ARUP

Department of Transport

Regional and Local EV Charging Network Plan

Strategic Environmental Assessment (SEA) Environmental Report Reference:

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Non-Technical Summary

Introduction

This Non-Technical Summary (NTS) has been prepared to support the Strategic Environmental Assessment (SEA) of the Regional and Local Electric Vehicle (EV) Charging Network Plan 2025-2030 (referred to hereafter as 'RLEVCNP' and 'the Plan'), established by Zero Emission Vehicles Ireland (ZEVI), Department of Transport (DoT). This document has been prepared in accordance with relevant EU and national legislation to summarise, in non-technical language, the Environmental Report for the SEA of the RLEVCNP. It draws attention to the most important issues outlined in the SEA Environmental Report and describes the key outcomes. Further detail is provided in the Environmental Report.

It should be noted that this document is the updated SEA ER, containing an assessment of the final RLEVCNP. An SEA ER was prepared in 2024 which summarised the environmental assessment of the draft RLEVCNP. This was put on public display in May 2024.

Since there has been some passage of time since the public consultation, and given the changes made to the RLEVCNP since then, it was considered best practise to update the SEA ER.

Regional and Local EV Charging Network Plan 2025-2030

Ireland's RLEVCNP 2025-2030 is a national document which provides a pathway for delivery of public EV charging infrastructure at destination and residential areas, in line with both national and European ambitions for cleaner transportation. This plan ensures a cohesive and standardised approach, minimising confusion for the public. It will be supported by local authorities and regional strategies, promoting a unified and efficient rollout of charging infrastructure, facilitating nationwide integration of EVs.

The RLEVCNP provides a way forward for equitably delivering charging infrastructure at a national and local level to support the national and international efforts to reduce transport-related carbon emissions through the shift to zero emission vehicles for all users. The plan lays out a pathway, adhering to the fundamental principles set out in the Infrastructure Strategy, to sustainably deliver public charging infrastructure for light duty vehicles at destination and neighbourhood locations.

With EV adoption rates growing and the planned phasing out of carbon-emitting vehicles, a demand for convenient public charging will increase. Particularly in neighbourhood and destination locations, deploying infrastructure is key to ensuring that users and residents without off-street parking have access to affordable and convenient public charging – most notably in areas where transport alternatives are scarce.

The objectives of this plan are to:

- 1) Support the delivery of well-defined local and regional plans for a coordinated, resilient, selfsustaining, future-proofed network that minimises public funding supports and meets user needs.
- 2) In partnership with key stakeholders, support the coordinated and accelerated expansion of a publicly accessible destination and neighbourhood EV charging network that aligns with greater e-mobility policies.
- 3) Provide a pathway to deliver on national infrastructure targets in support of both AFIR requirements and Climate Action Plan objectives.

The accelerated expansion of public destination and neighbourhood charging infrastructure will be led by local authorities with the support and in partnership with other public sector bodies, private sector groups and other stakeholders.

SEA Methodology

European Council Directive 2001/42/EC (the SEA Directive) provides guidance on the assessment of effects of certain plans and programmes. Article 1 identifies that the objective of the SEA Directive is 'to provide for a high level of protection of the environment and to contribute to the integration of environmental

considerations into the preparation and adoption of plans with a view to promoting sustainable development'.

It is a systematic, on-going process for evaluating, at the earliest possible stage, the environmental quality, and consequences of implementing certain plans and programmes on the environment.

The methodology for this SEA is based on legislative requirements and guidance from the Environmental Protection Agency (EPA) to ensure compliance with the SEA Directive and associated national legislation.

Current State of the Environment

The SEA considers the current environmental conditions, hereafter referred to as the baseline environment. This description of the baseline considers the local level nature of the Plan and is cognisant of the pressures and interrelationships between environmental topics within the Plan area. Likely significant environmental effects of a transboundary nature, between the Republic of Ireland and Northern Ireland were also considered in this report.

The baseline considers the following environmental aspects:

- Population & Human Health
- Biodiversity
- Land & Soils
- Water
- Air Quality, Noise & Climate
- Archaeology, Architectural & Cultural Heritage
- Landscape & Visual
- Material Assets

Population and Human Health

According to the 2022 Census results, the population of Ireland was 5,149,139 in 2022. This is an increase of 8.1%, almost twice the increase rate on the 2016 Census (4,761,865).

To coincide with this rising population, 2022 CSO figures show the continued growth in the number of electric and plug-in hybrid vehicles licensed in Ireland. The number of new electric cars licensed has increased by 82% from 8,414 in the first 11 months of 2021 to 15,291 in the same period in 2022. At the same time, the number of new diesel cars has decreased to 26,889 new diesel cars in the first 11 months of 2022 compared with 34,174 in the same period in 2021.

According to the Department of Health report '*Health in Ireland: Key Trends 2023*', Ireland has the highest self-perceived health status in the EU, with 80% of people rating their health as good or very good. The number of people reporting a chronic illness or health problem is also better than the EU average, at approximately 29.5% of the population.

Biodiversity (Including Flora and Fauna)

As outlined in Ireland's 4th National Biodiversity Action Plan (Department of Housing, Local Government and Heritage, 2024), global trends of biodiversity loss are reflected in Irish land and waterscapes. Intensive agricultural and forestry practises, overfishing, invasive species, changes in land-use (particularly for residential, agricultural, and commercial development) and the over-exploitation of resources such as peatland are the main drivers of biodiversity loss.

The 2019 conservation status assessments required under Article 17 of the EU Habitats Directive reported that 46% of EU protected habitats and 15% of EU protected species demonstrated ongoing declines over a 12 year (NPWS, 2019). About half of Ireland's rivers and lakes are in unhealthy ecological state mainly owing to nutrient inputs from wastewater and agriculture.

Despite ongoing conservation and restoration efforts, Ireland's biodiversity is in a state of crisis and urgent impactful action is imperative to prevent the continued erosion of its natural heritage.

Land and Soils

According to the same EPA report, the main source of national scale information on land cover in Ireland is the European Environment Agency (EEA) CORINE (Coordination of Information on the Environment) land cover data series, which is an EU-wide inventory of land cover in 44 classes categorised from satellite photography. According to 2018 CORINE data, the main land cover type in Ireland is agricultural land, which accounts for approximately two-thirds (67%) of the national landmass. The new national land cover map prepared by the National Mapping Division of Tailte Éireann, was considered too detailed for a national level plan.

Most of this is permanent grassland pastures. Peatlands and wetlands are the second most widespread land cover type, covering almost one-fifth (18%) of the country, while forested areas cover 11.6% of the country.

The quality of soils in Ireland is considered generally good although there are pressures impacting on its long-term protection and maintenance particularly from land use changes, intensification of use, urbanisation, and contamination¹.

Water

Nearly half of the surface waters in Ireland are failing to meet the legally binding water quality objectives set by the EU Water Framework Directive because of pollution and other human disturbance.

Based on the Water Framework Directive monitoring programme, the biological quality of rivers is assessed and categorised into five categories: high, good, moderate, poor, and bad. The EPA's report '*Water Quality in 2023*¹² found that of the 1,459 (out of 2,365) river water bodies assessed in 2022 and 20234, 1,028 river water bodies remained stable with no change in their quality class when compared to their previous survey. There was a net decline in quality in 45 river water bodies over the two years; 187 improved in quality while 232 declined in quality. Declines and improvements in river biological quality occurred in all major river catchments (known as hydrometric areas) surveyed in 2022 and 2023; net improvements were noted in the Liffey, Slaney, Moy and Erne river catchments and net declines were noted in the Nore, Suir, Barrow, Shannon, Lee, Laune, Feale and Lough Swilly river catchments.

Taking the latest data for all river water bodies (monitored between 2020-2023), 55% (1,309) of river water bodies are in high or good biological quality5. The remaining 45% (1,056) are in moderate, poor or bad quality

The number of river water bodies in bad condition has increased to four since the 2019-2021 period. These bad quality river stretches are within the River Laune in Kerry (impacted by urban waste water) and within the Annagh River in Clare, Ahavarraga Stream in Limerick, and the Nenagh River in Tipperary which are impacted by multiple pressures such as agriculture, urban waste water and other human activities6. This increase is in part due to targeted monitoring in rivers downstream of known pressures.

Overall, 91% of groundwater bodies are in good chemical status and nearly all are in good quantitative status.

The south and southeast regions have the greatest proportion of sites with high and increasing nitrate concentration. There has been a slight decline of 0.8% (four waterbodies) in the number of groundwater bodies at good status since the last assessment.

Air Quality and Climate

¹ EPA (2020) Ireland's Environment - An Integrated Assessment 2020. Available at: <u>https://www.epa.ie/publications/monitoring--assessment/state-of-theenvironment/</u> EPA_Ireland's Environment 2020.pdf

² EPA (2023) Water Quality in Ireland 2023. Available at: <u>https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/water-quality-in-2023.php</u>

While air quality in Ireland has been generally good, new evidence from increased monitoring and modelling, coupled with new research on the health impacts at lower levels of exposure to particulate matter, raises questions about that status.

The 'Air Quality in Ireland Report 2023' (EPA, 2024)³, Ireland's latest monitoring shows compliance with current EU standards. Air Quality in Ireland is moving in a positive direction although Ireland has not yet met the Clean Air strategy and WHO values. Ireland is not on track to achieve its ambition, set out in the National Clean Air Strategy, to meet the health-based WHO air quality guideline limits in 2026. Achieving future targets will be very challenging. Main pollutants of concern are fine particulate matter ($PM_{2.5}$) from solid fuel combustion and nitrogen dioxide (NO_2) from vehicle emissions/traffic.

The transport sector is projected to contribute up to 21% of Ireland's total emissions by 2030. Nitrogen dioxide (NO₂) is the air pollutant most directly associated with traffic in high-density urban contexts and is formed by a reaction between ozone and nitrogen oxide (NO). NO₂ is a known precursor to the formation of other pollutants such as ground-level ozone (O₃) and particulate matter (PM_{2.5} and PM₁₀). Its sources originate from combustion and home heating.

Climate

According to Met Eireann⁴ (2022) the general climatic conditions for Ireland as a country are dominated by the Atlantic Ocean and its air and oceanic currents. Consequently, the region does not suffer from extremes of temperature. According to Met Eireann, average annual temperature is about 9°C. Average rainfall varies between about 800 and 2,800mm. Rainfall accumulation tends to be highest in winter and lowest in early summer. Winters tend to be cool and windy, while summers, when the depression track is further north and depressions less deep, are mostly mild and less windy.

In line with the global picture, Ireland's average temperature has increased by about 0.7°C over the last 100 years, and the rate of increase has been higher in the last couple of decades, as reported by the EPA⁵ (2022).

According to the EPA's latest emissions data, Greenhouse Gas (GHG) emissions in Ireland decreased in 2023. The change in emissions since 2022 was -6.8%. Emissions decreases were driven by the reductions in the Electricity generation, Residential sector, Agriculture and Industry. The overall emissions reduction, while welcome, falls short of reductions required to achieve National and new EU targets.

As outlined in the report 'Ireland's Greenhouse Gas Emissions Projections 2023-2050'⁶, Ireland is not on track to meet the 51 per cent emissions reduction target (by 2030 compared to 2018) based on current projections which include most 2024 Climate Action Plan measures.

Archaeology, Architectural and Cultural Heritage

The sites and features considered as part of the cultural heritage baseline for Ireland include those listed on the following:

- Record of Monuments and Places (RMP), which is the statutory list of all known archaeological monuments in Ireland as compiled by the Archaeological Survey of Ireland, part of the Department of Housing, Local Government and Heritage; and
- National Inventory of Architectural Heritage (NIAH), which identifies, records, and evaluates the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. NIAH surveys provide the basis for the recommendations of the Minister for Housing, Local Government and Heritage [previously the Minister for Housing, Planning and Local Government] to the planning authorities for the inclusion of particular structures in their

³ Air Quality in Ireland Report 2023 (EPA, 2024) Available at: <u>https://www.epa.ie/publications/monitoring--assessment/air/Air_Quality_Report_23_v13_flat.pdf</u>

⁴ Met Eireann (2022) Climate of Ireland. Available at: <u>https://www.met.ie/climate/climate-of-ireland</u>

⁵ EPA (2022) What Impact Will Climate Change have on Ireland? Available at: <u>https://www.epa.ie/environment-and-you/climate-change/what-impact-will-climate-change-have-for-</u>

Record of Protected Structures; and United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage List, which includes cultural and natural heritage sites around the world considered to be of outstanding value to humanity.

Ireland is particularly rich in archaeological sites and monuments which form a central component of Irish Heritage. Many of Ireland's archaeological or cultural heritage sites occur on forest land and peatlands. Archaeological sites and monuments range from substantial above-ground structures to easily damaged subterranean traces of human activity. Types of monuments vary greatly and include ecclesiastical ruins, ancient trackways, standing stones, fortifications, megalithic tombs, earthwork mounds and cairns.

Landscape and Visual

The Landscape Character Guidelines for Ireland⁷ (Mosart, 2016) classify Ireland's landscape into four distinct character types, which vary considerably regarding both landform and landcover. The four landscape character types include:

- Rolling moorland.
- Rolling fertile farmland.
- Drumlins; and
- Mountain and farmland complex.

The National Landscape Strategy for Ireland 2015-2025⁸ (Department of Housing, Local Government and Heritage, 2015) was produced in line with Ireland's obligations under the European Landscape Convention. The overall vision of the strategy is stated as: "Our landscape reflects and embodies our cultural values and our shared natural heritage and contributes to the well-being of our society, environment, and economy. We have an obligation to ourselves and to future generations to promote its sustainable protection, management, and Planning".

In terms of landscape & visual amenity, local authorities in Ireland conserve and protect scenic value as Areas of High Amenity, Areas of Outstanding Natural Beauty, and Protected Views. Each local authority is responsible for the designation of these within their individual jurisdictions, with each County Development Plan providing objectives to protect such views.

Material Assets

Transportation

Vehicular traffic is by far the most common mode of travel in Ireland. In 2021, the national vehicle fleet was made up of 2.86 million vehicles. Ireland's National Roads network consists of circa 5,300 km of roads, which includes National Primary roads (including motorways (916km)) and National Secondary roads.

Iarnród Éireann (Irish Rail), the state-owned railway company in Ireland, operates 1,944km (1,215 miles) of the rail network. Iarnród Éireann is responsible for maintenance of the heavy rail intercity and regional network, which is used for both passengers and freight. Transport Infrastructure Ireland is responsible for the light rail Luas networks based in Dublin.

There are 10 main airports across Ireland: Cork Airport, Donegal Airport, Dublin Airport, Weston Airport, Galway Airport, Kerry (Farranfore) Airport, Ireland West Airport Knock, Shannon Airport, Sligo Airport and Waterford Airport. Cork, Dublin, and Shannon are international airports.

Twenty commercial ports exist nationwide; international ports include Shannon Foynes, Cork, Dublin Port and Drogheda. In addition, there are 15 international ferry ports, 99 local ferry ports and 48 fishing ports. Urban nodes in Ireland include Shannon, Foynes, Dublin, Cork, and Galway ports.

⁷ Mosart (2016) Landscape Character Guidelines for Ireland. Available at: <u>https://mosart.ie/wp-content/uploads/2016/02/forestry-and landscapeguidelines-ireland.pdf</u>

⁸ Department of Housing, Local Government and Heritage (2015) The National Landscape Strategy for Ireland 2015-2025. Available at: https://www.gov.ie/en/publication/8a59b-national-landscape-strategy/

Water Supply

Uisce Éireann is responsible for the monitoring of public water supplies in Ireland and Local Authorities are responsible for monitoring of group water schemes and regulated small private supplies.

The EPA publishes an annual Public Supply Drinking Water Report which provides an overview of the quality of drinking water in public supplies. The reports are based on the assessment of monitoring results reported to the EPA by Uisce Éireann and the Local Authorities.

Results from the 2023 Drinking Water Quality in Public Supplies Report⁹ show that compliance with the microbiological and chemical standards for drinking water remains high at greater than 99.7%, which means the water in Irelands public water supplies is safe to drink.

The Environmental Protection Agency (EPA) has identified a priority list of "at-risk" drinking water supplies, called the Remedial Action List (RAL), that must be improved to ensure that these water supplies are safe to drink and are also secure in the future. A supply may be placed on the RAL if water treatment at the supply is not adequate. The number of people served by public water supplies on the EPA's RAL increased further in 2023 and is now almost 561,000 people. This compares to over 481,000 people at the end of 2022. This increase is mainly due to THM (trihalomethanes) exceedances or inadequate treatment for Cryptosporidium as seen in 2022. At the end of 2023, there were 7 supplies on the RAL for more than 1 year without an improvement plan completion date. Supplies on the RAL must be addressed as a priority for Uisce Éireann.

Wastewater Treatment and Discharge

Irish Water operates a network of wastewater treatment plants across Ireland. Irish Water has sole responsibility for operating and maintaining the public sewer network. The wastewater treatment plants vary in size according to the population of the area they serve. Despite the variation in size, the processes used to treat wastewater are generally the same.

The EPA Report '*Urban Waste Water Treatment in 2023*¹⁰, provides an overview of urban waste water treatment in Ireland during 2023. It focuses on the most important issues that Irish Water needs to address to protect the Irish environment from the harmful effects of waste water discharges. Treatment at 10 large urban areas failed to comply with EU standards set to protect the environment. This is down from 15 areas in 2022. Ireland's largest treatment plant at Ringsend in Dublin has failed the standards for many years. Upgrade works to address this will be completed next year and the infrastructure in place at Ringsend since the beginning of 2024 is already improving effluent quality.

Waste Management Services

Ireland's waste management practices, infrastructure and regulation have matured significantly over the last 20 years. This change has been driven by EU and national legislation, national policy, and economic initiatives. Government policy focusses on waste as a resource and the virtual elimination of landfilling.

In 2023, only three landfills are accepting municipal waste in Ireland. Between 2019 and 2020 municipal waste increased by 4% to 3.2m tonnes. Waste generation in Ireland continues to be closely linked with economic activity indicating limited progress towards a circular economy. Construction and demolition waste decreased by 0.6m tonnes to 8.2m. However, this correlates with a decrease in construction activity nationally due to Covid-19.

Energy

⁹ EPA (2024) Drinking Water Quality in Public Supplies 2023. Available at: https://www.epa.ie/publications/compliance--enforcement/drinkingwater/annual-drinking-water-reports/drinking-water-quality-in-public-supplies-2023.php

¹⁰ EPA (2024) Urban Waste Water Treatment in 2023. Available at: https://www.epa.ie/publications/monitoring--assessment/waste-water/Urban-Wastewater-Treatment-in-2023-report.pdf

SEAI's Energy in Ireland 2024 report¹¹ provides a definitive record on the supply, transformation, and enduser demand of energy in Ireland.

- *Electricity Demand*: Increased by 1.24 TWh in 2023, mainly driven by the commercial services sector, which saw a 9.7% increase. Overall electricity demand rose by 4.1%.
- Long-term Trends: Over the past 10 years, electricity demand has consistently grown, with the commercial services sector seeing a 79.1% increase since 2013.
- Energy-Related Emissions: In 2023, emissions were at their lowest in over 30 years, down 8.3% from 2022, with a significant reduction of 2.8 MtCO2eq.
- **Transport Sector**: The largest source of energy demand (43%) and a major source of GHG emissions (21%). Transport energy demand increased by 2.61 TWh in 2023, led by international aviation and private car use.

Consideration of Reasonable Alternatives

Three reasonable alternatives were considered in the preparation of the Plan, as summarised below:

- Alternative 1 "Do Nothing": Under Alternative 1, no Regional and Local EV Charging Network Plan is prepared. Under this Alternative, the private market will lead the rollout of the EV charging network. This rollout will be in response to market demand, resulting in charging infrastructure concentrated at high demand locations that are economically viable, but not necessarily publicly accessible. This rollout will also not contribute to the availability of charging infrastructure in locations that would support equitable access to public charging infrastructure.
- Alternative 2 "Provide Targeted Capital Funding for Projects": Alternative 2 relates to the provision of targeted capital funding projects for EV charging infrastructure, with no strategic national plan to sustainably deliver charging infrastructure at a regional and local scale.
- Alternative 3 "Regional and Local EV Charging Network Plan": In order to adequately facilitate the transition to EVs in accordance with the *EV Charging Infrastructure Strategy*, Alternative 3 relates to the preparation of a Regional and Local EV Charging Network Plan to provide a coordinated and planned approach to implementing a charging network.

Each of the three alternatives assessed are likely to result in positive effects on population, air quality and climate, and on material assets, in that some level of new charging infrastructure would be provided under each alternative. Ultimately, each alternative offers an improvement on the existing infrastructure offering and supports a greater uptake in EV usage around the country. Otherwise, neutral environmental effects are identified for each alternative option.

However, it is important to note that there are variances to the significance of effects identified for each of the alternatives considered.

Alternative 3 acknowledges that to support EV adoption amongst diverse groups, infrastructure needs to be provided at locations to enable these groups' ability to transition to EVs, even if these locations are not currently economically viable. Additionally, this approach taps into existing local authority-owned sites such as residential roads and municipal parking lots in town centres. This large property portfolio provides the opportunity to bundle low and high profit sites to ensure widespread delivery of charge points, as opposed to concentrating charge points in and around cities where sites are more economically viable.

Furthermore, this approach allows for working within and across different groups in the local authority and complementary public bodies to ensure that site selection aligns with parallel mobility efforts, particularly those aiming to incentivise shifts to public transport or active modes of travel.

¹¹ SEAI (2024) Energy in Ireland. Available at: <u>https://www.seai.ie/sites/default/files/publications/energy-in-ireland-2024.pdf</u>

Thus, the positive effects on population, air quality and climate and on material assets that are predicted to occur as a result of Alternative 3 are likely to be significant. Alternative 3 represents the preferred alternative.

Objectives, Targets, and Indicators

The SEA is designed to assess the potential environmental impact of the RLEVCNP and its associated proposals against the established baseline. The proposals outlined in the RLEVCNP are assessed against a range of established environmental objectives and targets.

Indicators proposed in the Environmental Report are utilised over the lifetime of the RLEVCNP to quantify the level of impact that the objectives and proposals may have on the environment. The Objectives, Indicators and Targets relating to the RLEVCNP are set out in the SEA Environmental Report.

Assessment of Likely Significant Effects

The proposals in the RLEVCNP were assessed with respect to the existing environmental baseline and the environmental objectives and targets.

As the proposals included in the RLEVCNP relate to the roadmap for implementation and roll out of EV charging infrastructure across the regional and local network in Ireland, the environmental assessment outcomes are generally unknown or neutral as a result of the limited information of deployment sites at this time. Matrices were prepared to identify potential impacts across the Plan area.

The RLEVCNP contains a range of proposals relating to the implementation of EV charging infrastructure in Ireland. The deployment of this infrastructure across the regional and local network has largely been assessed as likely to result in overall positive effects on the environment, particularly on Population & Human Health and Air Quality, Noise & Climate environmental factors. While the provision of new charging infrastructure across Ireland is likely to have a positive impact on material assets, it is also likely to have an increased demand on electricity and consequently a negative, neutral or unknown impact on Material Assets is predicted.

A detailed assessment of each of the proposals of the RLEVCNP is set out in the SEA Environmental Report. The assessment of significant effects in the Environmental Report also takes account of potential transboundary effects of the RLEVCNP on Northern Ireland, particularly where there is potential for any significant effects, such as transboundary impacts on climate and shared resources.

To implement the proposals of the RLEVCNP, a cumulative assessment was carried out to assess the potential projects / schemes which may arise from the implementation of the Plan.

The two types of potential cumulative effects that have been considered throughout this assessment are:

- Potential Intra-Plan cumulative effects, which arise from the interactions between different types of potential environmental effects resulting from a plan, programme, or policy where there are elevated levels of environmental sensitivities.
- Potential Inter-Plan cumulative effects which arise when the effects of the implementation of one plan occur in combination with those of other plans, programmes, developments, etc.

Mitigation Measures

This Environmental Report has highlighted some potential negative environmental impacts that may arise from the implementation of the RLEVCNP. A number of mitigation measures have been identified to prevent, reduce and as fully as possible offset any potential significant adverse impacts on the environment associated with the implementation of the RLEVCNP.

It is envisaged that all upgrading and new developments within the Plan area will be environmentally assessed at project level, as required, and specific mitigation proposed, where appropriate.

Monitoring Measures

Article 10 of the SEA Directive requires that monitoring should be carried out to identify (at an early stage) any unforeseen adverse impacts associated with the implementation of the plan or programme.

A monitoring programme has been developed as part of this SEA (based on the relevant indicators) to track progress towards achieving strategic environmental objectives and reaching targets. As previously described, indicators have been developed to show changes that would be attributable to implementation of the RLEVCNP, therefore enabling positive and negative impacts to be measured.

1. Introduction

Zero Emissions Vehicles Ireland (hereafter referred to as 'ZEVI') is an Office within the Department of Transport dedicated to overseeing Ireland's transition to zero emission vehicles and more sustainable transportation. ZEVI has prepared a Regional and Local EV Charging Network Plan 2025-2030 (hereafter referred to as the 'RLEVCNP' and 'the Plan') for Ireland which provides a roadmap for the deployment of Electric Vehicle (EV) charging infrastructure across Ireland with respect to Passenger Vehicles.

Arup was appointed by ZEVI to undertake a Strategic Environmental Assessment (SEA) of the RLEVCNP. All necessary stages of Appropriate Assessment (AA) were also undertaken on the Plan. This process was carried out in parallel with the SEA process and fed into the alternatives considered as part of the SEA, as required for ZEVI.

It should be noted that this document is the updated SEA ER, containing an assessment of the final RLEVCNP. An SEA ER was prepared in 2024 which summarised the environmental assessment of the draft RLEVCNP. This was put on public display in May 2024.

Since there has been some passage of time since the public consultation, and given the changes made to the RLEVCNP since then, it was considered best practise to update the SEA ER.

1.1 Background

As Ireland transitions to a more sustainable future, Electric Vehicles (EVs) have been identified as a key component of reducing carbon emissions in the transportation sector. The widespread adoption of EVs requires a comprehensive charging infrastructure network that is accessible, reliable, and convenient for all users. As of early 2025, Ireland has a growing network of publicly accessible EV charging stations, with approximately 3,700 public and semi-public charging points across the country.

At a national level, accelerating the transition to EVs and vehicle technology improvements is a critical part of the transport decarbonisation pathway set out in Ireland's Climate Action Plan 2024 (CAP24), accounting for approximately half of the total transport emissions abatement by 2030. To achieve these emissions abatement targets, approximately 30% of the vehicle fleet must by electrified by 2030.

