

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 Birr 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

Birr is a compact town, with most residential properties located within a short distance of services. However, the use of the private car is still 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 2021-2027 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 Birr maintains good transportation linkages to surrounding urban and rural areas, which is a contributing factor to its sustainable growth.

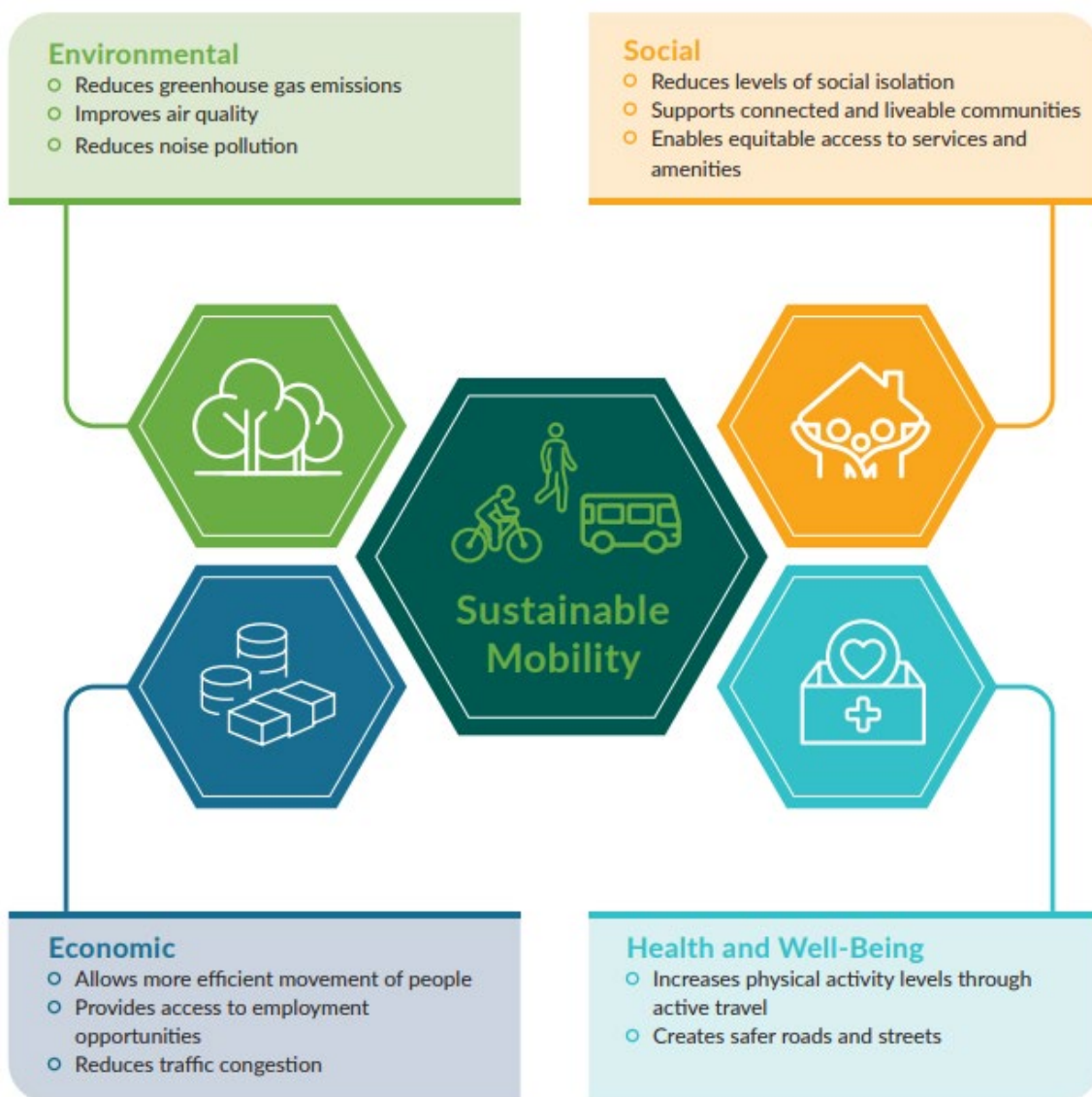


Figure 9.1 Benefits of Sustainable Mobility (Source: National Sustainable Mobility Policy, 2022)

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.

