road extending from Edenderry Business Campus in Monasteroris to Fr. McWey Street (including Carraig Aoibinn)

Other relief roads that could be considered are identified by indicative lines in the Zoning Objectives Map and would be subject to future feasibility studies and environmental assessment; such as:

- A link between Killane Drive and Killane Heights, and
- A route to the north of properties on the northside of JKL Street.

9.2.6 Car Parking

Car parking, while a necessary feature of any town centre, should not be allowed to dominate the public realm or compromise the experience of pedestrians. Public car parking in the town consists of on-street car parking and off-street car parking at O'Connell Square and Granary Road Carpark. The Council aims to achieve a balanced approach to effectively manage parking to support the local economy and give priority to sustainable travel modes in order to reduce reliance on the private car. In accordance with the Age Friendly Strategy, the Council intends to provide suitable areas in Edenderry Town for age-friendly parking bays.

9.3 Water, Wastewater, Flooding and Drainage

The availability of high-quality infrastructure is critical to securing investment, creating sustainable and attractive places, ensuring health and wellbeing and safeguarding the environment. The Council will work with national, regional and local utility providers to safeguard the protection of existing infrastructure assets in the town and seek up-grades and enhancement, where necessary, to facilitate the sustainable growth of the town.

9.3.1 Water Supply

The water supply in Edenderry is from a number of sources. Three boreholes provide water in the town. Two of these boreholes are located close to the water tower in Blundell Park and one is in close proximity to the Kishawanny Bridge. The town water supply is also supplemented by a connection to the Tubberdaly Public Water Scheme. The Irish Water 10-Year Water Supply Capacity Register (March 2022) notes that capacity constraints exist and that connection applications will be assessed on an individual basis considering their specific demand requirements. A Level of Service improvement is required to meet 2031 population targets. Improvement proposals will include but will not be limited to leakage reduction and / or capital investment. Such proposals will be developed and prioritised through Irish Water's National Water Resources Plan and Irish Water's investment planning process.

9.3.2 Wastewater Treatment

The current wastewater treatment system serving Edenderry is located at Monasteroris Edenderry. The Irish Water 10-Year Waste Water Treatment Capacity Register (March 2022) notes that there is capacity available within the Edenderry Wastewater Treatment Plant (WwTP) for an additional 156

persons, as the current load on the plant is 9,644 and the capacity is 9,800.. As per the Core Strategy outlined in the County Development Plan, the population of Edenderry is projected to increase by 721 people.

However, upon works completion, which will be post 2024, the capacity will be 12,500.

In the event of no remaining headroom, any proposed development would require developer investment. Where there are deficiencies in the capacity of Edenderry's wastewater treatment plant to cater for all of the proposed population, the sites that come forward first for development may be served by Irish Water based on their first come first served approach, whilst later sites might require a developer-led approach to finance the infrastructure.

9.3.3 Flooding

As represented on www.floodinfo.ie lands to the north and east of Edenderry are highlighted as liable to flooding from the River Boyne. A Strategic Flood Risk Assessment accompanies this LAP.

9.3.4 Drainage

The Council is responsible for the management and disposal of surface water run-off within the public realm. All new development will be required to be adequately serviced with surface water drainage infrastructure and to ensure new development will not cause surface water flood risk or safety risks to the public. New development proposals should ensure that surface water run-off does not increase above existing levels.

The Council seeks to ensure the sustainable management of surface water discharge through the use of sustainable urban drainage systems (SuDs). New developments in Edenderry must consider, as part of the initial design concept, whether SuDs and rainwater harvesting can be incorporated, particularly on large-scale developments. Insofar as practicable, development should seek to reduce the amount of impermeable hard surface areas.

New developments should also consider Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas – Best Practice Interim Guidance Document, 2022 and any subsequent editions. Climate change, and the need to adapt our urban areas to a changed climate in terms of rainfall patterns is the unifying concept in terms of the scope of this guidance document. The document identifies the need for a significant change in the way we plan, design, build and maintain our urban areas through the replacement of impermeable surfacing with nature-based planted areas designed to absorb, retain, store and treat urban runoff prior to discharge back to the environment.

SuD is also referred to in Chapter 3 Town Centre and Regeneration, Chapter 6 Biodiversity and Green Infrastructure and Chapter 8 Climate Action.

9.4 Energy and Communications

Enhanced development of secure and reliable electricity transmission infrastructure is recognised as being a key factor for supporting economic development and attracting investment to any area. At present there is more than adequate electricity infrastructure supplying Edenderry.

The Bord Gáis gas network does not currently extend to Edenderry. The Council will encourage the extension of the gas network to Edenderry, if considered feasible.