A key element for achieving these targets will be delivering a network of public EV charging stations in neighbourhoods and at destinations that meet the diverse needs of EV users. Local authorities will be critical players in equitably and sustainably driving the expansion of charging stations in these locations, given their unique knowledge of their local communities and the local opportunities that can be leveraged.

Arup was commissioned by ZEVI to carry out an SEA screening for the RLEVCNP ("SEA Screening Report"). The screening exercise concluded that an SEA is required with respect to the Plan, and this report acts as the SEA Environmental Report (ER).

This SEA ER presents the findings of the environmental assessment of the likely significant effects on the environment as a result of implementing the RLEVCNP. A Scoping Report was prepared which provided information to allow consultation with defined statutory bodies on the scope and level of detail to be considered in the environmental assessment. The purpose of this SEA ER – which should be read in conjunction with the RLEVCNP – is to provide a clear understanding of the likely environmental consequences of decisions arising from the RLEVCNP.

1.2 SEA Process and Legislative Context

1.2.1 Legislative Background

Directive 2001/42/EC of the European Parliament and of the Council on the Assessment of the Effects of Certain Plans and Programmes on the Environment, (also known as the Strategic Environmental Assessment (SEA) Directive), requires that an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment, in the following ten sectors:

• Agriculture

- Forestry
- Fisheries
- Energy
- Industry
- Transport
- Waste Management
- Water Management
- Telecommunications; and
- Tourism, Town and Country Planning or Land-use

The objective of the SEA Directive is 'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans ... with a view to promoting sustainable development' (Article 1 SEA Directive 2001).

It is a systematic, on-going process for evaluating, at the earliest possible stage, the environmental quality, and consequences of implementing certain plans and programmes on the environment. The requirements for SEA in Ireland are set out in the national legislation as follows:

- European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (S.I. No. 435 of 2004) as amended by European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations (S.I. No. 200 of 2011); and
- Planning and Development (Strategic Environmental Assessment) Regulations (S.I. No. 436 of 2004) as amended by the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations (S.I. No. 201 of 2011).

The SEA Directive has also been given effect through other Republic of Ireland legislation. An example being, the Planning and Development Act [PDA] 2000, as amended, which includes a specific requirement to carry out and facilitate SEA alongside the preparation of the Regional Spatial and Economic Strategies; and the Water Services Act 2007, as amended, requires that: *"The purpose for which this Act is enacted includes giving effect to so much of the following as relates to water services"* - listing specifically Directive 2001/42/EC.

1.2.2 SEA Process

The SEA process is comprised of the following steps:

- Screening: decision on whether the SEA of a Plan or Programme is required. This stage has been completed.
- Scoping: Consultation with the defined statutory bodies on the scope and level of detail to be considered in the assessment. This stage has been completed.
- Environmental Assessment: An assessment of the likely significant impacts on the environment as a result of the Plan or Programme. This is the current stage of the SEA process to which this report relates.
- Preparation of a draft Environmental Report
- Preparation of a final Environmental Report (this report).
- Consultation on the Plan or Programme and associated Environmental Report.
- Evaluation of the submissions and observations made on the Plan or Programme and Environmental Report; and

• Issuance of an SEA Statement identifying how environmental considerations and consultation have been integrated into the Final Plan or Programme.

SEA is intended to inform decision-making and needs to 'test' systematically the performance of the plan as a whole and its individual objectives and policies against SEA criteria. It is noted that under Environmental Impact Assessment (EIA) and Planning and Development legislation, certain projects taking place within the plan area arising during implementation of the Plan may require EIA.

1.2.3 SEA Guidance

The SEA methodology for the RLEVCNP is based on legislative requirements and Department of Environment, Heritage, and Local Government (DoEHLG) / Environmental Protection Agency (EPA) guidance - as listed below. The EPA's SEA Pack (Version 09/01/2023) was also used as a source of information during the scoping process along with published EPA SEA Scoping Guidance, including:

- EPA Good Practice Guidance Note: SEA and Integration (EPA, 2025)
- Strategic Environmental Assessment Guidelines for Regional Assemblies and Planning Authorities (Department of Housing, Local Government and Heritage, 2022)
- EPA Good Practice Note on the Strategic Environmental Assessment for the Energy Sector (EPA, 2019)
- Circular Letter PL 9/2013: Article 8 (Decision Making) of EU Directives 2001/42/EC on Strategic Environmental Assessment (SEA) as amended.
- Circular Letter PSSP 6/2011: Further Transposition of EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA).
- Developing and Assessing Alternatives in Strategic Environmental Assessment Good Practice Guidance.
- Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland (EPA, 2013).
- Directive 2001/42/EC on the assessment of Certain Plans and Programmes on the Environment.
- Draft Environmental Outcomes Report: a new approach to environmental assessment (Department for Levelling Up, Housing, and Communities, 2023).
- EPA guidance on Integrated Biodiversity Impact Assessment Streamlining AA, SEA, and EIA Processes Best Practice Guidance.
- Good practice guidance on Cumulative Effects Assessment in SEA.
- Good Practice Guidance on SEA Screening (EPA, 2021).
- Guidance on Implementation of Directive 2001/42/EC.
- Guidance on Strategic Environmental Assessment Statements and Monitoring.
- Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment- Guidelines for Regional Authorities and Planning Authorities (Department of the Environment, Community and Local Government, 2004).
- Integrating Climatic Factors into Strategic Environmental Assessment in Ireland A Guidance Note (EPA, 2019).
- Integrating Climatic Factors into the Strategic Environmental Assessment Process in Ireland (EPA, 2019).
- Ireland's Environment An Integrated Assessment 2020.

- SEA Resource Manual for Local and Regional Planning Authorities (EPA, 2015).
- Strategic Environmental Assessment Consultation Bodies' Services and Standards for Responsible Authorities (Northern Ireland Environmental Agency, 2009).
- Strategic Environmental Assessment Guidelines for Regional Assemblies and Planning Authorities.
- Strategic environmental assessment and climate change: guidance for practitioners (Environment Agency, 2011); and
- Synthesis Report on Developing a Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland (EPA, 2013).

2. Regional and Local EV Charging Network Plan 2025-2030

2.1 Introduction

Ireland's RLEVCNP 2025-2030 is a national document which provides a pathway for delivery of public EV charging infrastructure at destination and residential areas, in line with both national and European ambitions for cleaner transportation. This plan ensures a cohesive and standardised approach, minimising confusion for the public. It will be supported by local authorities and regional strategies, promoting a unified and efficient rollout of charging infrastructure, facilitating nationwide integration of EVs.

2.2 The National Strategy

To support the delivery of these targets, in January 2023, Zero Emission Vehicles Ireland (ZEVI) published the EV Charging Infrastructure Strategy 2022-2025. This sets out the national approach to rolling out charging infrastructure across Ireland to drive EV adoption. The strategy focuses on how to deliver home, neighbourhood, destination, and en-route charging for different vehicle types through a mix of delivery groups involving both public and private sector stakeholders, private, and public-private delivery groups.

The National Strategy reflects the urgent need for action to address climate change and the need for a strategic and just transition to sustainable ways of travelling. It is based on a set of fundamental principles (Figure 2.1) underpinning the roll-out of EV charging infrastructure over the coming decade. These principles were developed against the backdrop of climate change, the urgent need to decarbonise the Irish transport system and the opportunity to maximise the benefits of the electric mobility transition for all.

The National Strategy was accompanied by an Implementation Plan that included an initial set of actions and deliverables to support the strategy's delivery. This included the development of this document and the complementary National Road Network EV Charging Plan, published in May 2024. Whereas the latter focuses on the national expansion of the high-powered charging network on the Motorway, Ten-T and National roads and also encompasses charging requirements for HDVs, this plan focuses on delivering charging infrastructure for LDVs in neighbourhoods where people do not have access to private off-street

parking, and at destinations. Together, these two plans make up the National EV Charging Network Plan.



Figure 2.1 National EV Charging Plan

2.3 Scope of the RLEVCNP

The Regional and Local EV Charging Network Plan provides a way forward for equitably delivering charging infrastructure at a national and local level to support the national and international efforts to reduce transport-related carbon emissions through the shift to zero emission vehicles for all users. The plan lays out a pathway, adhering to the fundamental principles set out in the Infrastructure Strategy (Figure 2.2), to sustainably deliver public charging infrastructure for light duty vehicles at destination and neighbourhood locations.



Figure 2.2 Fundamental Principles

With EV adoption rates growing and the planned phasing out of carbon-emitting vehicles, a demand for convenient public charging will increase. Particularly in neighbourhood and destination locations, deploying infrastructure is key to ensuring that users and residents without off-street parking have access to affordable and convenient public charging – most notably in areas where transport alternatives are scarce.

The objectives of this plan are to:

- 4) Support the delivery of well-defined local and regional plans for a coordinated, resilient, selfsustaining, future-proofed network that minimises public funding supports and meets user needs.
- 5) In partnership with key stakeholders, support the coordinated and accelerated expansion of a publicly accessible destination and neighbourhood EV charging network that aligns with greater e-mobility policies.
- 6) Provide a pathway to deliver on national infrastructure targets in support of both AFIR requirements and Climate Action Plan objectives.

The accelerated expansion of public destination and neighbourhood charging infrastructure will be led by local authorities with the support and in partnership with other public sector bodies, private sector groups and other stakeholders.

2.4 Extent of the Plan Area

The RLEVCNP is a national level plan which covers the covers the entirety of Ireland.

To deliver a cohesive charging network that meets user needs, local authorities will take a regional approach to developing a strategy for the delivery of local charging networks, with the exception of local authorities in Dublin, Cork City and Galway City who have completed or are in advanced stages in the development of their strategies.¹² The seven regions and three city areas (Figure 2.3) have been agreed with local authorities.



Figure 2.3 Regional approach for strategy development

Given local authorities' access to suitable sites and knowledge of their jurisdictions and residents' needs, as well as complementary ongoing strategic efforts to promote sustainable mobility, they are in a unique position to design targeted strategies to expand access to publicly accessible EV charging infrastructure at a

¹² These regional groupings are agreed in principle, and subject to funding and resources.

local level. Local authorities can identify areas where gaps in the charging network pose a barrier to EV adoption and inequitably hinder individuals or groups from shifting from ICE to electric vehicles. Due to their knowledge of their local context and opportunities, ownership of suitable sites, and project delivery and stakeholder engagement experience, local authorities can make efficient use of available funding, accelerating the deployment of charging stations where they are needed the most.

By coordinating across jurisdiction borders, local authorities can avoid the risks of insular, siloed planning and potential oversupply of infrastructure where demand does not warrant this while also ensuring there is sufficient infrastructure in rural and remote areas to meet future demand to ensure equitable access to charging infrastructure to promote widespread EV adoption.

2.5 Plan Period

The time horizon for the RLEVCNP covers the period from 2025 to 2030.

3. Relationship with Other Relevant Plans and Programmes

3.1 Introduction

According to Article 5(1) of Annex 1 of the SEA Directive, the environmental assessment must identify "the environmental protection objectives, established at international, European Union or national level, which are relevant to the plan or programme, or modification to the plan or programme, and the way those objectives and any environmental considerations have been taken into account during its preparation".

Ultimately, this section should set out the RLEVCNP in its wider planning context. It should explain which other plans and environmental objective affect the RLEVCNP, and which plans and projects are affected by the RLEVCNP.

The wide range of plans, policies, programmes, and legislation which are considered to be of relevance to the RLEVCNP and are outlined in Appendix B.

A number of these plans policies and programmes have been identified as being key with regards interaction with the RLEVCNP – these are described in Section 3.2.

3.2 Key Policy, Plans, Programmes and Legislation of Relevance

This section of the Environmental Report aims to identify the key policy, plans and programmes of relevance to the RLEVCNP and show how these are interlinked with the RLEVCNP. The schematic as displayed in Figure 3.1 aims to show how these relationships can set the context for the RLEVCNP with regards to policy, plans, programmes, and legislation, including transport planning.



Figure 3.1 Interaction of Key Policy, Plans, Programmes and Legislation (including transport planning) with the RLEVCNP

The preparation of the Plan responds to legislation and policy, including statutory plans, at European Union (EU) and national levels, establishing ambitious targets for decarbonisation and, to this end, the deployment of EV charging infrastructure. The most relevant legislative instruments and plans or programmes are as follows.

Table 3.1	Relevant	Plans and	Programmes

Plan, Programme, Policy, or Legislation	Relevant Aims and Objectives	
European Union Level		
Sustainable and Smart Mobility Strategy	A strategy setting out a roadmap for a sustainable and smart transport future. It includes 10 focus areas and an action plan, aiming for a 90% reduction in the transport sector's emissions by 2050.	
(European Commission's Directorate-General for	Main milestones are:	
Mobility and Transport 2021)	1) By 2030, there will be at least 30 million zero-emission cars and 80 000 zero-emission lorries in operation.	
	2) By 2050, nearly all cars, vans, buses as well as new heavy-duty vehicles will be zero-emission.	
	3) Scheduled collective travel under 500 km should be carbon-neutral by 2030 within the EU.	
	4) By 2030, there will be at least 100 climate-neutral cities in Europe.	
	5) All external costs of transport within the EU will be covered by the transport users at the latest by 2050.	
2040 Climate Target	In February 2024, the European Commission presented its assessment for a 2040 climate target for the EU. The Commission recommended reducing the EU's net greenhouse gas emissions by 90% by 2040 relative to 1990.	
	The 2040 climate target will reaffirm the EU's determination to tackle climate change and will shape our path after 2030, to ensure the EU reaches climate neutrality by 2050. The climate neutrality objective is at the heart of the European Green Deal and is a legally binding objective set out in the European Climate Law.	
	The EU's 2030 climate target is to reduce net greenhouse gas emissions by at least 55% relative to 1990. The 2040 climate target is the next intermediate step on the path to climate neutrality.	
European Green Deal (EGD) (European Commission) 2020	A strategy to oversee Europe's transformation to a climate-neutral, fair, and prosperous society, with a modern, resource-efficient, and competitive economy. The strategy will be supported by climate, energy, and transport-related legislation under the 'Fit for 55 Package' to meet the 2030 and 2050 ambitions.	
	Target: 'Net-zero greenhouse gas emissions at EU level by 2050, and an emissions reduction target of at least 55% for 2030 to limit warming to 1.5 degrees Celsius and align with the goal of the Paris Agreement.'	
	Under the EGD, the European Commission has adopted a set of policy proposals with a view to realising its aim. These include, among others:	
	• The European Climate Law, making the EU's 2050 climate neutrality target legally binding; ensuring that all EU policies contribute to climate neutrality by mid-century and that all sectors play their part. To place the EU firmly on the pathway to climate neutrality by mid-century, it also establishes a legally binding, more ambitious intermediate emissions reductions target for 2030 of at least 55% relative to 1990 levels.	
	• The 'Fit for 55' Package, to deliver wide-ranging legislative and policy changes needed to support the achievement of the EU's emissions reductions targets for 2030 and 2050.	
Alternative Fuel Infrastructure Regulation (AFIR) (European Commission) 2023	The European Commission's new Alternative Fuel Infrastructure Regulation (AFIR) is part of the 'Fit for 55' package. Agreed in March 2023, AFIR establishes mandatory deployment targets for EV and hydrogen refuelling infrastructure for the roads, shipping, and aviation sectors across the trans- European Transport Network (TEN-T). AFIR sets a fleet-based target for EV charging infrastructure commensurate with the level of take up of EVs as follows:	
	• EV charging infrastructure capacity is proportionate to EV uptake, i.e., provision of charging infrastructure power output of 1.3 kW per battery EV, and 0.8 kW per plug-in hybrid vehicle, until battery EVs reach at least 15% market share of all passenger cars and LGVs.	
	AFIR mandates minimum infrastructure requirements on the European transport network, which will ensure that there are sufficient, interoperable recharging and alternative fuel refuelling stations.	

Plan, Programme, Policy, or Legislation	Relevant Aims and Objectives		
	• All new public charge points installed after the Alternative Fuels Infrastructure Regulation is enacted (13 April 2024), will be required to accept card payments by means of a contactless facility for charge points with capacity of 50 kW and over and for charge points with capacity below this to, at minimum, enable a QR code payment system.		
	• From 1 January 2027 onwards, charge point operators shall ensure that all publicly accessible charging points operated by them within three kilometres of the TEN-T road network (and that have a power output equal to or more than 50 kW) can accept card payments.		
	• Charge point operators will clearly display their prices, as well as comparison costs for other fuels as per AFIR requirements. As a result, this information is known to end users before they initiate a charging session. Pricing will be non-discriminatory.		
EU Effort Sharing Regulation (ESR) (European Commission) 2018, as amended 2023	The ESR establishes legally binding annual greenhouse gas emission reduction targets for EU Member States, including Ireland. The ESR targets emission reductions in most sectors not covered by the EU Emissions Trading System (ETS), including transport. Under the ESR, Ireland is required to reduce its emissions from non-ETS sectors by 42% by 2030, relative to 2005 levels.		
National Level			
National Planning Framework (Project Ireland 2040) – (Government of Ireland) 2018	A planning framework to guide growth, development, and investment over the period to 2040. Project Ireland 2040 represents an important shift from previous approaches to long-term planning and investment by the government. It represents an approach that joins up ambition for improvement, bringing the various government departments, agencies, state-owned companies, and local authorities together behind a shared set of strategic objectives for rural, regional, and urban development.		
	Vision: A shared set of goals for every community across the country, expressed as the National Strategic Outcomes.		
Draft First Revision to the National Planning Framework (NPF) (Government of Ireland, 2024)	This Framework is revised and updated to take account of changes that have occurred since it was published in 2018 and to build on framework that is in place.		
National Development Plan 2021- 2030 (Project Ireland 2040)	The Irish Government's over-arching investment strategy and budget for the period 2021-2030, balancing the demand for public investment across all sectors and regions of Ireland, with a major focus on improving infrastructure projects.		
(Department of Public Expenditure and Reform) 2021			
Climate Action and Low Carbon Development (Amendment) Act 2021	In July 2021, the Climate Action, and Low Carbon Development (Amendment) Act 2021 ('the Climate Act') was signed into Irish law. The Climate Act establishes a statutory national climate objective to pursue and achieve, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy.		
	It enshrines in Irish legislation a national target of achieving net zero emissions by 2050, and an interim 2030 target of reducing greenhouse gas emissions by 51% relative to 2018 levels – the most ambitious legally binding emissions reduction target to which Ireland is bound. The Act also provides for the establishment of five-year carbon budgets, sectoral emissions ceilings and statutory Government and Local Authority Climate Action Plans, establishing national and regional roadmaps to ensure compliance with same.		
Climate Action Plan 2024	The Climate Action Plan 2024 (CAP 24) is the third annual update to Ireland's Climate Action Plan 2019.		
	This plan is the second to be prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021, and following the introduction, in 2022, of economy-wide carbon budgets and sectoral emissions ceilings. The CAP 2024 implements the carbon budgets and sectoral emissions ceilings and sets out a roadmap for taking decisive action to halve our emissions by 2030 and reach net zero no later than 2050, as committed to in the Programme for Government.		
	The CAP 2024 also sets out how Ireland can accelerate the actions that are required to respond to the climate crisis, putting climate solutions at the centre of Ireland's social and economic development. In relation to the transport sector, the CAP details a 50% reduction in emissions by transforming how we travel.		

Plan, Programme, Policy, or Legislation	Relevant Aims and Objectives	
	It aims to drive policies to reduce transport emissions by improving town, city, and rural planning, and by adopting the Avoid-Shift-Improve approach: reducing or avoiding the need for travel, shifting to public transport, walking, and cycling and improving the energy efficiency of vehicles.	
Connecting Ireland (National Transport Authority) 2021	A public transport plan to improve mobility in Ireland's rural areas, by providing better connections between villages and towns, and by linking these areas with an enhanced regional network connecting cities and regional centres.	
National Investment Framework for Transport in Ireland (Department of Transport) 2021The DoT prepared the National Investment Framework for Transport in Ireland (NIFTI) level strategic framework to support the consideration and prioritisation of future invest transport. It represents the Department's contribution to Project Ireland 2040, Governme term, overarching strategy to make Ireland a better country for all and to build a more su future. NIFTI has been developed to ensure sectoral investment is aligned with the Natio Planning Framework (NPF) and supports the delivery of the ten National Strategic Outco (NSOs).		
	NIFTI establishes a common lens through which to consider potential investment. In doing so, NIFTI sits alongside other Government priorities and policy objectives, such as the Programme for Government and Climate Action Plan.	
Sustainable Mobility Policy (Department of Transport) 2022	The Sustainable Mobility Policy (SMP) was published in April 2022 and includes 91 actions that support behavioural change through a wide range of interventions. These interventions include, among other things, public transport infrastructure and services, active travel promotion and supports, road safety initiatives, legislative measures, research, and public engagement.	
Electric Vehicle Charging Infrastructure Strategy 2022 – 2025 and accompanying Implementation Plan (Department of Transport and ZEVI) 2023	In January 2023, the Department of Transport and ZEVI launched a national Electric Vehicle Charging Infrastructure Strategy 2022 – 2025 and accompanying Implementation Plan. Together, they provide a strategy and practical action plan for the development of Ireland's EV charging network to 2025, in accordance with targets and requirements in the above-mentioned national and EU legislation and policies.	
Electric Vehicle (EV) Recharging Infrastructure Regulation 2022 In November 2022, new Electric Vehicles (EVs) regulations rolled out that meant to support on climate change, improved air quality and reduced dependence on fossil fuels. It require Vehicle (EV) recharging infrastructure be installed in new homes to enable future installate recharging points.		
	The regulations apply to:	
	• New dwelling houses with a parking space located within the boundary of the dwelling.	
	New multi-unit residential buildings.	
	• Multi-unit residential buildings undergoing major renovation where the car park is located inside or adjacent to the building, and where renovations include the car park or the electrical infrastructure of the building or car park.	
National Road EV Charging Network Plan,	The Draft National Road EV Charging Network Plan is the first element of the National EV Charging Network Plan which covers all publicly accessible EV charging.	
	The initiatives in the National EV charging Network plan will drive the delivery of charging infrastructure to be ahead of demand and deliver AFIR requirements for both LGVs and HGVs by 2025. The plan provides a roadmap for the deployment of en-route EV charging infrastructure across Ireland, working towards achieving both national and European ambitions towards cleaner transportation. The aim of the Plan is to set out a path to deliver these ambitions, coupled with a series of potential commitments on investment, regulation, and policy instruments over the coming years.	
Grid25 Implementation Plan	Grid25, EirGrid's roadmap to uprate the electricity transmission grid by 2025, continues to be implemented so as to increase the capacity of the grid, to satisfy future demand, and to help Ireland meet its target of 40 per cent of electricity from renewable energy by 2020.	
	Circuit uprating's and refurbishments are to be completed on an on-going basis.	

Plan, Programme, Policy, or Legislation	Relevant Aims and Objectives	
The 300 kilometres of new circuit are expected to be connected in 2011/2012. By 2014 ten n 220kV sub- stations are expected to be completed. In total 2,000 out of the 6,500 kilometres existing assets will be uprated during Grid25. ¹³		
Regional and Municipal L	evel	
Eastern and Midland Regional Spatial and Economic Strategy 2019- 2031 (Eastern and Midland Regional Assembly, 2019)	A strategic plan and investment framework to shape the future development of the Region to 2031 and beyond. Vision: 'To create a sustainable and competitive Region that supports the health and wellbeing of our people and places, from urban to rural, with access to quality housing, travel and employment opportunities for all'	
Northern and Western Regional Spatial and Economic Strategy 2020- 2032 (Northern and Western Regional Assembly, 2020)	A Strategy to support the implementation of Project Ireland 2040, including the economic and climate policies of the Government, by providing a long-term strategic planning and economic framework for the region. Vision: 'To play a leading role in the transformation of this region into a vibrant, connected, natural, inclusive and smart place to work and live.'	
Southern Regional Spatial and Economic Strategy (Southern Regional Assembly, 2020)A long-term, strategic development framework for the future physical, economic, and development of the region. Vision:• Nurture all our places to realise their full potential. • Protect and enhance our environment. • Successfully combat climate change. • Achieve economic prosperity & improved quality of life for all. • Accommodate expanded growth & development in suitable locations; and • Make the Southern Region one of Europe's most creative, innovative, greenest, a regions.		

4. SEA Methodology

4.1 Introduction

This section highlights how the SEA has been undertaken for the RLEVCNP.

The SEA methodology is based on legislative requirements and relevant EPA guidance and will ensure compliance with the SEA Directive and associated legislation. The EPA's SEA Pack (Version 09/01/2023) was also used as a source of information during the scoping process¹⁴.

The RLEVCNP (ZEVI), the SEA Environmental Report and the Appropriate Assessment (Arup) were prepared in an iterative manner whereby multiple revisions of each document were prepared, each informing subsequent iterations of the others. To facilitate this iterative approach, numerous discussions were held between ZEVI and Arup.

The key stages outlined in Figure 4.1 were identified and are discussed in the following sections.

¹³ Energy Ireland. Link to the source: https://www.energyireland.ie/grid25/

¹⁴ Available at: <u>https://www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/SEA-Pack-2024.pdf</u>



Figure 4.1 Key Stages of the SEA Process

4.2 Screening

Screening is the process for deciding whether a particular plan would warrant SEA at the earliest possible opportunity, it also facilitates the assessment findings so that they can be factored into the plan development process.

The screening determination for the RLEVCNP was determined to be mandatory as the RLEVCNP is of a type of Plan/Programme (P/P) which falls within the remit of the SEA Directive/SEA Regulations based on the following:

- The Plan has been prepared by a Government Authority at national level, ZEVI, a dedicated Office of Government established in 2022.
- The Plan is considered to constitute a P/P that is required by legislative/administrative provisions arising from EU and national law and policy.
- The RLEVCNP is a P/P prepared for the transport sector and has the potential to set a framework for the development consent for projects listed in the EIA Directive; and
- The RLEVCNP is not of a type exempted from SEA. It does not serve national defence or civil emergency purposes or provide a financial budget, and it has not been co-financed by the Structural Funds/Regional Development Funds programme.

4.3 Scoping

The main objective of the Scoping Stage is to identify the key environmental issues that may arise as a result of the RLEVCNP, so they may be addressed appropriately in the ER.

There are a number of tasks at this stage:

- Determine the key elements of the RLEVCNP to be assessed.
- Determine the environmental issues to be assessed.
- Collect and report on relevant international, national, and local plans, objectives and environmental standards that may influence or impact on the RLEVCNP.