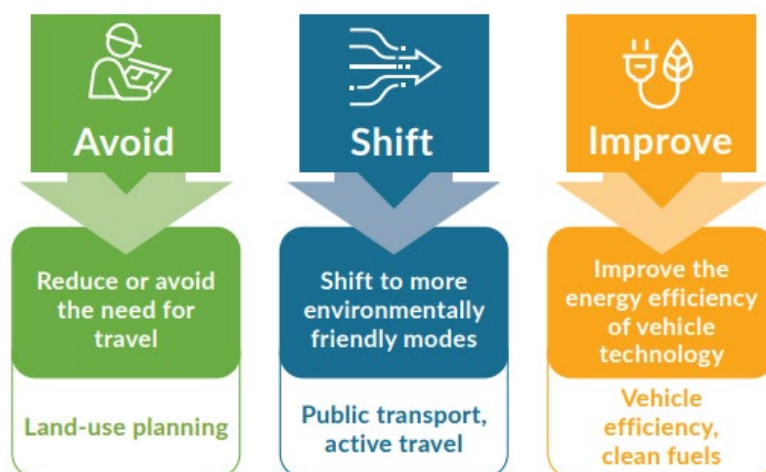


Figure 9.2 Avoid-Shift-Improve Principle (Source: National Sustainable Mobility Policy, 2022)

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 (Appendix 1) 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 Birr 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 which are also presented in Table 9.1 below.

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.

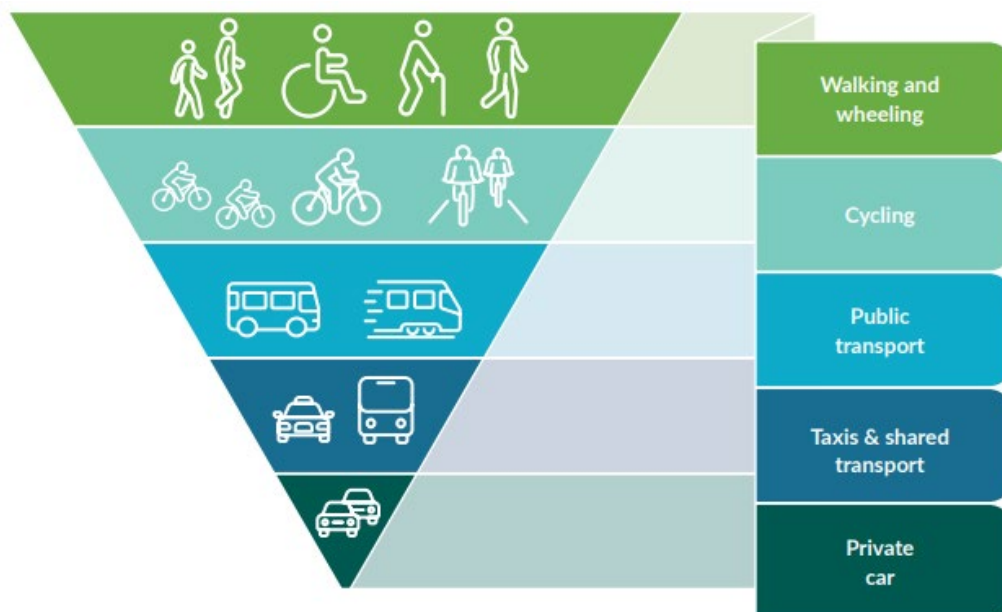


Figure 9.3 Hierarchy of Road Users model (Source: National Sustainable Mobility Policy, 2022)

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

Mode Share for Work Trips	2016 Baseline	Minimum Ambition 2029	% Change
Car	70%	65%	-5%
Public Transport	1.3%	3%	+1.7%
Walking	15.8%	20%	+4.2%
Cycling	3.1%	5%	+1.9%

Mode Share for Education Trips	2016 Baseline	Minimum Ambition 2029	% Change
Car	51.8%	45%	-6.8%
Public Transport	7.9%	9%	+1.1%

Walking	32%	37%	+5%
Cycling	1.6%	5%	+3.4%

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 Birr, 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 Birr town centre subject to funding received under the Active Travel Programme, through new build and retrofitting, to create accessible, attractive, vibrant and safer routes.