9.4.1 Broadband

Broadband is available in Edenderry, though speeds need improvement. A number of telecoms providers have network infrastructure serving the area and provide various types of connectivity from fixed line to wireless and mobile broadband.

9.5 Waste and Recycling

Edenderry Recycling Centre is located on the Dublin Road, Edenderry. There is currently a bring bank available for public use at Tesco Car Park, Clonmullen Industrial Estate, Edenderry.

The Council will support the circular economy principles, prioritising prevention, reuse, recycling and recovery over the disposal of waste. The Council will encourage the provision of recycling infrastructure where it is considered necessary and will assess requirements for recycling facilities on a case-by-case basis as part of the development management process.

9.6 Critical Infrastructure Policies

It is Council Policy to:

Movement and Connectivity

CIP-01 Promote enhanced connectivity for pedestrians and cyclists within Edenderry in order to improve access to the town centre, local schools, residential areas, recreational facilities, public transport services and other amenities.

CIP-02 Improve accessibility and movement within Edenderry, reduce dependency on private car transport, increase permeability in the town, and encourage the use of energy efficient forms of transport through the promotion of walking, cycling and public transport.

CIP-03 Make provisions for the use of electric vehicles through a significant increase in the provision of clearly and exclusively designated electric car charging points on public and private land in partnership with ESB and other relevant stakeholders and landowners.

CIP-04 Maintain and protect to a high level the safety, strategic transport function, capacity, accessibility, connectivity, level of service and efficiency of the R402 regional route and associated junctions in Edenderry Town in accordance with Strategic Planning and National Roads Guidelines 2012 or any subsequent edition.

CIP-05 Ensure that new cycling and walking infrastructure, including the provision of new cycling hubs / parks, shall be provided subject to environmental constraints, including those related to habitats and potential impacts such as disturbance from lighting; this will include minimising river crossings, avoiding sensitive habitats, not increasing barriers to flood waters and sustainable design and construction techniques.

Water Supply

CIP-06 Ensure that adequate and appropriate water services infrastructure is provided in accordance with the requirements of Irish Water and as part of new development proposals.

Surface water, Drainage and Flooding

CIP-07 Maintain and enhance the existing surface water drainage systems in Edenderry and to protect surface and ground water quality in accordance with the Water Framework Directive.

CIP-08 Require that all development proposals demonstrate that appropriate Sustainable Urban Drainage Systems (SuDS) and other nature-based solutions are examined and provided.

CIP-09 Manage flood risk in Edenderry in conjunction with the Office of Public Works and in accordance with the requirements of the Planning System and Flood Risk Management Guidelines for Planning Authorities (2009) and circular PL02/2014 (August 2014).

Energy

CIP-10 Promote and facilitate the development and renewal of energy and communications networks in Edenderry, while protecting the amenities of the town.

CIP-11 Seek the undergrounding of all electricity, telephone and television cables within the town.

Recycling

CIP-12 Adequately maintain recycling facilities and to secure the provision of additional facilities, as required, including in conjunction with development.

9.7 Critical Infrastructure Objectives

It is an objective of the Council to:

Movement and Connectivity

CIO-01 Increase modal share for pedestrians, cyclists and public transport, and decrease dependency on private cars subject to the Council securing funding under the NTA Active Travel Investment Programme and other applicable funding streams to develop and deliver schemes to help achieve this objective.

CIO-02 Make provision for cycle lanes in accordance with the Edenderry Urban Cycle Network Map by NTA when published, subject to resources and funding.

CIO-03 Identify suitable areas in Edenderry Town for age-friendly parking bays, in accordance with the Age Friendly Strategy for Offaly 2018-2021, and any future editions.

CIO-04 Support the delivery of the infrastructure proposed in the Local Transport Plan (LTP) subject to funding being made available.

CIO-05 To investigate the feasibility of constructing an Edenderry by-pass and relief roads, taking into account environmental sensitivities as identified in the SEA Environmental Report and the policies and objectives of the County Development Plan relating to sustainable mobility. Where feasibility is established, the Council will seek to pursue and / or facilitate the relevant project, subject to other provisions in the County Development Plan, including section 8.6.4 Corridor and Route Selection Process.

CIO-06 To reallocate corresponding roadspace within Edenderry to walking, cycling and public transport to accompany / occur concurrently with the provision of additional roadspace capacity under CIO-05. This may take the form of removing traffic from streets, removing lanes of traffic, narrowing carriageways, traffic management measures, or removing on-street parking to provide cycle tracks or widened footpaths.

Wastewater

CIO-07 Support and work in cooperation with Irish Water to upgrade Edenderry Wastewater Treatment Plan.