- Develop draft environmental objectives, indicators, and targets to allow the evaluation of impacts; and
- Identify reasonable alternative means of achieving the strategic goals of the RLEVCNP.

A Scoping Report was prepared in January 2024 in relation to the RLEVCNP, which provided information to allow consultation with defined statutory bodies on the scope and level of detail to be considered in the environmental assessment.

The RLEVCNP was issued to the statutory consultees and the consultees were given a period of four weeks to respond with any observations or submissions on the content of the SEA Scoping Report.

The SEA Directive requires that where the RLEVCNP has potential for transboundary environmental effects these must be addressed within the SEA. In accordance with SEA Directive and EPA Guidance, the relevant statutory consultee in Northern Ireland was contacted during the Scoping consultation period as listed on the EPA Contacts Section of the EPA website: <u>https://www.epa.ie/our-services/monitoring--</u>assessment/assessment/strategic-environmental-assessment/sea-contacts-/.

Scoping responses were received from the following statutory consultees during the statutory consultation period. Responses received are provided in Table 4.1.

- Environmental Protection Agency (EPA);
- Department of Environment, Climate and Communications (DECC) on behalf of Geological Survey of Ireland (GSI);
- Department for Communities Historic Environment Division (HED); and
- Department for Agriculture, Environment and Rural Affairs (DAERA) Northern Ireland Environment Agency (NIEA) SEA Team.

Consultee/Stakeholder **SEA Scoping Response SEA Actions Environmental Protection** Noted. A schematic of the Plan's position EPA recommends including a schematic of the hierarchy of transport planning and key relevant stakeholders, and the Plan's position within that overall framework. This would clearly show how the key relevant plans and policies are within that overall framework have been Agency (EPA) interlinked. The aim is to provide for connected and coordinated transport planning on the island of Ireland. incorporated into the SEA ER. Below is a list of legislation, plans, programmes, and research resources that may be relevant for consideration. Appendix B of this report has been updated to include a summary of the relevance of International Plans, Programmes, Policies or Legislation these plans and programmes. • ESPOO Convention and Kyiv (SEA) Protocol **OSPAR** Convention ٠ • WHO Global Air Quality Guidelines 2021 • Healthy Cities Project (WHO) European Plans, Programmes, Policies or Legislation • National Emissions Ceiling Directive (2016/2284) 8th Environmental Action Programme ٠ • The EU Zero Pollution Action Plan · Proposal for a Regulation of the European Parliament and of the Council on nature restoration National, regional, and local level plans and programmes National Air Pollution Control Programme State of Global Climate – Provisional Report 2021) • Ireland's Climate Change Assessment Prioritised Action Framework 2021-2027 (NPWS) • Management plans for Natura 2000 and National Site Network sites Just Transition First Progress Report Regional Tourism Strategies (Fáilte Ireland) • National Clean Air Strategy National Roads Plan • • Dublin Action Plan for Nitrogen Dioxide (December 2021) Local Authority Climate Action Plans Urban Transport Related Air Pollution (UTRAP) Working Group gov.ie - Urban Transport-Related Air Pollution (UTRAP) Working Group (www.gov.ie) Flood Risk Management plans (where relevant) •

Table 4.1 Scoping Responses

Consultee/Stakeholder	SEA Scoping Response	SEA Actions
	National SEA Guidelines	
	 Strategic Environmental Assessment: Guidelines for Regional Assemblies and Planning Authorities (DHLGH, 2022) 	
	Possible additional Data Sets and information sources	
	National Land Cover map	
	 Ireland's Greenhouse Gas emissions 1990-2021 (https://www.epa.ie/publications/monitoringassessment/climate- change/air-emissions/Ireland's-Final-Greenhouse-gas-report-1990-2021_April-2023.pdf) 	
	 Article 17 Habitats Directive Reports Ireland/Northern Ireland https://www.npws.ie/publications/article-17- reports/article-17-reports-2019 o https://jncc.gov.uk/our-work/article-17-habitats-directive-report-2019/ 	
	• Spatial analysis of Ireland's greenhouse gas exists at https://projects.au.dk/mapeire/spatial-results/.	
	 EPA national air pollutant inventory submissions, available at http://www.epa.ie/pubs/reports/air/airemissions/airpollutantemissions/ 	
	 Data on levels of atmospheric pollutants from the EPA's national ambient air quality monitoring network (http://www.epa.ie/air/quality/monitor/) 	
	 Climate Change Advisory Council annual review (https://www.climatecouncil.ie/councilpublications/annualreviewandreport/) 	
	 the latest GHG projections which can be found here https://www.epa.ie/publications/monitoring assessment/climate-change/air-emissions/irelands-greenhouse-gas-emissions-projections-2022-2040.php. 	
	• The latest published EPA water quality report Water Quality in 2022- An Indicators Report (EPA, 2023).	
	There is merit in reviewing the EPA's SEA Spatial Information Sources Inventory to determine whether any additional information may be of relevant to the Plan and SEA. https://www.epa.ie/publications/monitoringassessment/assessment/strategic-environmental-assessment/sea-spatial-information-sources-inventoryphp	Use of this inventory has been noted and reviewed as a useful support to assist the SEA process
	The key aspects of the Plan identified as having potential for likely significant environmental effects should help identify which environmental criteria may be more potentially impacted. This should help inform what environmental sensitivities are considered and the weightings assigned to those sensitivities.	The potential for likely significant effects has informed the environmental sensitivities and weightings of associated with those sensitivities.
		The methodology and weighting system applied is adopted from the EPA report 'GISEA Manual Improving the Evidence Base in SEA' and based on feedback from the scoping consultation process.
	In Table 3, in relation to WFD High status waterbodies (River, Lakes, Transitional, Groundwater), a weighting of 10 may be more appropriate, to reflect their greater relative importance for supporting various ecosystems and associated biodiversity.	This comment is welcomed, although Arup is satisfied with a ranking of 5 for High status waterbodies.

Consultee/Stakeholder	SEA Scoping Response	SEA Actions
	Given that the Plan is national in scale, it may be more appropriate to split the comprehensive objectives for the various environmental components set out in Table 5 into a smaller number of higher-level environmental protection objectives (EPOs) which seek to address the key environmental objectives. These can be supported by sub-objectives for more specific elements of the Plan. Where possible, the EPOs should also be made more specific to the Plan and assessment being carried out.	Noted. High level environmental protection objectives have been included in the SEA ER.
	Table 5 – Strategic Environmental Objectives, Targets, and Indicators.	Noted.
	We note the objectives, targets and indicators as set out for the various environmental components. The assessment of the EPOs against the Plan objectives could be done, taking account of the higher-level EPOs. The assessment for each environmental theme, could also include summary text of any aspects identified requiring mitigation, further assessment, policy wording changes/additions etc.	
	In terms of selecting monitoring indicators, where possible these should consider the potential impacts of the Plan and which monitoring indicators may be best placed to take these into account, over the lifetime of the Plan. Using broader environmental monitoring, will make it more difficult to differentiate whether any changes in environmental quality relate to implementation of the Plan (needing to be mitigated) or relating to wider environmental changes not linked to the Plan.	Noted. This has been taken into consideration in this ER. Due to the nature and scale of the Plan, only broader environmental monitoring measures can be included at this time.
	Alignment with other key plans and programmes	Noted.
	The Plan must consider the national sustainable mobility policy and outline investments for sustainable transport alternatives. It should demonstrate connectivity with other transport strategies, such as metropolitan area plans, and align with the National Planning Framework. Additionally, the Plan must incorporate County/City Development Plans, Local Authority Climate Action Plans, and relevant sectoral transport planning.	
	Biodiversity	Noted.
	The Plan must incorporate habitat mapping, consider green/blue infrastructure and ecological corridors, and commit to protecting designated national and European sites during implementation. It should address the control of invasive species and integrate relevant elements from the National Biodiversity Action Plan and the All-Island Pollinator Plan.	
	Scope of the SEA The SEA must define the Plan's scope, remit, and implementation details, guiding the appropriate assessment level. If Plan measures are implemented through other SEA-reviewed plans, this should be explained in the Environmental Report and considered in the assessment.	Noted. Chapter 2 of the ER includes an introduction and overview of the Plan. Proposals included in the Plan have been assessed in this ER in terms of significant effects on the environment – refer to Chapter 8.

Consultee/Stakeholder	SEA Scoping Response	SEA Actions
		It is stated in this Environmental Report that any plans/projects arising from the implementation of the Plan will be subject to appropriate feasibility, options and environmental assessment where required.
	<u>SEA Alternatives</u> You should describe the alternatives considered and how the selection and assessment of these has led to the selection of the preferred alternative. You should assess the alternatives against the 'Strategic Environmental Objectives' identified in the SEA ER. The EPA's good practice guidance note on Developing and Assessing Alternatives in	Consideration of alternatives have been included in Chapter 7 of the ER. EPA Guidance documents have been referred to and incorporated into the SEA ER.
	Strategic Environmental Assessment (EPA, 2015) may be useful to consider in preparing and assessing alternatives. Range of Environmental effects The SEA should refer to the full range of environmental effects and of the area likely to be affected. This assessment should consider the duration and frequency of effects as well as short, medium, and long-term and synergistic effects of the legislation. With regards the potential for cumulative effects, the EPA Guidance Practice Guidance Note on Cumulative Effects Assessment in Strategic Environmental Assessment (EPA, 2020) may be useful to consider in this context.	Assessment of potential environmental effects arising from the plan have been included in Chapter 8 of the ER. EPA Guidance documents have been referred to and incorporated into the SEA ER.
	Data & Knowledge gaps The SEA should identify any significant data and knowledge gaps and include commitments to help address these on a priority basis during the implementation phase of the Plan. This is with a view to strengthening the evidence base for future reviews and iterations of the Plan.	Due to the high-level nature of the Plan and non-specificity of geospatial locations for charging infrastructure at this time, data and knowledge gaps cannot be identified at this stage.
	We note the reference in Chapter 9 of the scoping report relating to the next steps to be taken in the SEA process. There is merit in noting that the scoping for the SEA is dynamic and should continue to feed into the preparation of the SEA environmental report and Plan.	Noted. Scoping responses have been incorporated into the SEA ER.
	Following the completion of the public consultation on the SEA and the Plan, while ongoing opportunities are presented for integration during the SEA process, the final stages of the SEA process are to integrate the environmental considerations of the SEA environmental report into the Plan, as appropriate. In accordance with Article 16 of the SEA Regulations, a SEA Statement should be published alongside the adopted Plan, summarising:	Guidance on the SEA process been taken from EPA Guidance on GISEA.
	how environmental considerations have been integrated into the Plan.	
	• how the environmental report and consultation comments on it have been considered.	
	• the reasons for choosing the Plan as adopted, in the light of the other reasonable alternatives dealt with (in the Environmental Report and the associated consultation).	
	the measures decided concerning monitoring.	

Consultee/Stakeholder	SEA Scoping Response	SEA Actions
	The EPA has published Guidance on SEA Statements and Monitoring, which should be considered in preparing the SEA statement.	
	<u>Available guidance and resources</u> The EPA website contains various SEA guidance notes and SEA resources at: https://www.epa.ie/our- services/monitoringassessment/assessment/strategic-environmental-assessment/sea-topic-and-sector-specific- guidance-/	Noted. EPA Guidance documents have been referred to and incorporated into the SEA ER.
	Environmental Sensitivity Mapping (ESM) Webtool The ESM Webtool is a decision support tool to assist SEA and planning processes in Ireland. The tool brings together over 100 datasets and allows users to explore environmental considerations within a particular area and create plan- specific environmental sensitivity maps. These maps can help planners anticipate potential land-use conflicts and help identify suitable development locations, while also protecting the environment. The ESM Webtool is available at www.enviromap.ie.	Use of this tool has been noted and reviewed as a useful support tool to assist the SEA process.
	<u>EPA SEA Search and Reporting Tool</u> Our SEA Search and Reporting Tool is publicly available at https://gis.epa.ie/EPAMaps/SEA. It allows public authorities to produce an indicative report on key aspects of the environment in a specific geographic area It is intended to assist public authorities in SEA screening and scoping exercises.	Use of this tool has been noted and reviewed as a useful support tool to assist the SEA process.
	<u>EPA Appropriate Assessment GeoTool</u> AA GeoTool application has been developed in partnership with the NPWS. It allows users to a select a location, specify a search area, and gather available information for each European Site within the area. It is available at: https://gis.epa.ie/EPAMaps/AAGeoTool.	Use of this tool has been noted and reviewed as a useful support tool to assist the SEA process.
DAERA – Northern Ireland Environment Agency	NED notes within Chapter 6 a description of sensitivity mapping have been provided. NED has concerns with this approach. Within Section 6.2 it states that the weights are subjective in nature, NED would be more confident in an approach which is evidence based. It is unclear as to how each weighting point (column 4 within Table 3) has been allocated and within Table 4 how the overlay results are related to significance of impacts against the environment. NED is concerned that should a site for example contain only an SAC and therefore a weighting of 10 that as per Table 4 this would be categorised as "low-sensitivity areas". Areas such as priority habitats which are not within designated sites have also not been included.	The Environmental Sensitivity Mapping has been prepared in accordance with the EPA Guidance on GISEA.
	NED notes that within Chapter 5 that Flora and Fauna have not been listed, it is unclear if they are included within the biodiversity section or have been omitted. NED advise that this should be made clearer in the Environmental Report and advise that flora and fauna should be clearly included within biodiversity or have their own section. NED also note that within Section 5.3.1.2 that no details have been provided on designated sites within Northern Ireland, NED would also welcome more detail in relation to priority habitats and species within Northern Ireland, this should be included as part of the Environmental Report. NED also note that within Chapter 5 that no section on interrelationships have been provided, this should be included in the Environmental Report.	Section 5.3 (Biodiversity) of the SEA ER is inclusive of Flora and Fauna. Section 5.3.1 (Transboundary Baseline) refers to protected sites in Northern Ireland.

Department of Transport

Consultee/Stakeholder	SEA Scoping Response	SEA Actions
	NED also note that no mapping in relation to Northern Ireland has been provided within Appendix A as has been the case for Ireland, NED would recommend the inclusion of maps of Northern Ireland in relation to SEA topic areas. Furthermore, NED advise that should there be any difficulties encountered in compiling the required information this should be outlined within the Environmental Report.	Note that maps of protected sites in Northern Ireland have been included in the SEA ER.
	NED note within Table 5 that a number of the targets have not been provided with clear figures and thresholds. NED recommend that clear measurable figures and thresholds should be used for targets and indicators were appropriate to provide clear goals	Noted.
	NED also notes within Table 5 under biodiversity indicators it states that "Conservation status/habitat quality for all sites and species located near EVCI", "near" is a subjective term and a clearer measurable definition should be used, with perhaps a measurable Zone of Influence	Table 6.1 of the SEA ER has been updated to include the wording 'Zone of Influence'.
	NED also note in Table 5 it states that the "siting of development of infrastructure on non-sensitive sites, where possible and appropriate" NED welcomes this, however, advises that, any siting of infrastructure should result in non-significant impacts wherever they are located this must be made clear in the Environmental Report.	Table 6.1 of the SEA ER has been updated to include that any siting of infrastructure should result in non-significant impacts wherever they are located.
	NED advise that impacts can occur at a distance from the construction and operational phases of the project. As discussed above interrelationships should also be included. NED also advise that impacts may not just result from air quality and be positive in nature, therefore sites other than those related to air quality should be included and the potential impacts both positive and negative indicators included.	Noted. An assessment of inter-relationships is included in the ER.
	NED notes under biodiversity indicators that the "Scale of EVCI permitted in proximity/within European sites/sites of ecological importance" this should not be limited to European sites and should include other designated sites and priority habitats. The indicators should also focus on any biodiversity loss or gain as a result of the plan both within and adjacent to designated sites. Furthermore, NED advise that details of where the indicators data will be sourced from should be included at the Environmental Report stage.	Table 6.1 (biodiversity indicators) has been updated to include this statement. All sources to data are referenced within the ER.
	NED note the alternatives provided within Section 3. NED notes that a more detailed environmental assessment of alternatives will be included in the Environmental Report and welcome this NED looks forward to reviewing these as part of the Environmental Report.	More detailed environmental assessment of alternatives included in section 7 of the SEA ER.
	NED notes that an AA (Appropriate Assessment) screening is to be undertaken carried out. NED would welcome the opportunity to review the AA screening and if required the completed AA when they have been completed.	Noted.
	Please note following the decision of the United Kingdom to leave the European Union, the collective term of "Natura 2000" sites the network of European protected sites is now known as "National Site Network" sites within the United Kingdom and is including Northern Ireland.	Noted. The SEA ER has been updated where appropriate.
	DAERA set out a range of guidance and data sources that may be useful in the preparation of the SEA	Noted and reviewed

Consultee/Stakeholder	SEA Scoping Response	SEA Actions
	Air Quality Consideration should be given as to the potential impacts of the Plan on air pollutants at protected sites in Northern Ireland (transboundary impacts). Further information regarding the location of protected sites in Northern Ireland can be found at Natural Environment Map Viewer Department of Agriculture, Environment and Rural Affairs (daera- ni.gov.uk).	Protected sites are now included in the assessment in section 6 of the ER.
	AQBU welcomes the consideration given to construction and traffic related activities associated with the delivery of projects within the Plan and if they might trigger a significant air quality effect on nearby sensitive habitats or species. Activities within 200m of sensitive habitats to air pollution should be assessed for potential effects from NOx and dust.	Noted.
	Ireland is now included in the Air Pollution Information System (APIS) which provides information on the impacts of air pollutants, such as NOx, ammonia emissions and the associated N deposition on sensitive habitats and species. The map feature within APIS enables detailed information to be provided on the Critical Levels/Loads for each qualifying feature and background levels of these pollutants: APIS app Air Pollution Information System.	Noted
	DAERA Marine Plan Team comment: Having reviewed the documentation, it is recommended the environmental objectives from marine policy and legislation both from the Republic of Ireland and Northern Ireland and the way those objectives and considerations have been considered, should be included.	Noted. Environmental objectives from marine policy and legislation have not been included as there will be no likely effects on marine environment.
	The relevant Northern Ireland documents are listed below:	
	• Marine Act (NI) 2013	
	Marine and Coastal Access Act 2009	
	UK Marine Policy Statement 2011	
	Draft Marine Plan for Northern Ireland 2018	
	Integrated Coastal Zone Management Strategy for Northern Ireland 2006-2026	
	• UK Marine Strategy [Marine Strategy Framework Directive (MSFD)]	
	The report would benefit from stating if there are any likely effects or no likely effects on the marine environment and the transboundary marine environment.	
	The section on transboundary baseline is welcomed. It would be helpful if any specific marine key issues and opportunities could be highlighted. For example, under Biodiversity, it is suggested the potential negative impacts due to run-off or dust deposition if construction works taken place in proximity to ecologically sensitive sites, should clearly state if this includes ecologically sensitive sites in the marine area.	
	It is also recommended that consideration is given to MSFD, particularly those elements not covered by WFD within coastal waters. This includes issues such as impacts of noise, litter, and certain aspects of biodiversity.	

Consultee/Stakeholder	SEA Scoping Response	SEA Actions
	The SEOs should also clearly include appropriate reference to marine aspects where relevant. For example, within the Water and Biodiversity SEO consideration should be given to the requirements of MSFD, not covered by WFD in coastal waters. The reference to 'seascapes' within the Landscape and Visual SEO is welcomed.	
	Inclusion will enable the subsequent Environmental Report to consider and assess likely effects on the marine environment, including the transboundary marine environment with Northern Ireland.	
HED – Historic Environment Division	HED welcome the consideration of transboundary issues in relation to Northern Irelands historic environment. In order to assist in identification of potential project specific transboundary impacts we advise that our full suite of currently recorded heritage assets (including architectural, historic parks and gardens, industrial and defence heritage, as well as archaeological) are available spatially via our downloadable Historic Environment Digital Datasets Department for Communities (communities-ni.gov.uk) and our Historic Environment Map Viewer Department for Communities (communities-ni.gov.uk).	Noted.
	We would also clarify that in addition to protection for archaeological heritage, the Transboundary Baseline, Para 5.7.1.1, should also acknowledge the legislative protection for architectural heritage under the Planning Act (NI) 2011, including vires to designate Listed Buildings and Conservation Areas.	Noted.
NPWS: Department of	We advise that you have regard to the following in preparing the SEA for this project.	Noted. The SEA ER includes reference to
Housing, local Government and Heritage	Legislation and Policy Framework	this legislation and policy framework.
	The National Monuments Acts 1930 to 2014	
	The specific national legislative code for protection of monuments, historic wrecks and archaeological objects is the National Monuments Acts 1930 to 2014. In summary, this provides legal protection for all archaeological objects, wrecks 100 or more years old and for a range of categories of monuments and places. Archaeological objects (which in broad terms includes all moveable objects of archaeological importance) are comprehensively protected under the National Monuments Acts.	
	In terms of protection of monuments and related sites, the most widely applicable protective mechanism is the Record of Monuments and Places (RMP), established under section 12 of the National Monuments (Amendment) Act 1994. There are over 130,000 entries in the RMP, which takes the form of lists and maps for each county in the State. Copies of these lists and maps, as prepared in the 1990s, were circulated to all planning authorities and are now available in PDF format at www.archaeology.ie. The RMP includes the archaeological monuments which had been identified at the time it was issued. Of course, many more archaeological monuments have been identified since and, while these have not as yet been included in the RMP, an online database of known archaeological monuments, the Sites and Monuments Record (SMR)—including current RMP entries and ones which will be included in a revised RMP—is available as the Historic Environment Viewer.	
	The RMP requires notice to be given to the Minister for Housing, Local Government and Heritage of proposed work at or in relation to monuments and places included in it (generally referred to as "recorded monuments"). Similar protection is provided by the Register of Historic Monuments (established under section 5 of the National Monuments (Amendment) Act (1987) to historic monuments and archaeological areas included in it.	Noted.

Consultee/Stakeholder	SEA Scoping Response	SEA Actions
	The strongest legal protection under the National Monuments Acts in respect of monuments is afforded to national monuments of which the Minister for Housing, Local Government and Heritage or a local authority is owner or guardian or in respect of which a Preservation Order under the National Monuments Acts is in force. The consent of the Minister is required for interference with such national monuments or ground disturbance around or in proximity to them. A national monument is any monument the preservation of which is a matter of national importance by reason of the archaeological, architectural, historical, traditional, or artistic interest attaching to it	Noted.
	Under the National Monuments Acts the Minister and local authorities must maintain national monuments of which they are owners or guardians (the OPW has day to day responsibility in relation to national monuments owned by or in guardianship of the Minister for Housing, Local Government and Heritage) and, subject to such restrictions as are reasonably necessary, seek to provide public access to such national monuments. All wrecks over 100 years old (whether previously known or just discovered) and all archaeological objects situated underwater, are protected under section 3 of the National Monuments (Amendment) Act 1987. Wrecks of any date and the potential location of wrecks or archaeological objects may also be protected under Section 3 of the 1987 (Amendment) Act by the making of an underwater heritage order, if considered to be of sufficient historical, arabaeological or articitie importance to more the protection.	Noted.
	The Planning and Development Act 2000 and the Planning and Development Regulations 2001 The Planning and Development Acts and Regulations contain further provisions relating to the protection of archaeological heritage. These include provisions for the conservation and protection of archaeological heritage within Development Plans, provisions making clear that imposition of archaeological conditions on grants of planning permission does not ground claims for compensation and detailed provisions to ensure that planning applications for proposed development which would affect sites protected under the National Monuments Acts 1930 to 2014 or archaeological sites in general are referred to the National Monuments Service.	Noted.
	Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 The recently signed Historic and Archaeological Heritage and Miscellaneous Provisions Act (2023) will replace the National Monuments Acts (1930–2014). The Bill will provide for the protection of historic and archaeological heritage. A new 'Register of Monuments' will be established, replacing several overlapping designation and registration systems currently in operation. Newly discovered archaeological sites will be afforded immediate legal protection, mirroring the existing system for archaeological objects and historic wrecks that are automatically protected without a need for formal designation or registration. This will be reinforced by a statutory reporting scheme for finds of monuments. Subject to certain exceptions, archaeological objects with no known owner will automatically become the property of the State. A new civil enforcement procedure can be used as an alternative to, or to supplement, criminal proceedings.	Noted. This recent Act has been added to section 5.7.1 of the SEA ER.

Consultee/Stakeholder	SEA Scoping Response	SEA Actions
	The bill makes explicit provision for the protection of World Heritage sites, including, for the first time, a definition in Irish law for "World Heritage Property". The new legislation enables the State to ratify or accede to certain international conventions, notably the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage, the 1970 UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property and the 1995 UNIDROIT Convention on Stolen or Illegally Exported Cultural Objects. The Act gives further effect to the 1992 Council of Europe European Convention on the Protection of the Archaeological Heritage (the "Valletta Convention").	
	The Act introduces a new integrated licensing system whereby one licence can authorise a range of activities and, for the first time, a statutory appeals process will be established to review licensing decisions.	
	Note while this new legislation has been signed into law, most of the provisions of the Act have not yet been commenced. However, it is expected that substantive implementation will occur within the lifetime of this DEDP.	
	The Environmental Impact Assessment Directive	Noted.
	The EU Directive on EIA (which is given effect to in Irish law through a range of national legislation) clearly requires that EIA include consideration of impact on archaeological heritage.	
	International Conventions	Noted.
	Ireland is a party to the 1992 Council of Europe European Convention on the Protection of the Archaeological Heritage (the "Valletta Convention"). It is important that all public bodies, play their part in ensuring Ireland is at all times in compliance with this binding international treaty, including through using domestic legislation such as the Planning and Development Act to give effect to the requirements of the Convention. A particular focus of the Valletta Convention is the requirement to ensure that archaeological considerations are integrated into the planning and development process. Ireland is also a party to the 1972 UNESCO World Heritage Convention.	
	Although not as yet a party to the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage, Ireland supported its adoption and has through the recent Historic and Archaeological Heritage and Miscellaneous Provisions Act (2023) directly facilitated its ratification. It is essential that full account is taken of the need to provide appropriate protection for the underwater cultural heritage	
	<u>National policy on protection of the archaeological heritage in the course of development</u> The Framework and Principles for the Protection of the Archaeological Heritage (Government of Ireland 1999) was published so as to promote a high level of compliance with the aims and requirements of the Valletta Convention. It sets out national policy on the protection of the archaeological heritage in the course of development. While not specifically directed at the planning system, as operating under the Planning and Development Acts, it speaks to all development control codes.	Noted. Section 5.7.1 of the ER now includes reference to the e Framework and Principles for the Protection of the Archaeological Heritage (Government of Ireland 1999).
	Core elements of the policies set out in the Framework and Principles document include emphasis on the non- renewable nature of the archaeological heritage and the need to always consider its preservation in-situ as the first option, and also the need to carry out appropriate levels and forms of archaeological assessment in advance of development.	Noted.
Consultee/Stakeholder	SEA Scoping Response	SEA Actions
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	Data/information sources The Department would draw attention to the following data sources about the archaeological and cultural heritage environment relevant to the Strategy and its associated environmental assessments.	Noted.