The Council proposes to provide a Riverside Walk of 910m for pedestrians and cyclists linking residential areas to schools, church, shops, library, swimming pool, gym and sports field, which has received NTA funding, as shown below.

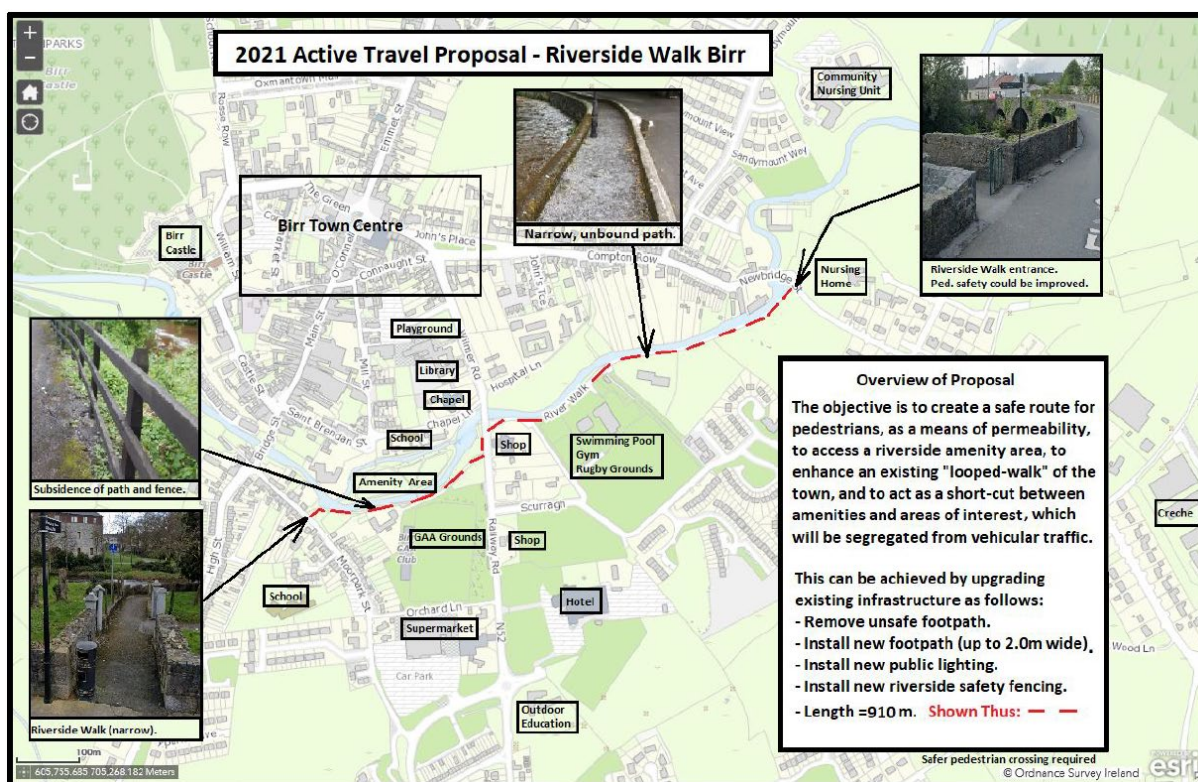


Figure 9.4 Riverside Walk Birr

Section 2.2.3 Greenways, section 2.2.4 Birr Town Trails (both in Chapter 2 Economic Development Strategy of this Plan) and the existing and potential Green Infrastructure Networks (in Chapter 6 Biodiversity and Green Infrastructure of this Plan) address additional walking / cycling provision in Birr.

There is limited cycle infrastructure in the town. There are some dedicated cycle lanes within the town and additional cycle lanes may be incorporated into new developments and on existing roads, where feasible.

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.

9.2.4 Public Transport

Local Link bus services support rural communities in providing for social and economic connectivity between Birr and other settlements in 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 - Birr

Bus Number	Route Area	Day
7098	Coolderry – Shinrone - Birr	Tuesday
911	Kinnitty – Clareen - Birr	Friday
823	Birr to Portlaoise	Monday to Sunday

9.2.5 Roads

The Council acknowledges the strategic function, capacity and safety of the national roads network traversing through Birr, which comprises of the N52 and N62 National Secondary Routes and strives to maintain them to a high level to ensure quality of service, safety, accessibility and connectivity to transport users.