4.4 Baseline Data

Gathering relevant information relating to the state of the baseline environment for a plan area is an integral part of the SEA process. The SEA Directive requires that certain information relating to the relevant environmental baseline is presented in order to help test the performance of the plan's implementation, as well as helping establish how the environment would change if the plan were not to implemented. Baseline information has been collected from readily available sources. The baseline information is reported in Section 5 of this report.

4.5 Considerations of Alternatives

The SEA Directive requires that reasonable alternatives be assessed in order to demonstrate how the preferred strategy performs against other forms of action. Alternatives must be developed, described, and assessed within the SEA process, with the results presented in the ER. Section 7 of this report identifies, describes, and evaluates different scenarios for the Plan, considering national planning policy, economic development policy, and the Strategic Environmental Objectives (SEOs) identified in Section 6.

4.6 Environmental Assessment of the Plan

The environmental assessment process ran in parallel to the development and preparation of RLEVCNP. The environmental assessment process was undertaken in accordance with best practice SEA principles and guidance. This included desk reviews of all of the available GIS data, specialist investigation into the likely effects associated with the RLEVCNP and proposals for suitable mitigation measures along with monitoring.

It should be noted that this document is the updated SEA ER, containing an assessment of the final RLEVCNP. An SEA ER was prepared in 2024 which summarised the environmental assessment of the draft RLEVCNP. This was put on public display in May 2024.

Since there has been some passage of time since the public consultation, and given the changes made to the RLEVCNP since then, it was considered best practise to update the SEA ER.

4.7 SEA Statement

On adoption of the RLEVCNP, the SEA Statement will be made public and will include information on how environmental considerations were integrated into the RLEVCNP.

It will highlight the following:

- Main changes to the RLEVCNP which results from the SEA process.
- How the Environmental Report and consultations were taken into account.
- Summary of the key issues raised in consultations and in the Environmental Report indicating what action was taken in response; and
- The reasons for choosing the RLEVCNP in the light of the other alternatives, identifying the other alternatives considered, commenting on their potential effects, and explaining why the RLEVCNP was selected.

4.8 Consultations

Further to the SEA Scoping consultation outlined in Section 4.3, the draft SEA Environmental Report was issued to the relevant statutory stakeholders for comment. The responses received have been addressed in the finalisation of the Environmental Report (this report). An outline of the responses received will be included in the SEA Statement. The SEA ER was also put on public display, alongside the draft Plan in May 2024. No submissions were received during this time relating to the SEA ER.

4.9 Technical Difficulties Encountered

Data relating to land cover on the Republic of Ireland was taken from the European Environmental Agency (EEA) CORINE (Coordination of Information on the Environment) land cover data series, which is an EU-

wide inventory of land cover in 44 classes categorised from satellite photography. The new national land cover map prepared by the National Mapping Division of Tailte Éireann, was considered too detailed for a national level plan.

No further technical difficulties were encountered during the preparation of this Environmental Report.

5. Current State of the Environment

5.1 Introduction

An assessment of the current state of the environment and key environmental issues across Ireland was conducted within the Plan SEA Scoping Report and reviewed as part of the SEA ER preparation. GIS is used extensively to provide national information.

The baseline environment is assessed under the following headings:

- Population & Human Health.
- Biodiversity (Including Flora and Fauna).
- Land & Soil.
- Water (note: the topic of marine environment has been assessed under Water).
- Air Quality, Noise & Climate.
- Archaeology, Architectural & Cultural Heritage.
- Landscape & Visual; and
- Material Assets.

In accordance with S.I. 436 of 2004 (as amended) consideration will be given to whether the environmental effects, both positive and negative, of the Plan are likely to be significant.

The SEA Directive requires that where the RLEVCNP has potential for transboundary environmental effects these must be addressed within the SEA. Where relevant and or appropriate, potential transboundary effects in Northern Ireland are included, as it is considered that significant effects may be likely due to the extensive nature of the border between the Republic of Ireland and Northern Ireland.

In addition, mitigation which has been developed as part of this SEA can be applied for any potential transboundary effects in the same manner in which they are applied for effects in the Republic of Ireland. A transboundary baseline has been provided in Sections 5.2 to 5.9.

5.2 Population and Human Health

5.2.1 Baseline

5.2.1.1 Population

According to the 2022 Census results, the population of Ireland was 5,149,139 in 2022. This is an increase of 8.1%, almost twice the increase rate on the 2016 Census (4,761,865)¹⁵. Between 2016 and 2022, the

¹⁵ Central Statistics Office (2022) Census 2022 Summary Results - Part 1. Available at: Key Findings - CSO - Central Statistics Office

population grew by an average of growth rate of 1.3%. The rise in population is most evident in certain regions:

- Increases in population since 2016 ranged from 5% in Donegal, Kilkenny, and Tipperary to 14% in Longford.
- Population growth tended to be stronger in the east of the country with Meath growing by 13%, followed by Fingal (12%) and Kildare (11%).
- Population changes by county show that Fingal had the largest natural increase (19,183), followed by Cork (county and city combined) (17,218).
- Leitrim (770) and Sligo (1,373) were the counties with the smallest natural increases.
- Estimated net migration ranged from 1,847 in Monaghan to 24,070 in Cork (county and city combined).



Figure 5.1 Population Change in Ireland since 2016 (%) | Source: SCO, 2022

To coincide with this growing population, the 2022 CSO figures show the continued growth in the number of electric and plug-in hybrid vehicles licensed in Ireland. The number of new electric cars licensed has increased by 82% from 8,414 in the first 11 months of 2021 to 15,291 in the same period in 2022. At the

same time, the number of new diesel cars has decreased to 26,889 in the first 11 months of 2022 compared with 34,174 in the same period in 2021.

By far the most common type of EV in 2021 was the conventional hybrid (45%), while one-third of EV owners had a fully electric EV, and more than one in five (22%) had a plug-in hybrid. However, the most common deterrent to buying an EV was the purchase price (63%), 29% cited access to public charging infrastructure, while 21% said that no or limited access to home charging was an issue.

5.2.1.2 Human Health

Availability of spatial data on human health is limited. A key area of consideration of human health will be the interaction between environmental aspects such as water, landscape, biodiversity, air, and energy and human beings.

According to the Department of Health report '*Health in Ireland: Key Trends 2023*', Ireland has the highest self-perceived health status in the EU, with 80% of people rating their health as good or very good. The number of people reporting a chronic illness or health problem is also better than the EU average, at approximately 29.5% of the population.

Health is influenced by many factors in the social and built environment including, housing, employment status, education, transport and access to fresh food and resources, as well as the impacts of air quality, water quality, flooding, and access to green space.

5.2.1.3 Transboundary Baseline

Northern Ireland, like the Republic of Ireland, is experiencing a rise in population as seen by their most recent Census (2021)¹⁶. The increasing population has the potential to result in similar problems as in the Republic of Ireland, particularly if charging infrastructure is deployed along and or around roadways connecting the Republic of Ireland to Northern Ireland e.g., the M1.

Like the Republic of Ireland, availability of spatial data on human health is limited and health is influenced by the same factors outlined above.

A Health Survey was carried out by the Department of Health in Northern Ireland for the period 2023-2024. Approximately 69% of respondents rated their general health as very good, or good while 10% rated their general health as bad or very bad.

5.3 Biodiversity (Including Flora and Fauna)

5.3.1 Baseline

Ireland's 4th National Biodiversity Action Plan (Department of Housing, Local Government and Heritage, 2024), gives an outline of the state of biodiversity in Ireland:

- There has been a general reduction in the numbers of insects in Ireland; one in three bee species is faced with extinction.
- The latest BirdWatch Ireland review of Birds of Conservation Concern states that 63% of species (including common birds such as house sparrows and starlings) have declined at alarming rates.
- The latest Article 12 reporting under the EU Birds Directive on the long-term status and trends of Ireland's bird species reports population declines of 9% and 24% for breeding and wintering taxa respectively.
- The latest Article 17 (2019) conservation status assessments under the EU Habitats Directive reports that 46% of protected habitats and 15% of protected species in Ireland demonstrated ongoing declines over a 12-year period with freshwater species most at risk. However, many mammal species such as seals, dolphins, several whale and bat species were assessed favourably.

¹⁶ NISRA (2021) Statistical Bulletin - 2021 Mid-year Population Estimates for Northern Ireland - Summary (nisra.gov.uk)

• Approximately half of Ireland's rivers and lakes are at less than Good ecological status under the Water Framework Directive, with the main significant pressures being nutrient inputs from urban wastewater discharges and agricultural source.

Climate change is a rising threat year on year, particularly due to ongoing changes in the temperature and the decrease of precipitation (EEA, 2022). Climate change is already affecting habitats and species in Europe, with increased temperatures, droughts, changes in rain patterns, wildfires and less snow. It is seen as an emerging threat to European habitats and species. Amphibians, birds and bats are the most affected species by droughts and changes in rain patterns.

In some cases, sector activities and developments which mitigate certain environmental effects, such as development of renewable energy in order to decarbonise the energy system, can result in harm on habitats and species. For example, wind turbines can create a threat to bats and birds, which can collide with the blades, and hydromorphological changes (e.g. creation of flood defences, hydropower development etc.) can block the passage of sediments and migratory fish. It is crucial, therefore, that all measures towards decarbonisation are taken in a coordinated manner with biodiversity policies, to minimise the impacts on habitats and species.

The EPA produces "State of the Environment' reports on a four-yearly cycle in support of action to protect and manage the environment. These reports provide timely information and knowledge to the public, policymakers and key economic sectors. The EPA recently published the State of the Environment Report 2024; the EPA's eighth report in the series.

According to the State of the Environment Report 2024, the overall current assessment for nature is 'very poor'. Deteriorating trends dominate, especially for protected habitats and bird populations, and Ireland is not on track to achieve policy objectives for nature. The report states that while the recent expansion of marine protected areas is welcome, additional far-reaching measures are needed to address the declines in nature and biodiversity.

Ireland has international and legal obligations to protect biodiversity. Implementation of the EU Habitats and Birds Directives has resulted in the creation of a network of sites for habitat and species protection, the Natura 2000 network. The State of the Environment Report 2024 states that some 85% of our protected habitats and almost one third of our protected species of flora and fauna are in unfavourable status, over half our native plant species are in decline and more than 50 bird species are of high conservation concern. The leading causes of these declines are changes in agricultural practices, including intensification; pollution; the increasing spread of invasive species; and the changing climate.

5.3.1.1 Transboundary Baseline

The Northern Ireland Environmental Statistics Report 2024¹⁷ states the following with regards to biodiversity in Northern Ireland at the time of writing:

- By March 2024, 111,159 hectares across 394 sites were declared Areas of Special Scientific Interest (ASSI). 246,300 hectares across 58 sites were declared Special Areas of Conservation (SACs) and 114,600 hectares across 16 sites as Special Protection Areas (SPAs). 77,700 hectares across 20 sites were declared Ramsar sites (areas of wetland and waterfowl conservation), and 26,178 hectares across 5 sites as Marine Conservation Zones (MCZs).
- In 2023/24, 55 per cent of features within Marine and Terrestrial protected sites were in Favourable condition while 36 per cent were in Unfavourable condition. Some 3 per cent were in Unfavourable-Recovering condition with less than 1 per cent Destroyed.
- The wild bird population indicator using 56 bird species shows decreased levels in 2022 compared to 1996. Bird populations peaked in 2005 and have been in decline since, driven principally by bird species found in farmland habitats.

¹⁷ DAERA (2024) Northern Ireland Environmental Statistics Report 2024. Available at: <u>https://www.daera-ni.gov.uk/sites/default/files/publications/daera/NI%20Environmental%20Statistics%20Report%202024_0.pdf</u>

- In 2023/24, 433 hectares of new woodland (41 hectares conifer and 392 hectares broadleaf) were planted by NI Forest Service and private landowners supported by grant aid.
- Agri-environment schemes encourage farmers and landowners to manage their land to benefit the environment. At the end of 2023, 62,000 hectares of land in Northern Ireland were under agri-environment scheme agreement.

During the preparation of the Northern Ireland Biodiversity Strategy (2022), a list of Northern Ireland Priority Species requiring conservation action was identified and since updated as needed. The Northern Ireland Priority Species list currently stands at 481 species. Northern Ireland also has a list of priority habitats which require conservation action because of their decline, rarity, and importance.

Peaty soils cover almost 13% (206,400 hectares) of Northern Ireland's land, including most of the uplands. Of this total area, 165,000 hectares (ha) consists of either semi-natural blanket bog, lowland raised bog or fen vegetation each with a high biodiversity value. Approximately 70% of land in Northern Ireland is devoted to agricultural activities.

Northern Ireland has approximately 111,000 ha of forest and woodland (approximately 10% of land cover) of which 62,000 ha, or 56% is managed by the Forest Service, an executive agency of the Department of Agriculture and Rural Development. The remainder is predominantly privately owned and managed by a wide range of land managers.

Semi-natural grasslands cover approximately 18.5% of Northern Ireland. These areas are used for low intensity grazing and are valuable for carbon storage especially in areas of permanent grassland. This habitat is also important for scenery and tourism.

Wetlands, including lakes, fens, and flooded grassland, cover around 7% of Northern Ireland. There are more than 1,600 lakes ranging in size from small ponds to Lough Neagh, the largest freshwater lake in the UK. Most lakes are fringed by fen, marsh, and swamp. However, this broad habitat also frequently occurs in low-lying wet ground or poorly drained marginal land. Many have been highly modified over the years by drainage and nutrient enrichment from surrounding farmland and urban wastewater. A high proportion of such wetlands are eutrophic with resultant negative impacts on biodiversity.

The State of Nature Partnership published the State of Nature Northern Ireland report in 2023. The report found that Northern Ireland, like most other regions worldwide, has experienced a significant loss of biodiversity. The trends in nature presented here cover, at most, 50 years, but these follow on from major changes to Northern Ireland's nature over previous centuries. As a result, Northern Ireland is now one of the most nature-depleted countries on Earth.

The report gives an outline of the state of biodiversity in Northern Ireland:

- Of 2,508 species in Northern Ireland that have been assessed using IUCN Regional Red List criteria, 12% have been classified as threatened with extinction from Ireland as a whole.
- There has been a 24% increase in the distributions of invertebrate species, since 2016
- The abundance of 17 farmland bird species has on average fallen by 43% across Northern Ireland since 1996. Across all 64 breeding birds assessed, species' abundance had declined on average by 10%.
- The indicator of average species' abundance in Northern Ireland of 36 wintering waterbird species has fallen by 30% since 1988.

5.4 Land and Soils

5.4.1 Baseline

5.4.1.1 Land-Use

According to data from Eurostat, and as described in the report '*Climate Change and Land Use in Ireland*' (EPA, 2018), the main source of national scale information on land cover in Ireland is the European Environment Agency (EEA) CORINE (Coordination of Information on the Environment) land cover data series, which is an EU-wide inventory of land cover in 44 classes categorised from satellite photography. According to 2018 CORINE data, the main land cover type in Ireland is agricultural land, which accounts for approximately two-thirds (67%) of the national landmass. The new national land cover map prepared by the National Mapping Division of Tailte Éireann, was considered too detailed for a national level plan.

Most of this is permanent grassland pastures. Peatlands and wetlands are the second most widespread land cover type, covering almost one-fifth (18%) of the country, while forested areas cover 11.6% of the country.

5.4.1.2 Soil

The quality of soils in Ireland is considered generally good although there are pressures impacting on its long-term protection and maintenance particularly from land use changes, intensification of use, urbanisation, and contamination¹⁸.

The soils of the Republic of Ireland, mapped in Figure A4 of Appendix A, are an immensely valuable, and finite, national resource, which forms and evolves slowly over very long periods of time and can easily be damaged and lost¹⁹. The long process of soil formation extends to the process of soil restoration after pollution or deterioration. The EPA report¹⁸ states that there are six overarching degradation processes that can impact on soils. These processes include compaction, erosion, organic matter decline, salination, landslides and soil sealing which is where soils are closed off from the surface of the land, e.g., road and building developments. The bedrock underlying these soils greatly influence soil formation and soil chemistry, as such, a map of the bedrock type distribution of Ireland can be found in Figure A5 of Appendix A.

Geological Heritage Sites are presented in Figure A6 of Appendix A.

5.4.1.3 Transboundary baseline

In Northern Ireland, the primary soil functions include biomass production (grass and grain), regulation of nutrients and water in soils and maintenance and enhancement of soil carbon stocks.

The Sustainable Agricultural Land Management Strategy Report in 2016 stated that 98% of soils in Northern Ireland are inadequately analysed every year and that 82% of soils are below optimum fertility. Consequently, the Agri-Food and Biosciences Institute started a four-year Department of Agriculture, Environment and Rural Affairs' funded project on soil health that will measure key soil chemical, physical and biological characteristics in soils.

Soil erosion is also of concern in Northern Ireland. In the temperate region of Northern Ireland, recent studies have highlighted the off-site issue of soil erosion by water in the present day and projected that the problem may become more widespread and serious in a changing climate.

For a small area, Northern Ireland is known to have exceptional geological biodiversity.

¹⁸ EPA (2020) Ireland's Environment - An Integrated Assessment 2020. Available at: <u>https://www.epa.ie/publications/monitoring--assessment/assessment/assessment/state-of-theenvironment/</u>
EPA Julend's Environment 2020 add

EPA_Ireland's_Environment_2020.pdf

¹⁹ RPS (2017) Environmental Report – Ireland 2040: The National Planning Framework. Available at: <u>https://npf.ie/wp-content/uploads/2017/09/Environmental-Report-%E2%80%93-Ireland-2040.pdf</u>

5.5 Water

5.5.1 Baseline

5.5.1.1 Surface Water

Nearly half of the surface waters in Ireland are failing to meet the legally binding water quality objectives set by the EU Water Framework Directive because of pollution and other human disturbance. Surface water features and their status across the Republic of Ireland have been illustrated in Figures A7, A8, A9, A10, A11, and A12 in Appendix A.

Based on the Water Framework Directive monitoring programme, the biological quality of rivers is assessed and categorised into five categories: high, good, moderate, poor, and bad. The EPA's report '*Water Quality in 2023*^{'20} found that of the 1,459 (out of 2,365) river water bodies assessed in 2022 and 20234, 1,028 river water bodies remained stable with no change in their quality class when compared to their previous survey. There was a net decline in quality in 45 river water bodies over the two years; 187 improved in quality while 232 declined in quality. Declines and improvements in river biological quality occurred in all major river catchments (known as hydrometric areas) surveyed in 2022 and 2023; net improvements were noted in the Liffey, Slaney, Moy and Erne river catchments and net declines were noted in the Nore, Suir, Barrow, Shannon, Lee, Laune, Feale and Lough Swilly river catchments.

Taking the latest data for all river water bodies (monitored between 2020-2023), 55% (1,309) of river water bodies are in high or good biological quality5. The remaining 45% (1,056) are in moderate, poor or bad quality

The number of river water bodies in bad condition has increased to four since the 2019-2021 period. These bad quality river stretches are within the River Laune in Kerry (impacted by urban waste water) and within the Annagh River in Clare, Ahavarraga Stream in Limerick, and the Nenagh River in Tipperary which are impacted by multiple pressures such as agriculture, urban waste water and other human activities6. This increase is in part due to targeted monitoring in rivers downstream of known pressures.

According to the EPA²⁰, Ireland's surface waters are being damaged by pressures arising from various human activities. The most significant pressures, those considered to put a water body at risk of not meeting its environmental objectives, were identified, and reported in the Draft River Basin Management Plan 2022-2027, following a comprehensive assessment by the EPA of various human activities and their potential impact on the aquatic environment. The complete breakdown is shown in Figure 5.2 below.

²⁰ EPA (2023) Water Quality in Ireland 2023. Available at: <u>https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/water-quality-in-2023.php</u>



Figure 5.2 Representation of significant pressures in the rivers monitoring programme | Source: DHLGH, 2022²¹

5.5.1.2 Groundwater

Groundwater features and their status' in the Republic of Ireland have been illustrated in Figures A13, A14 and A15 of Appendix A.

Overall, 91% of groundwater bodies are in good chemical status and nearly all are in good quantitative status. The south and southeast regions have the greatest proportion of sites with high and increasing nitrate concentration. There has been a slight decline of 0.8% (four waterbodies) in the number of groundwater bodies at good status since the last assessment.

Groundwater flows through the subsoil or bedrock into streams, rivers, lakes, and estuaries. During periods when there is little or no rain, almost all the water flowing in streams and rivers originates from groundwater. Nitrate enters groundwater from the land through free draining soils; groundwater therefore is an important contributor of nitrate into surface water bodies.

According to the EPA²⁰, the three-year average nitrate concentrations for the period 2021-2023 saw no real change on the previous period. Eleven (6%) monitoring sites exceeded the threshold value of 37.5 mg/l NO3 and one (Sheepgrange, Co. Louth) monitoring site exceeded the drinking water standard of 50 mg/l NO3 13. One-fifth (20%) of monitoring sites had nitrate concentrations greater than 25 mg/l NO3 (considered as a high nitrate concentration), which is the same as the previous assessment.

5.5.1.3 Transboundary Baseline

The Water Framework Directive Statistics Report published in December 2021²² by the Northern Ireland Environmental Agency presents the statistics on the state of the water environment in Northern Ireland, as summarised below:

- In 2018, 141 (31 %) of river water bodies were classified as good or high overall status. In 2021, no river water bodies achieved good or high overall status.
- In 2018, 5 (24 %) of the 21 lake water bodies in Northern Ireland were classified as good overall status. In 2021, no lakes achieved good overall status.

²² Available at: https://www.daera-

²¹ EPA_WFD_MonitoringProgramme_2019_2021.pdf (dcuwater.ie)

ni.gov.uk/sites/default/files/publications/daera/NI%20Water%20Framework%20Directive%20Statistics%20Report%202021.pdf

- In 2018, (32 %) of the 25 transitional & coastal water bodies in Northern Ireland achieved good overall status and 1 (4 %) achieved high overall status.
- In 2018, 10 (40 %) water bodies achieved good overall status. In 2021, no water bodies achieved good overall status.

5.6 Air Quality and Climate

5.6.1 Baseline

5.6.1.1 Air Quality

In order to protect human health, vegetation and ecosystems, EU Directives set down air quality standards in Ireland and the other Member States for a wide variety of pollutants. These pollutants are generated through fuel combustion, in space heating, traffic, electricity generation and industry and, in sufficient amounts, could affect the well-being of the area's inhabitants. The EU Directives include details regarding how ambient air quality should be monitored, assessed, and managed.

The EPA measures the levels of a number of atmospheric pollutants throughout Ireland in order to measure compliance with Air Quality Standards Regulations, 2022 (S.I. No. 739 of 2022). For the purposes of monitoring in Ireland, four zones are defined in the Regulations:

Zone A: Dublin Conurbation.

Zone B: Cork Conurbation.

Zone C: Other Cities and Large Towns; and

Zone D: Rural Ireland which is the remainder of the State excluding Zones A, B and C.

While air quality in Ireland has been considered to be generally good, new evidence from increased monitoring and modelling, coupled with new research on the health impacts at lower levels of exposure to particulate matter, raises questions about that status.

The Irish Ambient Air Quality Standards Regulations (2022) are informed by the EU Air quality standards which set the annual limits for each parameter in Table 5.1. These annual limits must not be exceeded in order to protect human health and environmental quality across Ireland.

Parameter	Air quality standard (μg/m3) annual limits
NO ₂	40
SO ₂	20
СО	10,000
PM10	40
PM _{2.5}	25
Benzene	5

Table 5.1 Air Quality Standards | Source: Government of Ireland, 2022

The EPA manages the National Ambient Air Quality Network. This network sets legislative limits and target values for the protection of human health and vegetation.

The 'Air Quality in Ireland Report 2023' (EPA, 2023)²³, Ireland's latest monitoring shows compliance with current EU standards. Air Quality in Ireland is moving in a positive direction although Ireland has not yet

²³ Air Quality in Ireland Report 2023 (EPA, 2024) Available at: <u>https://www.epa.ie/publications/monitoring--assessment/air/Air_Quality_Report_23_v13_flat.pdf</u>

met the Clean Air strategy and WHO values. Ireland is not on track to achieve its ambition, set out in the National Clean Air Strategy, to meet the health-based WHO air quality guideline limits in 2026. Achieving future targets will be very challenging. Main pollutants of concern are fine particulate matter ($PM_{2.5}$) from solid fuel combustion and nitrogen dioxide (NO_2) from vehicle emissions/traffic.

Transport Emissions

The transport sector is projected to contribute up to 21% of Ireland's total emissions by 2030. Nitrogen dioxide (NO₂) is the air pollutant most directly associated with traffic in high-density urban contexts and is formed by a reaction between ozone and nitrogen oxide (NO). NO₂ is a known precursor to the formation of other pollutants such as ground-level ozone (O₃) and particulate matter (PM_{2.5} and PM₁₀). Its sources originate from combustion and home heating.

Following concerns with transport-related air emissions, the Urban Transport-Related Air Pollution (UTRAP) Working Group was established in Ireland in 2019 to assess the impacts of transport on air pollution and human health. In their most recent report²⁴, air pollution is named as the single largest environmental health risk in Europe. As part of their report, a review of traffic demand management studies across Ireland's five major cities was undertaken (Dublin, Cork, Galway, Limerick, and Waterford), which identified that interactions between different traffic measures are complex, have a cumulative impact, and most importantly, there is no one measure that will address each issue with the cities.

5.6.1.2 Noise

The World Health Organisation (WHO) has identified long-term noise exposure as an important public health issue and the second most significant environmental cause of ill health in western Europe. The WHO have published a guideline for noise in 2018²⁵ which sets out how noise pollution in towns and cities across Ireland is increasing and how excessive noise, such as that from transport sources has negative impacts on human health.

The Environmental Noise Directive (END) (2002/49/EC) requires that action is taken by each member state, with a view to preventing and reducing environmental noise where necessary (particularly where exposure levels can induce harmful effects on human health) and to preserving environmental acoustic quality where it is good. The relevant local authorities have been designated by the Environmental Noise Regulations, S.I. Regulations No. 140 of 2006, as the bodies charged with development and making of 'Noise Action Plans'.

In Ireland, Local Authorities are responsible for preparing Noise Action Plans, which primarily consider the long-term environmental noise impact from road, rail, and air traffic noise sources, and set out an approach to review noise impact levels near to the major sources assessed during the strategic noise mapping with a view to identifying locations where noise reduction is deemed necessary in the first instance. Strategic Noise Maps are prepared to show noise exposure levels from transport and are prepared using computer modelling techniques.

5.6.1.3 *Climate*

Climate

According to Met Eireann²⁶ (2022) the general climatic conditions for Ireland as a country are dominated by the Atlantic Ocean and its air and oceanic currents. Consequently, the region does not suffer from extremes of temperature. According to Met Eireann, average annual temperature is about 9°C. Average rainfall varies between about 800 and 2,800mm. Rainfall accumulation tends to be highest in winter and lowest in early summer. Winters tend to be cool and windy, while summers, when the depression track is further north and depressions less deep, are mostly mild and less windy. In line with the global picture, Ireland's average

²⁴ UTRAP Final Report (2023). Available at: gov.ie - Urban Transport-Related Air Pollution (UTRAP) Working Group (www.gov.ie)

²⁵ WHO (2018) Environmental Noise Guidelines for the European Region

²⁶ Met Eireann (2022) Climate of Ireland. Available at: <u>https://www.met.ie/climate/climate-of-ireland</u>

temperature has increased by about 0.7°C over the last 100 years, and the rate of increase has been higher in the last couple of decades, as reported by the EPA²⁷ (2022).

Greenhouse Gases

A carbon budget represents the total amount of emissions that may be emitted in the Republic of Ireland during a five-year period, measured in tonnes of carbon dioxide equivalent. It is calculated on an economy-wide basis.

The Climate Change Advisory Council is responsible for proposing three five-year economy-wide carbon budgets, covering the periods 2021-2025, 2026-2030 and 2031-2035, to assist the State in achieving its national climate objectives and greenhouse gas emissions targets agreed by the European Union.

The first three carbon budgets cover the following five-year periods: 2021 to 2025, 2026 to 2030, and 2031 to 2035 (although the budget for the third period is provisional). All greenhouse gas emissions and all relevant sectors are included in the carbon budgets.

They are as follows:

- 2021-2025: 295 Mt CO2 eq. an average of -4.8% for the first budget period.
- 2026-2030: 200 Mt CO2 eq. an average of -8.3% for the second budget period.
- 2031-2035: 151 Mt CO2 eq. an average of -3.5% for the third provisional budget.

According to the EPA's latest emissions data, Greenhouse Gas (GHG) emissions in Ireland decreased in 2023. The change in emissions since 2022 was -6.8%. Emissions decreases were driven by the reductions in the Electricity generation, Residential sector, Agriculture and Industry. The overall emissions reduction, while welcome, falls short of reductions required to achieve National and new EU targets.

As outlined in the report 'Ireland's Greenhouse Gas Emissions Projections 2023-2050'²⁸, Ireland is not on track to meet the 51 per cent emissions reduction target (by 2030 compared to 2018) based on current projections which include most 2024 Climate Action Plan measures. The key findings of this report are illustrated in Figure 5.3.

²⁷ EPA (2022) What Impact Will Climate Change have on Ireland? Available at: <u>https://www.epa.ie/environment-and-you/climate-change/what-impact-will-climate-change-have-for-</u>

ireland/#:~:text=Ireland's%20climate%20is%20changing%20in,depending%20on%20the%20emissions%20trajectory

²⁸ EPA (2024) Ireland's Greenhouse Gas Emissions Projections 2023-2050. Available at: <u>https://www.epa.ie/publications/monitoring--</u> <u>assessment/climate-change/air-emissions/EPA-GHG-Projections-Report-2022-2050-May24--v2.pdf</u>

Ireland's Climate Act Ambition	Ireland is not on track to meet the 51 per cent emissions reduction target (by 2030 compared to 2018) based on these projections which include most 2024 Climate Action Plan measures.
Carbon Budgets	The first two carbon budgets (2021-2030), which aim to support achievement of the 51 per cent emissions reduction goal, are projected to be exceeded by a significant margin of between 17 and 27 per cent.
Sectoral Emissions Ceilings	Sectoral emissions ceilings for 2025 and 2030 are projected to be exceeded in almost all cases, including Agriculture, Electricity, Industry and Transport.
EU Targets	Ireland will not meet its non-ETS EU targets of a 42 per cent emissions reduction by 2030 in WAM even with both the ETS and LULUCF flexibilities.
Rate of Change	Emissions in the Planned Additional Measures scenario are projected to be 29 per cent lower in 2030 (compared with 2018) whereas in the Implemented Existing Measures scenario the emissions reduction is projected to be 11 per cent. There has been no improvement in these figures since EPA projections published in 2023.
Implementation Gap	Faster implementation of measures is necessary to meet both National and EU targets. The pace at which planned policies and measures are implemented needs to be accelerated.
Agriculture	Total emissions from the agriculture sector are projected to decrease by between 1 and 18 per cent over the period 2022 to 2030. Savings are projected from a variety of measures including limiting usage and switching to different fertilisers, methane reduction measures and water table management.
Transport	Transport emissions are projected to decrease by 5 to 26 per cent over the period 2022-2030. Measures that are projected to contribute to greater emissions reductions include 945,000 EVs by 2030, a 20 per cent biodiesel blend rate by 2030 and avoid/shift measures such as a 50 per cent increase in daily active travel journeys and a 130 per cent increase in daily public transport journeys.
Electricity Generation	Emissions from the Energy Industries sector are projected to decrease by between 57 and 62 per cent over the period 2022 to 2030. Renewable energy generation at the end of the decade is projected to range from 69 to 80 per cent of electricity generation as a result of a projected rapid expansion in wind energy and other renewables.
Land use, Land use Change and Forestry (LULUCF)	Emissions from the LULUCF sector have been revised significantly to reflect new science. Total emissions from the LULUCF sector are projected to increase over the period 2022 to 2030. It is unlikely with the currently planned measures that the target set under the EU LULUCF Regulation and included in Climate Action Plan 2024 will be met.

Figure 5.3 Key Findings from Ireland's Greenhous Gas Emissions Projections 2022-2040 | EPA 2023

5.6.1.4 Transboundary Baseline

Air Quality

The Air Pollution in Northern Ireland 2023 Report revealed that the regulation limit values target values and corresponding AQS objectives have been met for the following pollutants in Northern Ireland:

- Particulate matter as PM10
- Particulate matter as PM2.5
- Nitrogen dioxide
- Carbon monoxide

- Benzene
- Sulphur dioxide
- The elements lead, arsenic, cadmium and nickel

Three of the four sites where benzo[a]pyrene was monitored in 2023 exceeded the AQS objective of 0.25 ng m-3. One site, Lough Navar exceeded the AQS objective for ozone of 100 μ g m-3 13 times, more than the permitted 10 days in 2023.

Noise

Northern Ireland is also in compliance with EU Environmental Noise Directive (END) (2002/49/EC) and is required to determine the noise exposure of the population through noise mapping, make information on noise publicly available, and establish Noise Action Plans based on mapping results every five years.

A Noise Action Plan has been prepared in relation to Roads for the period 2019 to 2023 (no recent update). This includes all Major Roads with more than 3 million vehicle passages per year; and all agglomerations with more than 100,000 inhabitants.

Climate

The climate across Northern Ireland²⁹ and the Republic of Ireland is very similar and are both experiencing climactic warming due to global greenhouse gas emissions rising.

According to the Northern Ireland Environmental Statistics Report (NISRA, 2024) Northern Ireland's greenhouse gas emissions were estimated to be 22.5 MtCO2e in 2021 (most recent data), a reduction of 23 per cent since 1990.

The largest sectors in terms of emissions in 2021 were agriculture (28 per cent), transport (17 per cent) and business (14 per cent). Most sectors showed a decreasing trend since the base year. The largest decreases, in terms of tonnes of carbon dioxide equivalent, were in the energy supply, business sectors and waste management. These were driven by improvements in energy efficiency, fuel switching from coal to natural gas, which became available in the late 1990s, and the introduction of methane capture and oxidation systems in landfill management.

5.7 Archaeology, Architectural and Cultural Heritage

5.7.1 Baseline

The sites and features considered as part of the cultural heritage baseline for Ireland include those listed on the following:

- Record of Monuments and Places (RMP), which is the statutory list of all known archaeological monuments in Ireland as compiled by the Archaeological Survey of Ireland, part of the Department of Housing, Local Government and Heritage; and
- National Inventory of Architectural Heritage (NIAH), which identifies, records, and evaluates the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage.

NIAH surveys provide the basis for the recommendations of the Minister for Housing, Local Government and Heritage [previously the Minister for Housing, Planning and Local Government] to the planning authorities for the inclusion of particular structures in their Record of Protected Structures; and United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage List, which includes cultural and natural heritage sites around the world considered to be of outstanding value to humanity.

Ireland is particularly rich in archaeological sites and monuments which form a central component of Irish Heritage. Many of Ireland's archaeological or cultural heritage sites occur on forest land and peatlands.

²⁹ Northern Ireland Environmental Statistics Report 2023. Available at: <u>https://www.daera-ni.gov.uk/publications/northern-ireland-environmental-statistics-report-2023</u>

Archaeological sites and monuments range from substantial above-ground structures to easily damaged subterranean traces of human activity. Types of monuments vary greatly and include ecclesiastical ruins, ancient trackways, standing stones, fortifications, megalithic tombs, earthwork mounds and cairns.

Geological Heritage Sites in the Republic of Ireland are illustrated in Figure A6 of Appendix A. Recorded monuments are illustrated in Figure A17 of Appendix A.

The recently signed Historic and Archaeological Heritage and Miscellaneous Provisions Act (2023) will replace the National Monuments Acts (1930–2014). The Bill will provide for the protection of historic and archaeological heritage. A new 'Register of Monuments' will be established, replacing several overlapping designation and registration systems currently in operation. While this new legislation has been signed into law, most of the provisions of the Act have not yet been commenced. However, it is expected that substantive implementation will occur within the lifetime of this DEDP commenced.

The Framework and Principles for the Protection of the Archaeological Heritage (Government of Ireland 1999) was published so as to promote a high level of compliance with the aims and requirements of the Valletta Convention. It sets out national policy on the protection of the archaeological heritage in the course of development. While not specifically directed at the planning system, as operating under the Planning and Development Acts, it speaks to all development control codes.

5.7.1.1 Transboundary Baseline

Northern Ireland has been legally protecting its historic monuments with legislative measures since 1869. The Northern Irish Historic Monuments and Archaeological Objects Order 1995 protects archaeological monuments or objects of significance by either taking them into State care or by scheduling and also places restrictions on searching for archaeological material. There sites of interest are registered on a government database which gives them protection from development. Legislative protection is also in place for architectural heritage under the Planning Act (NI) 2011, including vires to designate Listed Buildings and Conservation Areas.

There are two UNESCO sites which have the potential transboundary impacts as they are located on or near the Northern Ireland and Republic of Ireland border. These sites include Cuilcagh Lakelands UNESCO Global Geopark, formerly Marble Arch Caves UNESCO Global Geopark and the Mourne Gullion Strangford UNESCO Global Geopark.

5.8 Landscape and Visual

5.8.1 Baseline

The Council of Europe Landscape Convention 20/10/2000³⁰ promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues. It defines "landscape" as an area perceived by people, whose character is the result of the action and interaction of natural and/ or human factors. This holistic definition incorporates all aspects of an area and in doing so can be useful when considering development in that area.

Ireland's National Landscape Strategy³¹ is the country's way of meeting its obligations and delivering on the objectives set by the European Landscape Convention.

The Landscape Character Guidelines for Ireland³² (Mosart, 2016) classify Ireland's landscape into four distinct character types, which vary considerably in regard to both landform and landcover. The four landscape character types include:

³⁰ Council of Europe (2016) Council of Europe Landscape Convention as amended by the 2016 Protocol. Available at: <u>https://www.coe.int/en/web/conventions/full-list?module=treaty-detail&treatynum=176</u>

³¹ Department of Housing, Local Government and Heritage (2015) National Landscape Strategy for Ireland 2015-2025. Available at: <u>https://www.gov.ie/en/publication/8a59b-national-landscape-strategy/</u>

³² Mosart (2016) Landscape Character Guidelines for Ireland. Available at: <u>https://mosart.ie/wp-content/uploads/2016/02/forestry-and landscapeguidelines-ireland.pdf</u>

- Rolling moorland.
- Rolling fertile farmland.
- Drumlins; and
- Mountain and farmland complex.

The following outlines landscape planning and design for the four distinct landscape character types commonly found in Ireland, according to the Landscape Character Guidelines for Ireland (Mosart)³².

- **Rolling Moorland Landscape interpretation**: Many mountain slopes in Ireland are sweeping and extend as open, expansive, and undulating moorland. Existing conifer plantation forests in such areas have tended to be angular in nature, because of their straight boundaries. Due to poor site conditions and exposure, they have inclined to be of limited species and age diversity, resulting in a severe visual impact on the landscape.
- **Rolling Fertile Farmland Landscape interpretation**: This landscape type is a man-made 'working landscape'. The rolling hills are characterised by a patchwork of clearly defined fields with farmsteads and houses, copses and shelterbelts scattered throughout. These fields are typically under pasture or tillage. The scale of the landscape is usually relatively enclosed. Soil fertility should allow broadleaf plantations, with a potential for silvicultural systems other than clear-felling.
- **Drumlins Landscape interpretation**: The typical continuity of small rolling hills with wet inter-drumlin flats, combined with a close network of fields and hedgerows, creates a small scale, intimate and visually complex landscape. Many fields have reverted to rush and scrub in recent years. Soils on drumlins are typically gleyed and thus limit species choice.
- Mountain and Farmland Complex Landscape interpretation: Landscapes comprising mountain moorland on upper ground falling through marginal land and on to farmland at lower levels, are very common in Ireland. The farmland will usually comprise either rolling hills or a plane of patchwork fields which sweeps up forming a continuum with the open mountainside. The strip of marginal land running between these two landcovers is typically identified by bracken, rush, and scrub.

The National Landscape Strategy for Ireland 2015-2025³³ (Department of Housing, Local Government and Heritage, 2015) was produced in line with Ireland's obligations under the European Landscape Convention. The overall vision of the strategy is stated as: "Our landscape reflects and embodies our cultural values and our shared natural heritage and contributes to the well-being of our society, environment, and economy. We have an obligation to ourselves and to future generations to promote its sustainable protection, management, and Planning".

In the absence of a national landscape character assessment, the CORINE Land Cover Map is used as a proxy for the purposes of landscape, refer to Figure A3 in Appendix A.

In terms of landscape & visual amenity, local authorities in Ireland conserve and protect scenic value as Areas of High Amenity, Areas of Outstanding Natural Beauty, and Protected Views. Each local authority is responsible for the designation of these within their individual jurisdictions, with each County Development Plan providing objectives to protect such views.

5.8.1.1 Transboundary Baseline

Northern Ireland abides by the Council of Europe Landscape Convention 20/10/2000. In recognising the importance of sustaining local identity, the Northern Ireland Environment Agency (NIEA) commissioned Landscape Character Assessments of Northern Ireland which resulted in the identification of distinct character areas within Northern Ireland.

The Northern Ireland Regional Landscape Character Assessment provides a strategic overview of the landscape in Northern Ireland and subdivides the countryside into 26 Regional Landscape Character Areas

³³ Department of Housing, Local Government and Heritage (2015) The National Landscape Strategy for Ireland 2015-2025. Available at: <u>https://www.gov.ie/en/publication/8a59b-national-landscape-strategy/</u>

based upon information on people and place and the combinations of nature, culture and perception which make each part of Northern Ireland unique.

The Northern Ireland Landscape Character Assessment subdivided the countryside into 130 Landscape Character Areas (LCAs), each based upon local patterns of geology, landform, land use, cultural and ecological features. For each LCA, the key characteristics were described and an analysis of landscape condition and its sensitivity to change was made.

There are several areas designated for their landscape quality located on or close to the Northern Ireland and Republic of Ireland border, such as Ring of Gullion Area of Outstanding Natural Beauty (AONB). The landscape around AONBs performs an important function by providing context, particularly in views to and from the AONB.

5.9 Material Assets

5.9.1 Baseline

SEA legislation includes '*material assets*' as a topic to be addressed in SEA but does not include a definition of what this topic might encompass. Consequently, it is interpreted in a number of different ways.

However, for the purposes of this report, the term '*material assets*' is taken to mean all infrastructure and local services including transportation, water supply, wastewater treatment and discharge, waste management services and energy supply.

5.9.1.1 Transportation

The 2022 census provides statistics on how people travel to their place of work, school, college, and childcare. The number of people who drove to work increased by 4% to 1.2 million between 2016 and 2022. There were 4% fewer people commuting to work by train, LUAS, or DART. However, there was a big increase recorded in the number of people who work mainly at or from home, up 173% to nearly 260,000. Fewer third level students commuted to their place of education on foot or by bike, but more used public transport and cars.

Vehicular traffic is by far the most common mode of travel in Ireland. In 2021, the national vehicle fleet was made up of 2.86 million vehicles.

Ireland's National Roads network consists of circa 5,300 km of roads, which includes National Primary roads (including motorways (916km)) and National Secondary roads. Other road infrastructure in Ireland is comprised of local roads, minor roads, and unclassified urban roads.

Iarnród Éireann (Irish Rail), the state-owned railway company in Ireland, operates 1,944km (1,215 miles) of the rail network. Iarnród Éireann is responsible for maintenance of the heavy rail intercity and regional network, which is used for both passengers and freight. Transport Infrastructure Ireland is responsible for the light rail Luas networks based in Dublin.

There are 10 main airports across Ireland: Cork Airport, Donegal Airport, Dublin Airport, Weston Airport, Galway Airport, Kerry (Farranfore) Airport, Ireland West Airport Knock, Shannon Airport, Sligo Airport and Waterford Airport. Cork, Dublin, and Shannon are international airports.

Twenty commercial ports exist nationwide; international ports include Shannon Foynes, Cork, Dublin Port and Drogheda. In addition, there are 15 international ferry ports, 99 local ferry ports and 48 fishing ports. Urban nodes in Ireland include Shannon, Foynes, Dublin, Cork, and Galway ports.

5.9.1.2 Water Supply

Uisce Eireann (formerly Irish Water) is the national water utility, as set up in July 2013, under the Water Services Act 2013. Uisce Éireann is responsible for the production, distribution, and monitoring of drinking water from Ireland's public water supplies.

Uisce Éireann is responsible for the monitoring of public water supplies and Local Authorities are responsible for monitoring of group water schemes and regulated small private supplies.

The EPA publishes an annual Public Supply Drinking Water Report which provides an overview of the quality of drinking water in public supplies. The reports are based on the assessment of monitoring results reported to the EPA by Uisce Éireann and the Local Authorities.

Results from the 2023 Drinking Water Quality in Public Supplies Report³⁴ show that compliance with the microbiological and chemical standards for drinking water remains high at greater than 99.7%, which means the water in Irelands public water supplies is safe to drink.

The Environmental Protection Agency (EPA) has identified a priority list of "at-risk" drinking water supplies, called the Remedial Action List (RAL), that must be improved to ensure that these water supplies are safe to drink and are also secure in the future. A supply may be placed on the RAL if water treatment at the supply is not adequate. The number of people served by public water supplies on the EPA's RAL increased further in 2023 and is now almost 561,000 people. This compares to over 481,000 people at the end of 2022. This increase is mainly due to THM (trihalomethanes2) exceedances or inadequate treatment for Cryptosporidium as seen in 2022. At the end of 2023, there were 7 supplies on the RAL for more than 1 year without an improvement plan completion date. Supplies on the RAL must be addressed as a priority for Uisce Éireann.

5.9.1.3 Wastewater Treatment and Discharge

Irish Water operates a network of wastewater treatment plants across Ireland. Irish Water has sole responsibility for operating and maintaining the public sewer network. The wastewater treatment plants vary in size according to the population of the area they serve. Despite the variation in size, the processes used to treat wastewater are generally the same.

The EPA Report '*Urban Waste Water Treatment in 2023*³⁵, provides an overview of urban waste water treatment in Ireland during 2023. It focuses on the most important issues that Irish Water needs to address to protect the Irish environment from the harmful effects of waste water discharges. Treatment at 10 large urban areas failed to comply with EU standards set to protect the environment. This is down from 15 areas in 2022. Ireland's largest treatment plant at Ringsend in Dublin has failed the standards for many years. Upgrade works to address this will be completed next year and the infrastructure in place at Ringsend since the beginning of 2024 is already improving effluent quality.

5.9.1.4 Waste Management Services

Ireland's waste management practices, infrastructure and regulation have matured significantly over the last 20 years. This change has been driven by EU and national legislation, national policy, and economic initiatives. Government policy focusses on waste as a resource and the virtual elimination of landfilling.

The current and future focus is on circular economy - preventing waste, reuse, maximising recycling and using waste as a fuel in replacement of fossil fuels: all elements of the strategy to boost competitiveness, foster sustainable economic growth and generate new jobs.

More residual waste is now used as a fuel (energy recovery) than disposed to landfill.

Segregation and separate collection of food waste from households has been legislated for since 2013 and municipal waste recycling at composting and anaerobic digestion facilities has increased as a result. Ireland is reliant on export markets for the treatment of residual and recyclable and hazardous wastes.

In 2023, only three landfills are accepting municipal waste in Ireland. Between 2019 and 2020 municipal waste increased by 4% to 3.2m tonnes. Waste generation in Ireland continues to be closely linked with economic activity indicating limited progress towards a circular economy.

Construction and demolition waste decreased by 0.6m tonnes to 8.2m. However, this correlates with a decrease in construction activity nationally due to Covid-19.

³⁴ EPA (2024) Drinking Water Quality in Public Supplies 2023. Available at: https://www.epa.ie/publications/compliance--enforcement/drinkingwater/annual-drinking-water-reports/drinking-water-quality-in-public-supplies-2023.php

³⁵ EPA (2024) Urban Waste Water Treatment in 2023. Available at: https://www.epa.ie/publications/monitoring--assessment/waste-water/Urban-Wastewater-Treatment-in-2023-report.pdf

5.9.1.5 Energy

SEAI's Energy in Ireland 2024 report³⁶ provides a definitive record on the supply, transformation, and enduser demand of energy in Ireland.

Electricity demand in Ireland rose by 1.24 TWh in 2023. This net-increase was strongly led by a 1.15 TWh increase in demand from the commercial services sector, which includes data centres. While total electricity demand increased by 4.1% in 2023, electricity demand from the commercial services sector increased by 9.7%. Smaller increases in demand were also observed in the transport, industry, and public service sectors, coupled with decreases in the residential and agriculture-and-fisheries sectors.

Ireland's demand for electricity has grown every year for the last 10 years. The dominant driver of this longterm increased demand has been the commercial services sector. Since 2013, electricity demand from the commercial services sector has increased by 79.1%. By way of comparison, across the same 10-year period, residential demand for electricity has increased by just 1.7%, and industry demand has increased by 6.7%

Ireland's national energy-related emissions in 2023 were at their lowest level in over 30 years. Energy-related emissions in 2023 were 31.4 MtCO2eq, down 8.3% on 2022 levels, and lower even than those observed during the height of COVID impacts in 2020. Energy-related emissions fell by over 2.8 MtCO2eq in 2023 - the largest annual reduction observed in 12 years. Ireland's national energy-related emissions have fallen for seven of the last ten years.

The transport sector is the single largest source of energy demand in the Irish economy, and one of the largest sources of GHG emissions in Ireland. In 2023, transport accounted for just over 43% of Ireland's energy demand, and over 21% of Ireland's total GHG emissions.

Demand for transport energy increased by 2.61 TWh in 2023, up 4.5% on 2022 levels. The net-increase in transport energy demand was mainly led by increases in fuel use for international aviation and private car use. Fuel demand for international aviation increased by 1.52 TWh or 12.9% in 2023, while energy demand from private car use increased by 1.16 TWh or 5.0%.

Electric Vehicle Charging Infrastructure

The 2022 CSO figures show the continued growth in the number of electric and plug-in hybrid vehicles licensed in Ireland. The number of new electric cars licensed has increased by 82% from 8,414 in the first 11 months of 2021 to 15,291 in the same period in 2022. At the same time, the number of new diesel cars has decreased to 26,889 new diesel cars in the first 11 months of 2022 compared with 34,174 in the same period in 2021.

By far the most common type of electric vehicle (EV) in 2021 was the conventional hybrid (45%), while one-third of EV owners had a fully electric EV, and more than one in five (22%) had a plug-in hybrid. However, the most common deterrent to buying an EV was the purchase price (63%), 29% cited access to public charging infrastructure, while 21% said that no or limited access to home charging was an issue.

With a Charging network of approximately 1,700 publicly available charge points, Ireland is currently behind the EU average in infrastructure provision. Across the EU, there is an average of 73 charging points per 100,000 inhabitants. However, this is very unevenly distributed and only 8 countries surpass this ratio: Austria, Belgium, Denmark, Finland, Germany, Luxembourg, the Netherlands, and Sweden.

5.9.1.6 Transboundary Baseline

Transportation

Department for Infrastructure Roads (DfI) is responsible for the maintenance of over 25,000km of public roads in Northern Ireland. Translink (Northern Ireland Railways), the state-owned transport company in Northern Ireland, operates approximately 357km of public rail lines (223 miles).

³⁶ SEAI (2024) Energy in Ireland. Available at: <u>https://www.seai.ie/sites/default/files/publications/energy-in-ireland-2024.pdf</u>

There are three main airports in Northern Ireland – Belfast International Airport, George Best Belfast City Airport and City of Derry Airport and there are five commercial ports in Northern Ireland (Belfast, Larne, Londonderry, Warrenpoint and Coleraine).

Water Supply

Northern Ireland Water is a Government Owned Company, set up in 2007 to provide the water and sewerage services in Northern Ireland.

According to Northern Ireland Water's Annual Report 2023³⁷, overall drinking water quality compliance in the 2023 calendar year is above the PC21 target of 99.83%.

Wastewater Treatment and Discharge

Northern Ireland Water is also responsible for providing the sewerage services in Northern Ireland. An issue facing the management of wastewater in Northern Ireland is the discharge of untreated effluent in Northern Ireland seas and rivers.

According to Northern Ireland's Water's Drinking Water Quality Annual Report 2023, Wastewater compliance has increased from 98.6% (population equivalent) in 2015 to 99.2% in 2023.