Relief / distributor roads that could be considered in the future are identified by indicative lines in the Zoning Objectives Map and would be subject to future feasibility studies and environmental assessment.

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 Marian Hall car park, Emmet Square car park and Mill Street car park. 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 Birr 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

Birr's water supply is taken from the Camcor River and abstraction points are at Kinnitty and Springfield Bridge, Birr. The Irish Water 10-Year Water Supply Capacity Register (March 2022) notes that there is sufficient water supply capacity available up to 2031. Within Birr some sites are currently served by a

private well. All new developments must connect to the public supply scheme where it is feasible to do so.

Where there are public water supply constraints, the availability of water will be on a first come, first served basis with priority given to domestic customers. Non-domestic developments will be asked by Irish Water to review their proposals to reduce water requirements.

9.3.2 Wastewater Treatment

The current wastewater treatment system serving Birr is located at Townspark, Birr. The Irish Water 10-Year Waste Water Treatment Capacity Register (March 2022) notes that there is capacity available within the Birr Wastewater Treatment Plant (WwTP) up to 2031, and currently has capacity for an additional 989 persons. As per the Core Strategy outlined in the County Development Plan, the population of Birr Town is projected to increase by 1,263 people.

Currently after heavy rain, the incoming flow to the WwTP overflows to the river. The proposed wetlands will prevent this occurring and will pump the effluent to the Plant when a storm subsides. Also, this wetland will prevent the Plant from washing out. It will not increase the capacity of the Plant. There are no current proposals to expand the WwTP. In the event of no remaining headroom, any proposed development would require developer investment. Where there are deficiencies in the capacity of Birr'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

The following flood events have been highlighted on the OPW website (www.floodinfo.ie) for Birr. Information received from www.floodinfo.ie will continue to inform the plan making and decision-making process on an on-going basis.

As represented on older Ordnance Survey Ireland Mapping, lands to the west of Birr town were highlighted as liable to flooding from the Little Brosna River. Where possible and feasible, riparian strips of land within close proximity to the Camcor River and Little Brosna River are zoned open space and kept development-free, for not only flood risk issues, but also for recreational and natural heritage issues. A Strategic Flood Risk Assessment accompanies this LAP. The Council intends to co-operate with the Office of Public Works (OPW) in the delivery of the Birr Flood Relief Scheme that may be brought forward in the lifetime of this Plan.

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 Birr 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 Birr.

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

9.4.1 Broadband

Broadband is readily available in Birr. 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

Birr Recycling Centre is located in the Syngefield Industrial Estate, Kinnitty Road, Birr. There is currently a bring bank available for public use at Tesco Car Park, Roscrea Road, Birr.

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 Birr 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 Birr, 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 N52 and N62 National Secondary Routes and associated junctions in Birr 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 Birr 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 Birr 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 Birr, 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 Birr Urban Cycle Network Map by NTA when published, subject to resources and funding.

CIO-03 Identify suitable areas in Birr 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 a Birr Relief Road and construction of Birr By-pass and Distributor Road Network (Birr LUTS), 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 roadspace within Birr to walking, cycling and public transport. 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.

CIO-07 Ensure access to the lands to the north of the town that are zoned 'Enterprise and Employment' and 'Business or Technology Park' are accessed from a local road and not from a national road at a point where the speed limit exceeds 60kph and regard shall be had to the Spatial Planning and National Roads Guidelines for Planning Authorities, 2012 (and any subsequent edition).

CIO-08 Reserve land for an access link to the Birr Northern Distributor road from zoned residential land to the south, in consultation with and in agreement with TII.

Wastewater

CIO-09 Support and work in cooperation with Irish Water to upgrade Birr Wastewater Treatment Plan.

Flooding

CIO-10 To support and work in co-operation with the OPW in the implementation of the Birr Flood Relief Scheme.

CIO-11 Provide a new Wetland Area adjacent to the Crinkill Pumping Station within the Council landholding to provide necessary storm water attenuation.