Waste Management Services

Northern Ireland's councils collected 1,000,681 tonnes of waste during 2023/24 which was 3.0% higher than the amount collected in 2022/23. During 2023/24, 50.5% of waste collected by councils was sent for recycling which was higher than the 49.7% recycling rate reported in 2022/23.

According to the Northern Ireland Environment Statistics Report 2023 (DAERA, 2024), the tonnage of local authority collected municipal waste sent for preparing for reuse, dry recycling and composting was 482,575 tonnes in 2022/23. The recycling rate was 49.7 per cent which was similar to the recycling rate recorded in 2021/22. The household waste recycling rate was 50.7 per cent in 2022/23, 0.6 percentage points higher than the 2021/22 household waste recycling rate. The proportion of household waste sent for preparing for reuse was 0.3 per cent, dry recycling made up 23.2 per cent and composting was 27.1 per cent

Energy

A report detailing the percentage of electricity consumption in Northern Ireland generated from renewable sources was published in December 2024. The key findings of that report are outlined below:

- For the year ending September 2024, 44.5% of total metered electricity consumption in Northern Ireland was generated from metered renewable sources located in Northern Ireland.
- At 44.5%, this represents a decrease of 2.9 percentage points on the previous 12 month period (year ending September 2023).
- In terms of the volume of electricity consumption in the year ending September 2024 some 7,255 Gigawatt hours (GWh) of total electricity was consumed. Over the same period, some 3,230 GWh was generated from renewable sources located in Northern Ireland.
- Of all renewable electricity generated within Northern Ireland in the year ending September 2024, 81.9% was generated from wind. This compares to 83.4% for the previous 12 month period (year ending September 2023).
- For the year ending September 2024, non-wind renewable electricity generation in Northern Ireland was 584 GWh (18.1%) with 2,646 GWh (81.9%) from wind renewable generation.

³⁷ Northern Ireland Water (2021) Drinking Water Quality Annual Report 2021. Available at: <u>2021NIWaterDrinkingWaterQualityAnnualReport.pdf</u>

6. SEA Objectives, Targets, and Indicators

6.1 Introduction

The SEA is designed to assess the potential environmental effect of the policies of the RLEVCNP against the environmental baselines established.

The policies and associated proposals are assessed against a range of established environmental objectives and targets. Indicators that are recommended in the SEA are utilised over the lifetime of the RLEVCNP to quantify the level of impact that the proposals have on the environment.

6.2 SEA Objectives and Targets

Strategic Environmental Objectives (SEOs) are methodological measures against which the environmental effects of the Plan can be assessed. If complied with in full, SEOs would result in an environmentally positive, or neutral impact from realisation of the Plan. The SEOs are set out under a range of topics and are used as standards against which the provisions of the RLEVCNP can be evaluated in order to help identify areas in which potential significant adverse impacts may occur. SEOs are distinct from the objectives of the Plan and are developed from international and national policies which generally govern environmental protection objectives. Such policies include those of various European Directives which have been transposed into Irish law which is intended to be implemented across the country.

The SEA Directive requires that the evaluation of the RLEVCNP be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected. In compliance with this requirement the SEA will focus upon the most relevant aspects of the environmental characteristics. The SEOs are linked to indicators which can facilitate monitoring the environmental effects of the RLEVCNP as well identifying targets which the Plan can help work towards.

6.3 SEA Indicators

The assessment of aims and commitments with respect to the Environmental Objectives and Targets is required to be measurable. The Environmental Indicators need to be capable of the following:

- Describing trends in the baseline environment.
- Demonstrating the likely significant effect of the implementation of the RLEVCNP.
- Being used in a monitoring programme.
- Providing an early warning of significant unforeseen adverse effects.
- Prioritising key environmental effects.
- Ensuring the number and range of environmental indicators are manageable in terms of time and resources.

SEA Objectives, Indicators and Targets are as described in Table 6.1.

Environmental Component	Strategic Environmental Objectives	Targets	Indicators
Population & Human Health	 Environmental Protection Objective (EPO): Protect, enhance, and improve human health and wellbeing. Protect and enhance human health and well-being. Provide improved and increased charging infrastructure. 	 No deterioration in human health as a result of environmental factors. Increased supply of charging infrastructure across Ireland. 	 Changes in trends in perceived health status. Census population data. Mode share of electrified public transport (passenger and freight) Scale and location of charging infrastructure in Ireland.
Biodiversity	 Environmental Protection Objective (EPO): Support achievement of the conservation objectives and requirements of the Birds and Habitat Directives, and other sites of nature conservation value. Protect, conserve, enhance where possible and avoid loss of diversity and integrity of the broad range of habitats, species, and wildlife corridors. Conserve and protect other sites of nature conservation including NHAs, pNHAs, National Parks, Nature Reserves, Wildlife Sanctuaries as well as protected species outside these areas as covered by the Wildlife Act. No net biodiversity loss. 	 Siting of development of infrastructure installation on non-sensitive sites, where possible and appropriate. Any siting of infrastructure should result in non-significant impacts wherever they are located. Maintenance of favourable conservation status for all habitats and species protected under the Habitats Directive. No loss of protected habitats and species during the lifetime of the Plan. Prevent the introduction of new invasive or alien species. Control/manage new invasive species. 	 Conservation status/habitat quality for all sites and species located within the Zone of Influence. Scale of charging infrastructure permitted in proximity/within European sites/sites of ecological importance. Conservation status/habitat quality for all sites and species positively impacted by an improvement in air quality due to decarbonisation and the electrification of Ireland's vehicle fleet. Level of biodiversity lost as a result of the implementation of the Plan.
Land & Soils	 Environmental Protection Objective (EPO): Protect and enhance soil quality, function, and fertility. Protect soils against pollution. Minimise the excavation and movement of soils within charging infrastructure works. Minimise the amount of waste to landfill from the site. Conserve, protect and avoid loss of diversity and integrity of designated habitats, geological features, species, or their sustaining resources in designated ecological sites. 	 Prevent pollution of soil through adoption of appropriate environmental protection procedures during any construction or maintenance works. No incidences of soil contamination Ensure appropriate management of existing contaminated soil in accordance with the requirements of current waste legislation. Limit the amount of excavation in sensitive locations. Minimise the consumption of non-renewable sand, gravel, and rock deposits. Preference for development on brownfield site over greenfield sites. 	 Incidences of soil contamination near charging infrastructure works. Number and condition of designated geological features. Rates of re-use/recycling of construction waste related to implementation of Plan. Rates of brownfield site and contaminated land re-use and development near charging infrastructure works. Rates of greenfield development near and throughout charging infrastructure works.

Table 6.1 SEA Objectives, Indicators and Targets

Environmental Component	Strategic Environmental Objectives	Targets	Indicators
Water	 Environmental Protection Objective (EPO): Support achievement of the objectives of the Water Framework Directive. Ensure that the status of water bodies is protected, restored and no deterioration will be seen. Avoid inappropriate development in areas at risk of flooding and areas that are vulnerable to current and future erosion 	 All waters within the plan area to achieve the objectives of the Water Framework Directive and the relevant River Basin Management Plan by 2027. Minimise flood risk through appropriate management of flood vulnerable zones. Support flood prevention measures, where appropriate. 	 Status and quality of waterbodies near charging infrastructure. Number of significant pollution events recorded as a result of the implementation of the Plan. charging infrastructure.
Air Quality, Noise & Climate	 Environmental Protection Objective (EPO): Continue to comply with air quality standards to prevent or reduce harmful effects on human health and the environment; and Seek to reduce Ireland's transport-related greenhouse gas emissions to help in achieving Ireland's net zero commitments by 2050. To avoid, prevent or reduce harmful effects on human health resulting from the emissions to air as a result of fossil fuel-based transport fleets and construction vehicles. Maintain and promote continuing improvement in Air Quality, Noise & Climate through the reduction of emissions and promotion of a decarbonised and electrified fleet. Meet the relevant Air Quality Standards for the protection of human health and vegetation including nitrogen deposition. Minimise the use of high-embodied carbon during any charging infrastructure works. Contribute towards the reduction of greenhouse gas emissions in line with national targets. 	 Improvement in Air Quality trends, particularly in relation to machinery related emissions of NOx and particulate matter. Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy. Meeting and improving Air Quality Standards for human health and vegetation, including nitrogen deposition. Meet EU/ Irish carbon budgets and commitments. Achievement of Paris Agreement GHG emission reduction targets. Minimise air and noise emissions during construction and operation of new developments. 	 General air quality results in the Republic of Ireland. The changes and level of GHG emissions from the electrification of vehicular transport over the plan period. Compliance with national Air Quality Standards (AQS). Mode share of electrified public transport (passenger and freight). Overall GHG emission reductions over the Plan period. Noise and air quality monitoring data from any new developments arising as a result of the Plan.
Archaeology, Architectural and Cultural Heritage	 Environmental Protection Objective (EPO): Protect, conserve, and enhance the cultural heritage and historic environment. 	• Protect entries to the Record of Monuments and Places, and the immediate setting of these entries including relationships with the surrounding landscape where relevant, from adverse effects resulting from potential development and or increased infrastructure resulting from the Plan.	• No deterioration of features of archaeological/ architectural/ cultural significance as a result of the implementation of the Plan.

Environmental Component	Strategic Environmental Objectives	Targets	Indicators
	• Protect and conserve the cultural heritage including the built environment and settings; archaeological recorded and unrecorded monuments, architectural (Protected Structures, Architectural Conservation Areas, vernacular buildings, materials, and urban fabric) and manmade landscape features (e.g., field walls, footpaths, gate piers etc.).	 More generally ensure permitted developments and or increased infrastructure, where possible, avoid impacts on cultural heritage, including Protected Structures, Architectural Conservations Areas, and other significant landscape features; and protect the amenities of such structures, and features. 	 Number of entries to the Record of Monuments and Places, and the immediate setting of these entries including their relationships with charging infrastructure and the surrounding landscape. Full or partial loss to entries to the RPSs/NIAHs near charging infrastructure. Archaeological Impact Assessments related to increased infrastructure, and or the number and types of archaeological investigations undertaken.
Landscape & Visual	 Environmental Protection Objective (EPO): Conserve, protect and enhance valued natural, cultural, and built landscapes, seascape, views of local value and features. To implement the identification, assessment, protection, management, and planning of landscapes. 	 Any construction works and structures should be planned with cognisance of landscape sensitive areas and protected views/ prospects 	• No deterioration of landscape or areas with scenic value e.g., Areas of High Amenity, Areas of Outstanding Natural Beauty, and Protected Views as a result of the implementation of the Plan.
Material Assets	 Environmental Protection Objective (EPO): Support the development of Electric Vehicle infrastructure while making efforts to reduce the carbon emissions and waste produced by the transport industry. Provide improved and increased charging infrastructure in appropriate locations across Ireland. Provide improved electrified public transport and freight transport infrastructure. 	 Improve the number and scale of charging infrastructure across Ireland at appropriate locations. Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy. 	 Scale and location of charging infrastructure in Ireland. Statistics relating to the electrification of transport fleets in Ireland (including number of EVs, passengers and journey times). Economic growth statistics – particularly those relating to EV. Mode share of electrified public transport (passenger and freight).

7. Alternatives Considered

7.1 Introduction

Article 5.1 of the SEA Directive requires the Environmental Report to consider "*reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme*". Annex 1(h) of the SEA Directive, as replicated in paragraph (h) of Schedule 2B of the Planning and Development Regulations 2001, as amended, requires "*an outline of the reasons for selecting the alternatives*". This suggests that there are three stages to the consideration of alternatives:

- 1. Identify reasonable alternatives; (Refer to Section 7.2).
- 2. Evaluate and compare the alternatives; (Refer to Section 7.3); and
- 3. Provide reasons for the choice of preferred alternative(s) (Refer to Section 7.4).

7.2 Identification of Reasonable Alternatives

Three reasonable alternatives were considered in the preparation of the Plan, as summarised below:

Alternative 1 "Do Nothing": Under Alternative 1, no Regional and Local EV Charging Network Plan is prepared. The National Enroute EV charging Network Plan 2023 -2030 remains the primary overarching document pertaining to EV infrastructure charging in the country.

Under this Alternative, the private market will lead the rollout of the EV charging network. This rollout will be in response to market demand, resulting in charging infrastructure concentrated at high demand locations that are economically viable, but not necessarily publicly accessible. This rollout will also not contribute to the availability of charging infrastructure in locations that would support equitable access to public charging infrastructure.

Alternative 2 "Provide Targeted Capital Funding for Projects": Alternative 2 relates to the provision of targeted capital funding projects for EV charging infrastructure, with no strategic national plan to sustainably deliver charging infrastructure at a regional and local scale.

Lessons learned from international experience and from experience with funding already offered in Ireland demonstrate that public funding alone for public charging infrastructure projects does not suffice to foster a public charging network that meets diverse current and future EV user needs. Capital funding programmes, while valuable in accelerating the rollout of infrastructure at key locations, do not provided a coordinated, widespread charging network with the variety of charging types needed at different key locations.

Alternative 3 "Regional and Local EV Charging Network Plan 2024 - 2030": In order to adequately facilitate the transition to EVs in accordance with the *EV Charging Infrastructure Strategy*, Alternative 3 relates to the preparation of a Regional and Local EV Charging Network Plan to provide a coordinated and planned approach to implementing a charging network. The plan will:

- 1. Support the delivery of well-defined local and regional plans for a resilient, self-sustaining, futureproofed network that minimises public funding supports and encourages participation from public and private stakeholders to drive delivery.
- 2. Supports the coordinated and accelerated expansion of a destination and neighbourhood EV charging network that aligns with greater e-mobility policies.
- 3. Provides a pathway to deliver on national infrastructure targets in support of both AFIR requirements and CAP objectives.

These regional and local strategies will be led by local authorities, with the support of public and private sector stakeholders, to facilitate charging infrastructure delivery that is financially sustainable and best ensures equitable access for all.

7.3 Evaluation and Comparison of Reasonable Alternatives

This section provides a detailed description and assessment of those alternatives outlined in Section 7.2.

The assessment process categorised environmental impacts using the ratings outlined in Table 7.1 which is based on the impact assessment criteria defined by the EPA for environmental impact assessment.

Table 7.1 Impact Ratings

Significance of Effects						
	Neutral					
	Positive					
	Negative					
	Uncertain (Unknown or both positive and negative effects likely)					

Table 7.2 identifies the likely unmitigated impacts associated with each of the alternatives considered.

Table 7.2 Environmental Assessment of Alternatives

e	Description of Alternative Scenario:								
Alternativ No.		НН&Ч	Bio	L&S	Wat	AQN&C	AA&CH	L&V	MA
e 1	Under Alternative 1, no Regional and Local EV Charging Network Plan is prepared. The National Enroute EV charging Network Plan 2023 - 2030 remains the primary overarching document pertaining to EV infrastructure charging in the country.								
Alternativ	Under this Alternative, the private market will lead the rollout of the EV charging network. This rollout will be in response to market demand, resulting in charging infrastructure concentrated at high demand locations that are economically viable, but not necessarily publicly accessible. This rollout will also not contribute to the availability of charging infrastructure in locations that would support equitable access to public charging infrastructure.								
Alternative 2	Alternative 2 relates to the provision of targeted capital funding projects for EV charging infrastructure, with no strategic national plan to sustainably deliver charging infrastructure at a regional and local scale. Lessons learned from international experience and from experience with funding already offered in Ireland demonstrate that public funding alone for public charging infrastructure projects does not suffice to foster a public charging network that meets diverse current and future EV user needs. Capital funding programmes, while valuable in accelerating the rollout of infrastructure at key locations, do not provided a coordinated, widespread charging network with the variety of charging types needed								
Alternative 3	at different key locations. In order to adequately facilitate the transition to EVs in accordance with the EV Charging Infrastructure Strategy, Alternative 3 relates to the preparation of a Regional and Local EV Charging Network Plan to provide a coordinated and planned approach to implementing a charging network.								

Each of the three alternatives assessed are likely to result in positive effects on population, air quality and climate, and on material assets, in that some level of new charging infrastructure would be provided under each alternative. Ultimately, each alternative offers an improvement on the existing infrastructure offering and supports a greater uptake in EV usage around the country. Otherwise, neutral environmental effects are identified for each alternative option.

However, it is important to note that there are variances to the significance of effects identified for each of the alternatives considered.

Alternative 1 involves reliance on the private market to lead the rollout of the EV charging network in Ireland. This rollout will be in response to market demand, resulting in charging infrastructure concentrated at high demand locations that are economically viable, but not necessarily publicly accessible. This rollout will also not contribute to the availability of charging infrastructure in locations that would support equitable access to public charging infrastructure.

Thus, the positive effects on population, air quality and climate and on material assets that are predicted to occur as a result of Alternative 1 are likely to be minimal. Alternative 1 represents the least-preferred alternative.

Alternative 2 relates to the establishment of targeted capital funding programmes. These programmes would draw on international and national funding to support the costs of installing infrastructure, and potentially the ongoing operational and maintenance costs of that infrastructure.

Lessons learned from international experience and from experience with funding already offered in Ireland demonstrate that public funding alone for public charging infrastructure projects does not suffice to foster a public charging network that meets diverse current and future EV user needs. Capital funding programmes, while valuable in accelerating the rollout of infrastructure at key locations, do not provided a coordinated, widespread charging network with the variety of charging types needed at different key locations. Capital funding programmes would provide limited support for EV charging infrastructure rollout, leaving large gaps in the network.

Thus, the positive effects on population, air quality and climate and on material assets that are predicted to occur as a result of Alternative 2 are likely to be moderate. Alternative 2 represents an intermediate alternative.

Alternative 3 relates to the preparation of a Regional and Local EV Charging Network Plan to provide a coordinated and planned approach to implementing a charging network.

Alternative 3 acknowledges that to support EV adoption amongst diverse groups, infrastructure needs to be provided at locations to enable these groups' ability to transition to EVs, even if these locations are not currently economically viable. Additionally, this approach taps into existing local authority-owned sites such as residential roads and municipal parking lots in town centres. This large property portfolio provides the opportunity to bundle low and high profit sites to ensure widespread delivery of charge points, as opposed to concentrating charge points in and around cities where sites are more economically viable.

Furthermore, this approach allows for working within and across different groups in the local authority and complementary public bodies to ensure that site selection aligns with parallel mobility efforts, particularly those aiming to incentivise shifts to public transport or active modes of travel.

Thus, the positive effects on population, air quality and climate and on material assets that are predicted to occur as a result of Alternative 3 are likely to be significant. Alternative 3 represents the preferred alternative.

8. Assessment of Significant Effects

8.1 Introduction

The approach used for assessing likely significant effects was objectives led. The assessment was primarily qualitative in nature, with some assessment based on expert judgement. This qualitative assessment compares the likely effects against the Strategic Environmental Objectives to see which proposals of the RLEVCNP meet the Strategic Environmental Objectives and which, if any, contradict these.

Particular reference was made to the potential for cumulative effects in association with other relevant plans and programmes.

In relation to transboundary effects, it must be noted that the assessment of significant effects outlined in Section 8.2 to Section 8.4 of this report also takes regard for transboundary effects of the RLEVCNP on Northern Ireland. Where there is potential for any significant effects to occur, particularly in relation to the air quality, climate and water assessments that have been detailed in Section 8.2 to Section 8.4, the potential for transboundary effects between the Republic of Ireland and Northern Ireland have also been considered throughout the assessment process.

8.2 Assessment of Environmental Effects

The environmental effects of the RLEVCNP's proposals were assessed with respect to the existing environmental baseline as outlined in Section 5 and the environmental objectives listed in Section 6. The assessment process categorises environmental effects using the ratings outlined in Table 8.1 which is based on the impact assessment criteria defined by the EPA for environmental impact assessment.

Where potential effects are identified, it is expected that these can be mitigated through the implementation of the mitigation measures outlined in Section 9.

Table 8.1 Significance Ratings

Signifi	Significance of Effects						
	Neutral						
	Positive						
	Negative						
	Uncertain (Unknown or both positive and negative effects likely)						

The potential environmental impact is assessed under the following headings:

- Population & Human Health (P&HH).
- Biodiversity (Bio) (note: the topic of marine environment and aquatic species have been assessed under Biodiversity).
- Land and Soil (L&S).
- Water (Wat) (note: the topic of marine environment has been assessed under Water).
- Air Quality, Noise & Climate (AQ, N &C).
- Archaeology, Architectural & Cultural Heritage (AA&CH).
- Landscape &Visual (L&V); and
- Material Assets (MA).

8.3 Principal Environmental Effects

The RLEVCNP represents a roadmap for establishing EV charging infrastructure at a regional and local level throughout the country. A number of value areas have been identified in the RLEVCNP which have the potential to give rise to positive effects on the environment. Value areas and guiding principles identified within the RLEVCNP have been outlined below:

- 1. **Prioritise and enhance private sector participation:** The important role of the existing private sector companies who are providing fuelling, charging and ancillary services is recognised. In this regard, interventions will be designed to ensure the continued vitality of the private sector and promote a self-sustainable destination and neighbourhood EV charging market.
- 2. Alignment with wider policy and other network goals: The interventions will support: the State's overall decarbonisation goals; the National Planning Framework (and associated National Strategic Outcomes including sustainable mobility, enhanced regional accessibility, transition to a low carbon and climate resilient society); and consider alignment with ESBN and EirGrid's electricity network strategies.

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- 3. **Prioritise the utilisation of existing parking spaces:** Local authorities should make the best use of available infrastructure, to enhance convenience for users while significantly reducing the need for creating new bays, in turn, minimising planning challenges and costs.
- 4. **Customer experience and equity:** Interventions will seek to provide a best-in-class customer experience to all users to ensure a positive perception of EV charging infrastructure provision and further facilitate the EV transition. This includes coverage across Ireland to ensure equitable distribution ensuring connectivity across urban, rural and end of routes.
- 5. Enhance and facilitate innovation: New and innovative technologies that further accelerate the roll-out of appropriate EV charging infrastructure will be encouraged coupled with the use of data to inform decision making.
- 6. Resource efficiency: Interventions will seek to facilitate efficient use of private and public resources.

Table 8.2 Assessment of Plan Provisions

No.	Proposal	Population + Human Health	Biodiversity	Land & Soils	Water	Air Quality Noise & Climate	Archaeology Architectural and Cultural Heritage	Landscape & Visual	Material Assets
1	The objectives of this plan are to: 1) Support the delivery of well-defined local and regional plans for a coordinated, resilient, self- sustaining, future-proofed network that minimises public funding supports and meets user needs.								
SEA C This c An ov	SEA Comments This objective relates to supporting future local and regional plans and will not give rise to environmental effects in and of itself. All future plans should be subject to SEA and AA, as appropriate. An overall neutral environmental effect is identified for the purposes of this assessment.								
2	The objectives of this plan are to: 2) In partnership with key stakeholders, support the coordinated and accelerated expansion of a publicly accessible destination and neighbourhood EV charging network that aligns with greater e-mobility policies.								
SEA C The co popula identi 2030 a An oth likely	SEA Comments The coordinated and accelerated expansion of a publicly accessible destination and neighbourhood EV charging network, as outlined in this objective, is likely to result in a positive effect on population, air quality and climate and material assets through the provision of improved EV charging facilities and the enabling of greater uptake in EV usage. A potential negative effect is also identified however with regards to material assets as it is anticipated that to support this public charging network, a total power requirement of 169,253 kW and 562,244 kW is needed by 2025 and 2030 respectively at destination and neighbourhood locations alone. Thus, the potential effects of this objective on material assets are classified as 'uncertain' for the purposes of this assessment. An otherwise uncertain environmental effect is identified as the exact locations and scale of the infrastructure roll-out is not known at this stage. However, the best use of available infrastructure is block to missing environmental effect as the exact locations and scale of the infrastructure roll-out is not known at this stage.								
3	The objectives of this plan are to: 3) Provide a pathway to deliver on national infrastructure targets in support of both AFIR requirements and Climate Action Plan objectives.								
SEA Comments This objective relates to methods of delivery and governance and will not give rise to development in and of itself.									
4	Based on the priority areas and user groups identified in their Infrastructure strategies, local authorities will need to identify the potential sites where the installation of an EV charging station supports strategic aims.								
SEA C This c	Comments bjective provides instruction to local authorities relating to the identification of sites for the installation of E	V chargi	ng statior	ns. It does n	ot give rise	to environr	nental effects	in and of	itself.

No.	Proposal	Population + Human Health	Biodiversity	Land & Soils	Water	Air Quality Noise & Climate	Archaeology Architectural and Cultural Heritage	Landscape & Visual	Material Assets
5	To ensure the charging network is operated and maintained to a high quality, with network gaps identified and addressed, key performance indicators will be established, embedded in contractual arrangements, and monitored.								
SEA Comment Measures to ensure the monitoring and maintenance and subsequent reliability of charge points is likely to result in a positive effect on population, air quality and climate and material assets through provision of a stable service. An otherwise neutral environmental effect is identified									through
6	When considering avenues for public intervention ZEVI will take the following principles into account: 1) Prioritise and enhance private sector participation: The important role of the existing private sector companies who are providing fuelling, charging and ancillary services is recognised as they have the technical expertise and resources required to successfully deliver charging infrastructure. In this regard, interventions will be designed to ensure the continued vitality of the private sector and promote a self- sustainable destination and neighbourhood EV charging market. Business models that facilitate the leveraging of private expertise and resources will be encouraged and prioritised for funding.								
SEA C	Comments		. 1	• • • • •					
This c	bjective relates to private company intervention and participation in the provision of charging services. An of When considering avenues for public intervention ZEVI will take the following principles into account:	overall ne	eutral env	ronmental	effect 1s 1d	entified.			
7	2) Alignment with wider policy and other network goals: The interventions will support: the State's overall decarbonisation goals; the National Planning Framework (and associated National Strategic Outcomes including sustainable mobility, enhanced regional accessibility, transition to a low carbon and climate resilient society); and consider alignment with ESBN and EirGrid's electricity network strategies.								
SEA C	Comments								
A Pos neutra	itive effect on population, air quality and climate and material assets are identified through the provision of i al environmental effect is identified.	ntervent	ions that	align with t	he state's o	verall decar	bonization g	oals. An o	therwise
8	When considering avenues for public intervention ZEVI will take the following principles into account: 3) Prioritise strategic locations that suit user needs: Local authorities should make the best use of available infrastructure, to enhance convenience for users while significantly reducing the need for additional infrastructure, in turn, minimising risks and costs. Local authorities should consider and prioritise sites that meet multiple user needs while also ensuring that there is adequate EV infrastructure installed to meet rural and urban charging needs.								

No.	Proposal	Population + Human Health	Biodiversity	Land & Soils	Water	Air Quality Noise & Climate	Archaeology Architectural and Cultural Heritage	Landscape & Visual	Material Assets
SEA 0	Comments								
The p 'deve	rioritization of using available infrastructure in the roll-out of charging infrastructure is likely to result in an loped' land, and the use of same will therefore not likely require intrusive construction or installation require	overall p ments.	ositive e	nvironmenta	al effect. Th	ese spaces a	are already 'p	oaved' or	
9	When considering avenues for public intervention ZEVI will take the following principles into account: 4) User experience and equity: Interventions will seek to provide a high-quality user experience to all users to ensure a positive perception of EV charging infrastructure provision and further facilitate the EV transition by adhering to principles of universal design. This includes the standardisation of design and information, and coverage across Ireland to ensure equitable distribution ensuring connectivity across urban, rural and end of routes.								
SEA o The in positi	SEA Comments The implementation of high-quality user experience and universal design in charging infrastructure across Ireland is likely to encourage greater use and uptake of EVs and EV charging facilities. A positive effect on population, air quality and climate and material assets are therefore identified. An otherwise neutral environmental effect is noted.								
10	When considering avenues for public intervention ZEVI will take the following principles into account: 5) Enhance and facilitate innovation: New and innovative technologies that further accelerate the roll- out of appropriate EV charging infrastructure will be encouraged coupled with the use of data to inform decision making.								
SEA O This o	<i>Comments</i> bijective relates to the encouragement of innovative technologies and will not result in development in and c	f itself. 7	Thus, an o	overall neut	ral environr	nental effec	t is identified	l.	
11	When considering avenues for public intervention ZEVI will take the following principles into account: 6) Resource efficiency: Interventions will seek to facilitate efficient use of private and public resources through approaches such as the bundling of high and low demand sites to improve the commercial viability overall of a package of sites and provide equitable access to charging infrastructure								
SEA (Comments				-	-			
The e	The efficient use of public and private resources is welcomed and will likely result in a positive effect on the population. However, an otherwise neutral environmental effect is identified.								
12	To ensure the charging network is operated and maintained to a high quality, with network gaps identified and addressed, key performance indicators will be established, embedded in contractual arrangements, and monitored. A consolidated map of charge points will support the monitoring, evaluation, and planning of projects. It is critical to monitor and track EV infrastructure planning and installation against actual and projected EV uptake. An oversupply of infrastructure could affect the commercial viability of charge points whereas undersupply result in queuing and insufficient charge points.								

No.	Proposal	Population + Human Health	Biodiversity	Land & Soils	Water	Air Quality Noise & Climate	Archaeology Architectural and Cultural Heritage	Landscape & Visual	Material Assets
SEA Comment									
Measures to ensure the monitoring and maintenance and subsequent reliability of charge points is likely to result in a positive effect on population, air quality and climate and material assets through provision of a stable service. An otherwise neutral environmental effect is identified.									

8.4 Cumulative Effects

Cumulative effects are those that arise when the effects of the implementation of a plan or project to occur in combination with those of other plans or projects. Cumulative effects can be described as the addition of many small impacts to create one larger, more significant, impact.

To implement the proposals of the RLEVCNP, a range of projects/schemes would be required. Each of these should be subject to cumulative assessment at project level, as necessary, to determine whether the subject project is likely to give rise to cumulative effects with other proposed or existing projects. However, it is thought that the mitigation measures outlined in Section 9 of this report will assist in the reduction or avoidance of cumulative environmental effects.

The two types of potential cumulative effects that have been considered throughout this assessment are:

- **Potential Intra-Plan cumulative effects**, which arise from the interactions between different types of potential environmental effects resulting from a plan, programme, or policy where there are elevated levels of environmental sensitivities. Environmental sensitivities have been identified in Section 5 of this Environmental Report to inform such, in the future development could result in environmental conflicts and lead to the deterioration of environmental quality. The interrelationships between environmental components that help determine these potential effects are identified in Table 8.2 below.
- **Potential Inter-Plan cumulative effects**, which arise when the effects of the implementation of one plan occur in combination with those of other plans, programmes, developments, etc. Other policies, plans and programmes, as outlined in Section 3 have therefore been considered for their potential to give rise to potential cumulative effects with the RLEVCNP.

Within the RLEVCNP a range of projects and schemes are proposed. Each of these should be subject to cumulative assessment at project level, as necessary, to determine whether the subject is likely to give rise to cumulative effects with other proposed or existing projects. However, it is thought that the mitigation measures outlined in Section 9 of this report will assist in the reduction or avoidance of cumulative environmental effects.

8.4.1 Intra-Plan Cumulative Effects

As no negative environmental effects are likely to arise as a result of the proposed plan, no intra-plan cumulative effects are identified.

8.4.2 Inter-Plan Cumulative Effects

With regards Inter-Plan effects, the RLEVCNP has the potential to contribute positively and cumulatively towards a wide range of Irish Government policies, within the context in which it sits. For example, the Plan directly contributes towards the achievement of the Alternative Fuels Infrastructure Regulation (AFIR) (European Commission) 2023, which sets out legally binding national and EU-wide targets for the deployment of alternative fuels infrastructures for road vehicles, vessels, and stationary aircraft. The Plan address key requirements of the AFIR.

Another example in which the RLEVCNP positively contributes towards, are the objectives of the Climate Action and Low Carbon Development (Amendment) Act 2021 and National Climate Action Plan (CAP 24) through the extensive suite of proposals for the deployment of EV charging infrastructure to accommodate the uptake of EV and contribute towards Ireland's target of having 30% EVs for private vehicles by 2030 and no new petrol or diesel cars being sold by 2035.

9. Mitigation Measures and Monitoring

9.1 Mitigation

Mitigation measures are measures envisaged and designed to prevent, reduce and as fully as possible offset any significant adverse impacts on the environment of implementing the RLEVCNP. All mitigation measures have been developed and agreed with ZEVI as part of the SEA iterative process. The primary mitigation measure is to ensure the sustainable and appropriate development of the plan area without compromising the integrity of the natural and built environment.

It is recommended that all legislation, policies, environmental requirements, and guidelines outlined in this Environmental Report are adhered to. In addition, future legislation, policies, environmental requirements, and guidelines should also be fully integrated into the RLEVCNP and Environmental Report.

In addition, many impacts will be more adequately identified and mitigated at project and EIA level. In general terms, all proposals for development will be required to have due regard to environmental considerations outlined in this Environmental Report and associated AA Screening.

In this section the mitigation measures are discussed under each environmental parameter heading. Refer to Table 9.1 for proposed mitigation measures, and recommendations of the SEA.
Table 9.1 Proposed Mitigation Measures for the RLEVCNP

Environmental Component	Relevant Mitigation Measures	Objectives to which this applies
Population & Human Health	No mitigation measures proposed	
Biodiversity	Protection of Biodiversity including Natura 2000 Network and National Site Network	2
	Protect designated sites including Special Protection Areas (SPAs) and Special Areas of Conservation (SACs), Natural Heritage Areas, proposed Natural Heritage Areas, UNESCO World Heritage and UNESCO biosphere sites, Ramsar Sites, Salmonid Waters, Shellfish Waters, Freshwater Pearl Mussel catchments, Flora Protection Orders and Species, Wildlife sites (including Nature Reserves); the Water Framework Directive Register of Protected Areas; Wildfowl Sanctuaries and Tree Preservation Orders.	
	• Identify and afford appropriate protection to any new, proposed or modified designated sites (as listed above) should they arise during the lifetime of this Plan.	
	• Any developments arising from the implementation of the RLEVCNP shall comply with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines.	
	Biodiversity and Ecological Networks	2
	• Any developments arising from the implementation of the RLEVCNP will aim to protect, restore and enhance biodiversity and ecological connectivity, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, geological and geo-morphological systems, other landscape features, natural lighting conditions, and associated wildlife where these form part of the ecological network and/or may be considered as ecological corridors or stepping-stones in the context of Article 10 of the Habitats Directive.	
	• The design of any developments arising from the implementation of the RLEVCNP should aim to achieve no net biodiversity loss where practicable.	
	• To ensure the protection and conservation of areas, sites, species, and ecological networks/corridors of biodiversity value outside of designated sites throughout the country and to require an ecological assessment to accompany development proposals likely to impact on such areas or species.	
	• To protect and promote the sustainable management of the natural heritage, flora, and fauna of the county through the promotion of biodiversity, the conservation of natural habitats and the enhancement of new and existing habitats.	
	• To promote the conservation of biodiversity through the protection of sites of biodiversity importance and wildlife corridors, both within and between the designated sites and the wider Plan area.	
	Land-Take	2
	• The design of any developments arising from the implementation of the RLEVCNP will ensure that measures are explored to avoid unnecessary land- take, in line with the ecological mitigation hierarchy which prioritises avoidance, and seeks to reduce, mitigate, and then compensate and offset for adverse effects on biodiversity, in that order of preference.	
	• If land-take cannot be avoided, an assessment of the type (and use) of habitat present is required to determine suitable mitigation and/or compensation measures.	
	• Existing sites (where appropriate) and brownfield sites should be considered in the first instance for any infrastructural development or expansions.	

Environmental Component	Relevant Mitigation Measures	Objectives to which this applies		
	Hydrological Change	2		
	• Where proposed work has the potential to result in hydrological change, and there is a European Site within the zone of influence, then design level modelling will be undertaken to determine any potential hydrological change as a result of any proposed construction works which may impact on the hydrology of sites within the zone of influence of the implementation of the RLEVCNP, including European Sites designated for their international nature conservation importance. This will also help to inform the overall design of any infrastructure requirements.			
	Air Quality	2		
	• Where there is potential for implementation of the RLEVCNP to result in significant increases in air pollution, and a European Site falls within the zone of influence of such implementation, then air quality modelling should be undertaken to determine potential air quality impacts of the implementation of the RLEVCNP on sites, including European Sites within the zone of influence.			
	 Where increased air pollution may result in adverse effects on habitats, potential solutions to mitigate air pollution and resulting dust and nitrogen deposition may include tree planting to reduce deposition of pollutants on a site (this is site and habitat dependent); preparation and implementation of dust management plans, screening, and the provision of compensatory habitat (where practicable). Water Pollution 			
	 Where proposed work has the potential to result in water pollution, and there is hydrological connectivity to a European Site, Surface Water Management Plans (SWMPs) will be prepared for planning submission of development proposals and implemented during construction where on sensitive waterbodies are likely to arise. SWMPs will include appropriate measures such as temporary silt fencing, cut off ditches, settlemer and bunds set up early in construction to capture runoff and prevent ingress of sediments and contaminants into existing drainage infrastructure necessary. Integrated and innovative solutions require a partnering approach best managed through a SWMP. 			
	• Where implementation of the Proposals presents a challenge to existing drainage systems, and/or the operation of a local drainage system is known to be complicated by interactions between river, groundwater and sewer systems or river and canal systems, submission of a Water Protection Plan and detailed site drainage plans will be required with planning applications associated with developments arising from the implementation of the RLEVCNP, if a European Site falls within the zone of influence.			
	Invasive Species	2		
	• Appropriate invasive species surveys shall be carried out in advance of any construction/reinstatement works, where deemed necessary. Invasive Species Management Plans shall be prepared and implemented where required, following the assessment of invasive species surveys.			
Land & Soils	Contamination	2		
	• Ensure that adequate soil protection measures are undertaken where appropriate on any developments arising from the implementation of the RLEVCNP. Adequate and appropriate investigations shall be carried out into the nature and extent of any soil and groundwater contamination and the risks associated with site development work, particularly where brownfield development is proposed.			
	Ensure contaminated soil is disposed of in accordance with the Waste Management Regulations (S.I.821 of 2007).			
	Geological Heritage Sites	2		
	To recognise the importance of Geological Heritage Sites and to protect the character and integrity of these sites.			

Environmental Component	Relevant Mitigation Measures	Objectives to which this applies
	Land Use	2.
	• Development proposals arising from the implementation of the RLEVCNP should be cognisant of the target of the National Planning Framework's (2018) SEA to "Maintain built surface cover nationally to below the EU average of 4%".	
	• Existing sites (where appropriate) and brownfield sites should be considered in the first instance for any infrastructural development or expansions.	
	Avoid geologically unsuitable areas including karst where practicable, and areas susceptible to subsidence or landslides.	
Water	Water Quality	2
	• To ensure Sustainable Drainage Systems (SuDS) is applied to any new facility and that site-specific solutions to surface water drainage systems are developed taking account of the alternative fuel type(s) being deployed on the site, and which meet the requirements of the Water Framework Directive and associated River Basin Management Plans.	
	• To ensure that developments likely to have an unacceptable impact on water resources, including surface water and groundwater quality and quantity, designated sources protection areas, estuarine, coastal transitional waters, river corridors and associated wetlands are not permitted.	
	• To protect river habitats, species, and water quality, ensure that no infrastructure, including clearance and storage of materials, takes place within a minimum distance of 25m measured from each bank of any river, stream, or watercourse.	
	Flood Risk Management	
	• Avoid development of infrastructure in flood risk areas. Ensure that any new development does not present an inappropriate risk of flooding or does not cause or exacerbate such a risk at other locations.	
	• Reference should be made to the Planning System and Flood Risk Management for Planning Authorities (DECLG/OPW 2009) and the National Flood Hazard Mapping (OPW) while referring to the relevant Flood Risk Management Plan (FRMP).	
	Groundwater	2
	• To protect groundwater resources in accordance with the statutory requirements and specific measures as set out in the relevant River Basin Management Plan.	
Air Quality, Noise	Air	2
& Climate	• Any developments arising from the implementation of the RLEVCNP should comply with air quality legislation and contribute to achieving greenhouse gas emission targets.	
	• Ensure that developments do not give rise to negative effects on air quality at sensitive receptors, during both construction and operation.	
	Dust management plans shall be prepared and implemented for any major construction/reinstatement/upgrade works associated with the implementation of the RLEVCNP.	
	Climate Adaptation and Resilience	2
	• Improve resilience and adaptation to climate change by taking into account issues including the following in the location and design of any developments/plans arising from the implementation of the RLEVCNP;	
	– Flood risk;	

Environmental Component	Relevant Mitigation Measures	Objectives to which this applies
	 Susceptibility to major accidents/disasters; 	
	- Extreme temperature and associated implications including those relating to the operation of transport and ancillary infrastructure and services.	
	• Promote the reduction of emissions of Greenhouse Gases and facilitate measures which seek to reduce emissions of greenhouse gases to ensure Ireland's compliance with our Emission Targets.	
	• The development of any future refuelling and recharging infrastructure should assess the potential vulnerability of new infrastructure to the likely impacts of climate change.	
	Noise	2
	• Consideration of existing noise policy in Ireland, for example noise mapping and noise action plans produced by the Local Authorities.	
	• Consideration of likely noise impacts/effects associated with new developments. This includes being cognisant of proximity to sensitive receptors when siting new developments and consideration of existing noise sources when zoning lands for residential development.	
	• Development proposals arising as a result of implementation of the RLEVCNP will have regard to the requirements of the Noise Directive 2002/49/EC and associated Environmental Noise Regulations 2006 ES 45 and European Communities (Environmental Noise) Regulations 2018 S.I. No. 549/2018 (Ireland) (and any updated/superseding documents).	
	 In constructing development proposals arising as a result of the RLEVCNP regard shall also be given to BS 5228 Part 1 (2014) and the European Communities (Noise Emission by Equipment for Use Outdoors) Regulations, 2001 ' Code of Practice for Noise and Vibration Control on Construction and Open Sites' (and any updated/superseding documents). 	
Archaeology,	Archaeological Heritage	2
Cultural Heritage	• Where practicable, developments arising from the implementation of the RLEVCNP should protect archaeological heritage by implementing the relevant provisions of the Planning and Development Act 2000 (as amended), the National Monuments Act, 1930 (as amended).	
	• To have regard to archaeological concerns when considering proposed developments located in close proximity to Recorded Monuments and Places and the Zones of Archaeological Potential.	
	• To secure the preservation (i.e. preservation in situ or in exceptional cases preservation by record) of all archaeological monuments included in the Record of Monuments and Places as established under Section 12 of the National Monuments (Amendment) Act, 1994, and of sites, features, and objects of archaeological and historical interest generally.	
	Architectural Heritage	2
	• Where possible developments arising from the implementation of the RLEVCNP should contribute towards the protection of architectural heritage by adhering to the relevant legislative provisions of the Planning and Development Act 2000 (as amended).	
	• Development arising from the RLEVCNP should ensure the protection of the architectural heritage through the identification of Protected Structures, the designation of Architectural Conservation Areas, the safeguarding historic gardens, and the recognition of structures and elements that contribute positively to vernacular and industrial heritage.	
	• To protect, as set out in the Record of Protected Structures, all structures, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social, or technical interest.	

Environmental Component	Relevant Mitigation Measures	Objectives to which this applies
Landscape & Visual	• Developments and plans arising from the implementation of the RLEVCNP should contribute, where possible, towards the protection of county and local level landscape designations from incompatible developments. Any developments which may arise from the implementation of the RLEVCNP that have the potential to result in negative effects on these designations shall be accompanied by an assessment of the potential landscape and visual impacts of any such development. This will demonstrate that potential landscape effects have been anticipated and avoided to a level consistent with the sensitivity of the landscape and the nature of the designation.	2
	• Existing sites (where appropriate) and brownfield sites should be considered in the first instance for any infrastructural development or expansions.	
	• Avoid, as far as possible, siting infrastructure in areas protected for landscape and visual amenity, geological heritage and/or cultural heritage value. Where this is unavoidable, an impact assessment should be carried out by a suitably qualified practitioner and appropriate mitigation and/or alternatives must be provided.	
	Ensure that all new plans and programmes incorporate the findings of the County Landscape Character Assessments.	
	• To require that all proposed developments in Heritage Landscapes demonstrate that every effort has been made to reduce visual impact. This must be demonstrated for all aspects of the proposal- from site selection through to details of siting and design. All other relevant provisions of the development plan must be complied with.	
	• To protect sensitive areas from inappropriate development while providing for development and change that will benefit the rural community.	
	• To ensure that proposed developments take into consideration their effects on views from the public road towards scenic features or areas and are designed and located to minimise their impact.	
	• To ensure that appropriate standards of location, siting, design, finishing, and landscaping are achieved.	
	• Any future plans/programmes arising from the implementation of the RLEVCNP will have regard to existing and new landscape guidance documents.	
Material Assets	Resources	2
	Phasing of infrastructure deployment to manage available resources.	
	Continued engagement with ESB Networks on the development of plans to ensure grid availability for EV charging infrastructure.	
	Distribution of maximum power output among charge points where more than one vehicle charges simultaneously at a charging station.	
	Use of battery technology to mitigate delays in grid connection.	
	Promote the development of sufficient energy resources to meet the needs of the Plan area and promote the use of renewable energies to meet those needs.	
	Waste Management	2
	Promote the implementation of the Waste Management Plan together with any future National or Regional Waste Management Plans. Additionally, ensure national policies and regulations regarding waste are adhered to.	
	Encourage waste prevention, minimisation, reuse, recycling, and recovery as methods of managing waste during construction.	
All	• Upgrading of existing and construction of new EV charging infrastructure shall be subject to feasibility, constraints, and route options selections assessments.	2
	• Any developments arising from the implementation of the RLEVCNP shall be subject to the relevant environmental assessments, as required (i.e. Environmental Impact Assessment, Environmental Impact Assessment Screening, Appropriate Assessment, Habitats Regulations Assessment).	

Environmental Component	Relevant Mitigation Measures	Objectives to which this applies
	• To require all planning applications for development that may have (or cannot rule out) likely significant effects on European Sites in view of the site's Conservation Objectives, either in isolation or in combination with other plans or projects, to submit a Natura Impact Statement in accordance with the requirements of the EU Habitats Directive and the Planning and Development Act, 2000 (as amended).	

9.2 Monitoring

Article 10 of the SEA Directive requires that monitoring should be carried out in order to identify at an early stage any unforeseen adverse impacts associated with the implementation of the plan or programme.

A monitoring programme is developed based on the indicators selected to track progress towards achieving strategic environmental objectives and reaching targets, enabling positive and negative impacts on the environment to be measured. As previously described, the environmental indicators have been developed to show changes that would be attributable to implementation of the RLEVCNP.

As outlined in the EPA guidance document '*Guidance on SEA Statements and Monitoring*' (EPA, 2020), SEA monitoring should reflect the nature and level of detail of the plan/programme (EPA, 2020)³⁸. Many national-level plans/programmes lack geographic specificity, contain only high-level strategic objectives, and do not lend themselves to cause–effect models in terms of direct measuring of environmental effects. As such, SEA monitoring for these plans should focus on national indicators to examine environmental trends.

Refer to Table 9.2 for the proposed monitoring measures. The monitoring measures included are based on national indicators and informed by the content of the RLEVCNP.

The SEA carried out has ensured that any potential significant environmental impacts have been identified and given due consideration.

ZEVI is responsible for collating existing relevant monitored data, the preparation of preliminary and final monitoring evaluation reports, the publication of these reports and, if necessary, the carrying out of corrective action.

³⁸ EPA (2020) Guidance on SEA Statements and Monitoring. Available at: <u>Strategic Environmental Assessment | Environmental Protection Agency</u> (epa.ie)

Table 9.2 Proposed monitoring measures for the RLEVCNP

Environmental Component	Draft SEA Indicators	Monitoring Sources	Frequency/Responsibility
Population & Human Health	Changes in trends in perceived health status. Census population data. Mode share of electrified public transport (passenger and freight) Scale and location of charging infrastructure in Ireland.	CSO Census Reports – Health, Population, Employment and Transport Statistics. EPA State of the Environment Report	Central Statistics Office, every 6 years. EPA, every 4 years.
Biodiversity	Conservation status/habitat quality for all sites and species located within the Zone of Influence. Scale of charging infrastructure permitted in proximity/within European sites/sites of ecological importance. Conservation status/habitat quality for all sites and species positively impacted by an improvement in air quality due to decarbonisation and the electrification of Ireland's vehicle fleet. Level of biodiversity lost as a result of the implementation of the Plan.	 The Status of EU Protected Habitats and Species in Ireland Article 17 Report (Department of Housing, Local Government and Heritage). Department of Housing, Local Government and Heritage report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive. EPA State of the Environment Report Birds of Conservation Concern Ireland – Monitoring by Birdwatch Ireland on status, distribution, population etc. EPA Air quality monitoring reports. 	 DHLGH, every 6 years. Department of Housing, Local Government and Heritage (DHLGH). Every 6 years. EPA, every 4 years. Birdwatch Ireland, every 6 years. EPA annual air quality monitoring.
Land & Soils	Incidences of soil contamination near charging infrastructure works. Number and condition of designated geological features. Rates of re-use/recycling of construction waste related to implementation of Plan. Rates of brownfield site and contaminated land re-use and development near charging infrastructure works. Rates of greenfield development near and throughout charging infrastructure works.	EPA State of the Environment Report Monitoring for Geological Survey Irelands (GSI) Database. EPA National Waste Statistics Summary Report. The annual report on the implementation of the Southern Regional and Eastern-Midlands Region Waste Management Plans.	EPA, every 4 years. GSI, varies. EPA, annually. The Regional Waste Office, annually.
Water	Status and quality of waterbodies near charging infrastructure. Number of significant pollution events recorded as a result of the implementation of the Plan.	Ireland's National Water Framework Directive Monitoring Programme, 2019-2021. River Basin Management Plan for Ireland 2018 -2021 & Draft River Basin Management Plan for Ireland (2022 – 2027).	EPA, continuously. DHLGH, every 6 years.

Environmental Component	Draft SEA Indicators	Monitoring Sources	Frequency/Responsibility
	Past flood risk events in or around existing charging infrastructure.	 The Status of EU Protected Habitats and Species in Ireland Report (Department of Housing, Local Government and Heritage). EPA Water Quality of Ireland Report. EPA State of the Environment Report EPA Water Quality Status for surface and ground water. EPA Risk Status for surface and ground water. Monitoring in the Review of Flood Risk Management Plans 2021. Monitoring for the EPA Catchments Unit and Local Authority Waters Programme. 	 DHLGH, every 6 years. EPA, continuously. EPA, every 4 years. EPA, varies. EPA, varies. OPW, every 3 years. EPA Catchment Unit, DHLGH and relevant local authorities, varies.
Air Quality, Noise & Climate	General air quality results in the Republic of Ireland. The changes and level of GHG emissions from the electrification of vehicular transport over the plan period. Compliance with national Air Quality Standards (AQS). Mode share of electrified public transport (passenger and freight). Overall GHG emission reductions over the Plan period.	EPA Air Quality Monitoring. EPA State of the Environment Report. Sustainable Energy Authority of Ireland (SEAI) - Monitoring of Renewable Energy Sources in Ireland. Monitoring related to Local Authority Climate Action Plans. EPA Greenhouse Gas Emissions Report. EPA Climate Change Projections. CSO Census Reports. Monitoring for Noise Action Plans across local authorities.	 EPA, annually. EPA, every 4 years. SEAI, varies. Local Authorities, every 5 years. EPA reports on each sector on an annual basis. EPA, varies. CSO, every 6 years. Local Authorities, varies.
Archaeology, Architectural & Cultural Heritage	No deterioration of features of archaeological/ architectural/ cultural significance as a result of the implementation of the Plan. Number of entries to the Record of Monuments and Places, and the immediate setting of these entries including their relationships with charging infrastructure and the surrounding landscape. Full or partial loss to entries to the RPSs/NIAHs near charging infrastructure.	Registers of nationally protected sites and structures. The National Inventory of Architectural Heritage. Heritage Plan Ireland 2030. Local Authority Heritage Plans.	NPWS (National Parks and Wildlife Services), NMS (National Monuments Service), UNESCO, continually. The Department of Housing, Local Government and Heritage are responsible for monitoring the conditions of, recording the presence of, and conserving Ireland's protected sites on a routine basis. The Heritage Council reviewed after 3 years. Local Authorities, reviewed annually.

Environmental Component	Draft SEA Indicators	Monitoring Sources	Frequency/Responsibility
	Archaeological Impact Assessments related to increased infrastructure, and or the number and types of archaeological investigations undertaken.		
Landscape & Visual	No deterioration of landscape or areas with scenic value e.g., Areas of High Amenity, Areas of Outstanding Natural Beauty, and Protected Views as a result of the implementation of the Plan.	Corrine / EPA mapping resurveys.	EPA, varies.
Material Assets	Scale and location of charging infrastructure in Ireland.	CSO Population, Health, Economic and Employment statistics.	CSO, every 6 years.
	Statistics relating to the electrification of transport	Sustainable Energy Authority of Ireland (SEAI) Monitoring	SEAI, varies.
	fleets in Ireland (including number of EV's,	of Renewable Energy in Ireland.	Local Authority, every 5 years.
	passengers and journey times).	Monitoring related to Local Authority Climate Action Plans.	CSO, every 6 years.
	Economic growth statistics – particularly those	CSO Transport data.	EPA, annually.
	relating to EV.	EPA National Waste Statistics Summary Report.	EPA, every 4 years.
	Mode share of electrified public transport (passenger and freight).	EPA State of the Environment Report.	The Regional Waste Office, annually.
		The annual reports on the implementation of the Southern Region and Eastern-Midlands Region Waste Management Plans. Monitoring for the EPA's Remedial Action List.	The EPA releases a Remedial Action List every Quarter which identifies problems with drinking water supply. Local Authorities should have regard to issues pertaining to Local Authorities water treatment plants.
		EPA Urban Wastewater Treatment Reports	The EPA publish an Urban Wastewater Treatment
		Erre croan masewater reachent reports.	Report each year which identifies areas in Ireland where there are issues with treatment and effluent quality as well as capacity issues.

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Appendix A

Combined Figures Relating to Baseline Environment (as extracted from SEA Scoping Report)

Appendix B

Relationship with Other Relevant Plans, Programmes, Policy, or Legislation

Plan, Programme, Policy, or Legislation	Relevant Aims and Objectives	Relevance of Plan, Programme, Policy, or Legislation to the RLEVCNP		
International Level				
ESPOO Convention and Kyiv (SEA) Protocol	The Espoo (EIA) Convention sets out the obligations of Parties to assess the environmental impact of certain activities at an early stage of planning. It also lays down the general obligation of States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries. The Kyiv Protocol was the first legally binding international instrument on pollutant release and transfer registers. Its objective is <i>'to enhance public access to information through the establishment of coherent, nationwide pollutant release and transfer registers (PRTRs)'</i> .	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.		
OSPAR Convention	An international co-operation to protect the marine environment of the north-east Atlantic is achieved through the OSPAR Convention. It aims to provide a comprehensive and simplified approach to addressing all sources of pollution which might affect the maritime area, and all matters relating to the protection of the marine environment.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.		
World Health Organisation (WHO) Global Air Quality Guidelines 2021	The World Health Organisation (WHO) periodically issues health-based air quality guidelines to assist governments and civil society to reduce human exposure to air pollution and its adverse effects. The updated guidelines include updated recommendations on Air Quality Guideline (AQG) levels and interim targets for PM2.5, PM10, ozone, nitrogen dioxide, sulfur dioxide and eachen monoride	Implementation of the RLEVCNP will incorporate all relevant environmental guidelines.		
	Thes guidelines provide insight on the impacts of air pollution for health / environmental impact assessment practitioners.			
European Union Level				
Trans European Transport Network (TEN-T) Policy – (European Parliament) 2013	A policy to address the implementation and development of a Europe-wide network of railway lines, roads, inland waterways, maritime shipping routes, ports, airports, and railroad terminals. Aim: <i>'To close gaps, remove bottlenecks and technical barriers, as well as to</i> <i>strengthen social, economic and territorial cohesion in the EU.'</i>	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.		
		The RLEVCNP is specifically focused on upgrading and developing new EV charging points at a local and neighbourhood scale in Ireland.		

Plan, Programme, Policy, or Legislation	Relevant Aims and Objectives	Relevance of Plan, Programme, Policy, or Legislation to the RLEVCNP
		The positioning of these charging points may overlap with locations along the TEN-T network (Core network and Comprehensive network), as well as all other national primary and secondary roads.
Sustainable and Smart Mobility Strategy (European Commission's Directorate- General for Mobility and Transport 2021)	A strategy setting out a roadmap for a sustainable and smart transport future. It includes 10 focus areas and an action plan, aiming for a 90% reduction in the transport sector's emissions by 2050.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
European Green Deal (EGD) (European Commission) 2020	A strategy to oversee Europe's transformation to a climate-neutral, fair, and prosperous society, with a modern, resource-efficient, and competitive economy. The strategy will be supported by climate, energy, and transport-related legislation under the 'Fit for 55 Package' to meet the 2030 and 2050 ambitions.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and
	Target: 'Net-zero greenhouse gas emissions at EU level by 2050, and an emissions reduction target of at least 55% for 2030 to limit warming to 1.5 degrees Celsius and align with the goal of the Paris Agreement.'	management. The RLEVCNP is focused on the deployment of EV charging infrastructure to accommodate use of EVs in Ireland. This will
	Under the EGD, the European Commission has adopted a set of policy proposals with a view to realising its aim. These include, among others:	contribute towards greenhouse gas emissions reduction targets.
	The European Climate Law, making the EU's 2050 climate neutrality target legally binding; ensuring that all EU policies contribute to climate neutrality by mid-century and that all sectors play their part. To place the EU firmly on the pathway to climate neutrality by mid-century, it also establishes a legally binding, more ambitious intermediate emissions reductions target for 2030 of at least 55% relative to 1990 levels.	
	The 'Fit for 55' Package, to deliver wide-ranging legislative and policy changes needed to support the achievement of the EU's emissions reductions targets for 2030 and 2050.	
Alternative Fuel Infrastructure Regulation (AFIR) (European Commission) 2023	The European Commission's new Alternative Fuel Infrastructure Regulation (AFIR) is part of the 'Fit for 55' package. Agreed in March 2023, AFIR establishes mandatory deployment targets for EV and hydrogen refuelling infrastructure for the roads, shipping, and aviation sectors across the trans- European Transport Network (TEN-T).	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
	AFIR sets locational/ distance-based charging infrastructure targets for member states to achieve by 2025 and 2027 with a view to deliver the following key requirements by 2030/2035:	The RLEVCNP is specifically focused on the delivery of the AFIR targets.
	By 2030, 3,800 kW of EV charging infrastructure for HDVs (including buses) on every 60 km of the TEN-T Core Road network; and	

Plan, Programme, Policy, or Legislation	Relevant Aims and Objectives	Relevance of Plan, Programme, Policy, or Legislation to the RLEVCNP
	By 2030, 1,500 kW of EV charging infrastructure for dedicated to HDVs on every 100 km of the TEN-T Comprehensive Road network; and	
	By 2030, 1,800 kW of EV charging infrastructure for dedicated to HDVs at each Urban Node.	
	In addition, AFIR sets a fleet-based target for EV charging infrastructure commensurate with the level of take up of EVs as follows:	
	EV charging infrastructure capacity is proportionate to EV uptake; i.e., provision of charging infrastructure power output of 1.3 kW per battery EV, and 0.8 kW per plug-in hybrid vehicle, until battery EVs reach at least 15% market share of all passenger cars and LGVs.	
EU Effort Sharing Regulation (ESR) (European Commission) 2018, as amended 2023	The ESR establishes legally binding annual greenhouse gas emission reduction targets for EU Member States, including Ireland. The ESR targets emission reductions in most sectors not covered by the EU Emissions Trading System (ETS), including transport. Under the ESR, Ireland is required to reduce its emissions from non-ETS sectors by 42% by 2030, relative to 2005 levels.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
		The RLEVCNP is focused on the deployment of EV charging infrastructure to accommodate use of EVs in Ireland. This will contribute towards greenhouse gas emissions reduction targets.
National Emissions Ceiling Directive (2016/2284)	The National Emissions Ceilings Directive (NEC Directive) establishes emission ceilings for 2020 and 2030 for five specified pollutants: nitrogen oxides (NOx), non-methane volatile organic compounds (NMVOCs), sulphur dioxide (SO2), ammonia (NH3) and fine particulate matter (PM2.5).	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and
	The directive transposes the reduction commitments for 2020 agreed by the EU and its Member States under the 2012 revised Gothenburg Protocol under the Convention on Long-range Transboundary Air Pollution (LRTAP Convention). The more ambitious reduction commitments agreed for 2030 are designed to reduce the health impacts of air pollution by half compared with 2005.	management. The RLEVCNP is focused on the deployment of EV charging infrastructure to accommodate use of EVs in Ireland. This will contribute towards greenhouse gas emissions reduction targets.
	Further, the Directive requires that the Member States draw up National Air Pollution Control Programmes that should contribute to the successful implementation of air quality plans established under the EU's Air Quality Directive.	
8th Environmental Action Programme	8th Environmental Action Programme (EAP) to 2030 entered into force in May 2022 and guides European environmental policy until 2030, supporting the climate action objectives of the European Green Deal. The long-term priority objective is that, by 2050 at the latest, Europeans live well, within planetary boundaries, in a well being accommy where actions is	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.

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	wasted. Growth will be regenerative, climate neutrality will be a reality, and inequalities will have been significantly reduced.Its six priority objectives to 2030 include achieving the 2030 greenhouse gas emissions reduction target and climate neutrality by 2050, enhancing adaptive capacity to climate change, accelerating transition to circular economy, pursing zero-pollution ambition, enhancing natural capital, and reducing environmental and climate pressures.	The RLEVCNP will help contribute towards the six priority objectives to 2030 through the deployment of EV charging infrastructure and transition towards EVs.
The EU Zero Pollution Action Plan	The action plan requires among other commitments, that by 2030, the EU should reduce: by 25% the EU ecosystems where air pollution threatens biodiversity; by 50% nutrient losses, the use and risk of chemical pesticides, the use of the more hazardous ones, and the sale of antimicrobials for farmed animals and in aquaculture; by 50% plastic litter at sea and by 30% microplastics released into the environment	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management. The RLEVCNP is focused on the deployment of EV charging infrastructure to accommodate use of EVs in Ireland. This will contribute towards greenhouse gas emissions reduction targets.
Proposal for a Regulation of the European Parliament and of the Council on nature restoration	Under the EU Biodiversity Strategy for 2030, as part of the European Green Deal, the European Commission committed to put forward a proposal for legally binding EU nature restoration targets to restore degraded ecosystems. In June 2022, the European Commission tabled a proposal for a regulation on nature restoration, which sets multiple binding restoration targets and obligations across a broad range of ecosystems, from forests and agricultural land to urban areas, rivers, and marine habitats, complementing existing legislation. The nature restoration measures should cover at least 20 % of the EU's land and sea areas by 2030, and all ecosystems in need of restoration by 2050. To implement the proposed regulation, Member States are required to develop nature restoration plans, to be assessed by the Commission. The proposed nature restoration law also entails a specific objective to reverse the decline of pollinator populations by 2030.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
National Level		
National Planning Framework (Project Ireland 2040) – (Government of Ireland) 2019	A planning framework to guide growth, development, and investment over the period to 2040. Vision: A shared set of goals for every community across the country, expressed as the National Strategic Outcomes.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.

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		The RLEVCNP will help contribute towards the Planning Framework's commitments to EVs and EV charging infrastructure.
National Development Plan 2021- 2030 (Project Ireland 2040) (Department of Public Expenditure and Reform, 2021)	The Irish Government's over-arching investment strategy and budget for the period 2021-2030, balancing the demand for public investment across all sectors and regions of Ireland, with a major focus on improving infrastructure projects.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management. The RLEVCNP will help contribute towards the Plan's commitments to EVs and EV charging infrastructure.
Climate Action and Low Carbon Development (Amendment) Act 2021	In July 2021, the Climate Action, and Low Carbon Development (Amendment) Act 2021 ('the Climate Act') was signed into Irish law. The Climate Act establishes a statutory national climate objective to pursue and achieve, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
	It enshrines in Irish legislation a national target of achieving net zero emissions by 2050, and an interim 2030 target of reducing greenhouse gas emissions by 51% relative to 2018 levels – the most ambitious legally binding emissions reduction target to which Ireland is bound. The Act also provides for the establishment of five-year carbon budgets, sectoral emissions ceilings and statutory Government and Local Authority Climate Action Plans, establishing national and regional roadmaps to ensure compliance with same.	The RLEVCNP is focused on the deployment of EV charging infrastructure to accommodate use of EVs in Ireland. This will contribute towards greenhouse gas emissions reduction targets.
Climate Action Plan 2024	The Climate Action Plan 2024 (CAP 2024) is the third annual update to the Republic of Ireland's Climate Action Plan 2019. This plan aligns with the Climate Action and Low Carbon Development (Amendment) Act 2021 and the economy-wide carbon budgets and sectoral emissions ceilings.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
	The CAP 2024 implements the carbon budgets and sectoral emissions ceilings and sets out a roadmap for taking decisive action to halve our emissions by 2030 and reach net zero no later than 2050, as committed to in the Programme for Government. The CAP 2024 also sets out how Ireland can accelerate the actions that are required to respond to the climate crisis, putting climate solutions at the centre of Ireland's social and economic development. In relation to the transport sector, the CAP details a 50% reduction in emissions by transforming how we travel. It aims to drive policies to reduce transport emissions by improving town, city, and	The RLEVCNP is focused on the deployment of EV charging infrastructure to accommodate use of EVs in Ireland. This will contribute towards greenhouse gas emissions reduction targets. Specifically, the Plan aims to achieve the CAP24 targets. At a national level, accelerating the transition to electric vehicles and vehicle technology improvements is a critical part of the transport decarbonisation nathway set out in Ireland's CAP24

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	avoiding the need for travel, shifting to public transport, walking, and cycling and improving the energy efficiency of vehicles.	
Draft Connecting Ireland (National Transport Authority) 2021	A public transport plan to improve mobility in Ireland's rural areas, by providing better connections between villages and towns, and by linking these areas with an enhanced regional network connecting cities and regional centres. The Plan will be updated with feedback from the public consultation that occurred in late 2021.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management. The Plan includes measures to accommodate both rural and urban
		areas across the Irish road network.
National Investment Framework for Transport in Ireland (Department of Transport) 2021	The DoT prepared the National Investment Framework for Transport in Ireland (NIFTI) as a high-level strategic framework to support the consideration and prioritisation of future investment in land transport. It represents the Department's contribution to Project Ireland 2040, Government's long-term, overarching strategy to make Ireland a better country for all and to build a more sustainable future. NIFTI has been developed to ensure sectoral investment is aligned with the National Planning Framework (NPF) and supports the delivery of the ten National Strategic Outcomes (NSOs). NIFTI establishes a common lens through which to consider potential investment. In doing so, NIFTI sits alongside other Government priorities and policy objectives, such as the Programme for Government and Climate Action Plan	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management. The RLEVCNP will contribute towards sustainable travel in the deployment of EV charging infrastructure across the Irish road network.
Sustainable Mobility Policy (Department of Transport) 2022	The Sustainable Mobility Policy (SMP) was published in April 2022 and includes 91 actions that support behavioural change through a wide range of interventions. These interventions include, among other things, public transport infrastructure and services, active travel promotion and supports, road safety initiatives, legislative measures, research, and public engagement.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
		The RLEVCNP will contribute towards sustainable travel in the deployment of EV charging infrastructure across the Irish road network.
Urban Transport Related Air Pollution (UTRAP Working Group) Final Report (January 2023)	The UTRAP Working Group was formed in 2019 to address rising concerns about the transport-generated air pollution and includes representatives from government departments, agencies, and stakeholders. This report addresses the transport-related air pollution and consequent effects on human health. As part of their report, a review of traffic demand management studies across Ireland's five major cities was undertaken (Dublin, Cork, Galway, Limerick, and	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management. The RLEVCNP is focused on the deployment of EV charging
	Waterford), which identified that interactions between different traffic measures	infrastructure to accommodate use of EVs in Ireland. This will

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	are complex, have a cumulative impact, and most importantly, there is no one measure that will address each issue with the cities.	contribute towards greenhouse gas emissions reduction targets, including reduction in traffic-related emissions.
Electric Vehicle Charging Infrastructure Strategy 2022 – 2025 and accompanying Implementation Plan (Department of Transport and ZEVI) 2023	In January 2023, the Department of Transport and ZEVI launched a national Electric Vehicle Charging Infrastructure Strategy 2022 – 2025 and accompanying Implementation Plan. Together, they provide a strategy and practical action plan for the development of Ireland's EV charging network to 2025, in accordance with targets and requirements in the above-mentioned national and EU legislation and policies.	The RLEVCNP is focused on the deployment of EV charging infrastructure to accommodate use of EVs in Ireland. This will contribute towards greenhouse gas emissions reduction targets.
National Air Pollution Control Programme	The National Air Pollution Control Programme (NAPCP) is a technical document which outlines the pathway Ireland will follow to achieve compliance with its commitments under the National Emission Ceilings Directive (NEC Directive).	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
	An overview of sectors and national policy frameworks in Ireland that impact on emissions of the five NEC pollutants (NOx, NMVOCs, SO ₂ , NH ₃ and PM _{2.5});	The RLEVCNP is focused on the deployment of EV charging infrastructure to accommodate use of EVs in Ireland. This will contribute towards greenhouse gas emissions reduction targets.
	pollutant;	
	Projections of relevant pollutant emissions to 2030;	
	Policy options, measures, and actions across sectors but in particular in the residential, transport agricultural and energy sectors aimed at reducing emissions of the five specified air pollutants.	
Grid 25 Implementation Plan (Eirgrid)	EirGrid is the national electricity Transmission System Operator (TSO) in Ireland and operates and maintains a safe, secure, reliable, economical, and efficient transmission system.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the
	The Plan defines three aspects:	regulatory framework for environmental protection and management.
	Onshore development of the grid network;	The RLEVCNP is focused on the deployment of EV charging
	Offshore development of the grid network; and	infrastructure to accommodate use of EVs in Ireland. Deployment
	Temporary emergency generation development.	works may include upgrades to the Grid network and will require access to the Grid network for charging EVs.
	EirGrid is reviewing the existing Grid Implementation Plan (IP) 2017-2022 for the Electricity Transmission System in Ireland and will prepare a new Grid Implementation Plan for 2023-2028 (Draft IP).	

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State of Global Climate 2022 (World Meteorological Society)	 This report focuses on key climate indicators – greenhouse gases, temperatures, sea level rise, ocean heat and acidification, sea ice and glaciers. The State of the Global Climate 2022 shows the planetary scale changes on land, in the ocean and in the atmosphere caused by record levels of heat-trapping greenhouse gases. It does not include the development of plans, policies, programmes, or legislation. 	On review of the report, it was not deemed relevant to include under the review of plans, policies, programmes, or legislation, as the report includes baseline elements. Due to the global nature of the of the report, it was not deemed relevant to include in the baseline assessment in Section 5.
Prioritised Action Framework 2021-2027 (NPWS)	This plan identifies the range of actions needed to help improve the status of Ireland's habitats and wildlife within the Natura 2000 site network.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
Management plans for Natura 2000 and National Site Network sites	Member States need to designate these sites as Special Areas of Conservation (SACs) and adopt conservation measures involving, if need be, appropriate management plans and other measures which correspond to the ecological requirements of the natural habitat types and the species of Community interest. Special Protection Areas designated under the Birds Directive need to be managed in accordance with the ecological needs of habitats of birds. The Directives make it clear that conservation objectives should be met while taking account of economic, social, cultural, regional, and recreational requirements. It is for Member States to establish the most appropriate methods and instruments for implementing the Directives and for achieving the conservation objectives of Natura 2000 and National Site Network sites.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
Just Transition First Progress Report (2021)	The report notes the importance of effective governance in the Midlands to deliver a just transition. The report makes recommendations across a number of areas including Electric Vehicle Charging. The eight Midlands counties are currently served by 98 public Electric Vehicle (EV) charging points provided by ESB. The report asks for an evaluation study on the potential to further expand the EV charging infrastructure nationally, including the enhancement of the charging network in the Midlands region, to commence immediately.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management. The draft NEVIP will include a roadmap towards the implementation of EV charging infrastructure across the National Roads Network.
Healthy Cities Project (WHO)	A healthy city is one that continually creates and improves its physical and social environments and expands the community resources that enable people to	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively

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	mutually support each other in performing all the functions of life and developing to their maximum potential.	contribute towards the achievement of the objectives of the regulatory framework for environmental protection and
	The Healthy Cities Project begin in 1987 with eleven cities. The concept is based on the importance of local action and the key role of local governments and Local Authorities in health and sustainable development.	management.
	In Ireland, 31 Local Authorities are committed to developing a structure to support Health Cities across Irish counties.	
Clean Air Strategy for Ireland	The Clean Air Strategy will provide the strategic policy framework necessary to identify and promote integrated measures across government policy that are required to reduce air pollution and promote cleaner air while delivering on wider national objectives.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
		The RLEVCNP is focused on the deployment of EV charging infrastructure to accommodate use of EVs in Ireland. This will contribute towards greenhouse gas emissions reduction targets.
Regional and Municipal Level		
Eastern and Midland Regional Spatial and Economic Strategy 2019- 2031 (Eastern and Midland Regional Assembly) 2019	A strategic plan and investment framework to shape the future development of the Region to 2031 and beyond. Vision: 'To create a sustainable and competitive Region that supports the health and wellbeing of our people and places, from urban to rural, with access to availity housing, travel and employment opportunities for all'	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
	quanty nousing, in a ret and employment opportunities for an	The Plan includes measures to accommodate all regions across the Irish road network.
Northern and Western Regional Spatial and Economic Strategy 2020- 2032 - Northern and Western Regional Assembly 2020	A Strategy to support the implementation of Project Ireland 2040, including the economic and climate policies of the Government, by providing a long-term strategic planning and economic framework for the region. Vision: 'To play a leading role in the transformation of this region into a vibrant, connected, natural, inclusive and smart place to work and live.'	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
		The Plan includes measures to accommodate all regions across the Irish road network.
Southern Regional Spatial and Economic Strategy (Southern Regional Assembly) 2020	A long-term, strategic development framework for the future physical, economic, and social development of the region. Vision: Nurture all our places to realise their full potential;	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the

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	Protect and enhance our environment;	regulatory framework for environmental protection and
	Successfully combat climate change;	management.
	Achieve economic prosperity & improved quality of life for all;	The Plan includes measures to accommodate all regions across the Irish road network.
	Accommodate expanded growth & development in suitable locations; and	
	Make the Southern Region one of Europe's most creative, innovative, greenest, and liveable regions.	
Rural Development Policy (Department	A policy framework for the development of rural Ireland over the next five years	Implementation of the RLEVCNP will comply with all relevant
of Rural and Community Development) 2021	Vision: 'A thriving rural Ireland which is integral to our national economic, social, cultural, and environmental wellbeing and development. An Ireland which is built on the interdependence of urban and rural areas. An Ireland which recognises the centrality of people, the importance of vibrant and lived-in rural places, and the potential to create quality jobs and sustain our shared environment.'	environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
		The Plan includes measures to accommodate rural areas across the Irish road network.
Realising our Rural Potential – Action Plan for Rural – Development 2017 - 2019 (Department of Rural and Community Development)	An action plan to ensure that people who live in rural areas have increased opportunities for employment locally, and access to public services and social networks that support a high quality of life.	Implementation of the RLEVCNP will comply with all relevant environmental legislation and will align with, and cumulatively contribute towards the achievement of the objectives of the regulatory framework for environmental protection and management.
		The Plan includes measures to accommodate rural areas across the Irish road network.
Regional Tourism Strategies (Fáilte Ireland)	Ireland has developed four regional development strategies for tourism across the country for the East Region, Heartlands Region, Wild Atlantic Way Region, and Dublin Region.	The RLEVCNP will be implemented across the National Road Network in Ireland. The deployment of EV charging infrastructure will consider coverage of tourist / seasonal spots adjacent to the national primary and secondary road network while designing the geographical reach of possible options.
Dublin Action Plan for Nitrogen Dioxide (December 2021) Dublin Region Air Quality Plan 2021 - Air Quality Plan to improve Nitrogen Dioxide levels in Dublin Region.	An exceedance of the EU limit value for nitrogen dioxide occurring in the Dublin region in 2019 necessitated the preparation of a Dublin Region Air Quality Plan 2021 -Air Quality Plan to improve Nitrogen Dioxide levels in Dublin Region.	The RLEVCNP will be implemented across the National Road Network in Ireland and may assist with reductions in nitrogen dioxide levels and an EV charging strategy for the Dublin region.
	This air quality plan sets out 14 broad measures and a number of associated actions to address the exceedance of the nitrogen dioxide annual limit value. This includes an EV charging strategy, publication of national clean air strategy, introduction of clean air zones / low emission zones, and behavioural change campaigns.	

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	The Plan was prepared by the four Dublin Local Authorities (Dublin City Council, Dún Laoghaire-Rathdown County Council, Fingal County Council and South Dublin County Council).	
Research Level		
Evaluating Ireland's Climate Policy Performance (Sabrina Dekker and Diarmuid Torney)	The central objectives of the Irish Climate Policy Evaluation project were to construct a policy evaluation framework that builds on a standard EU evaluation framework and to undertake evaluations of climate change policies across all sectors using the framework, with a specific focus on key policies.	On review of the report, it was not deemed relevant to include under the review of plans, policies, programmes, or legislation (Section 3), as the relates to research.
Synthesis of literature and preliminary modelling relevant to society-wide scenarios for effective climate change mitigation in Ireland (Barry McMullin and Paul Price)	This research assesses the international literature to inform climate mitigation policy in Ireland. It provides a preliminary tool for comparing policy within the Paris Agreement commitments.	On review of the report, it was not deemed relevant to include under the review of plans, policies, programmes, or legislation (Section 3), as the relates to research.
TRANSLATE (Met Eireann)	The TRANSLATE project is a Met Éireann lead initiative to standardise future climate projections for Ireland and develop climate services that meet the climate information needs of decision makers. TRANSLATE focuses on reviewing existing climate models to produce a national set of standardised climate projections.	On review of the report, it was not deemed relevant to include under the review of plans, policies, programmes, or legislation (Section 3), as the relates to research.
FLARES (Fire, Land and Atmospheric Route Sensing of Emissions), University College Cork	Fires, Land and Atmospheric Remote Sensing of Emissions (FLARES) aims to develop systematic approaches to the acquisition and collation of a range of data on agricultural and uncontrolled wildland burning burn events from satellite datasets.	On review of the report, it was not deemed relevant to include under the review of plans, policies, programmes, or legislation (Section 3), as the relates to research.
Department of Transport - Demand Management Study, 2021	The Five Cities Demand Management Research Report, which was conducted by Systra LTD on behalf of the Department, helps us to better understand what drives transport demand and how we can encourage a greater shift to more sustainable and healthier forms of travel in Ireland's five largest urban centres— Dublin, Cork, Waterford, Limerick, and Galway.	On review of the report, it was not deemed relevant to include under the review of plans, policies, programmes, or legislation (Section 3), as the relates to research.
	The findings from this Study will constitute a valuable resource for National and Local Authorities as they work to implement complementary demand management policy measures at national and local level over the coming years.	