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6th October 2022

Our Ref: SCP191202.2

Re. Draft National Roads 2040 Strategy and associated SEA Environmental Report

Dear Mr Brady,

We acknowledge your notice, dated 5th August 2022, in relation to the Draft National Roads 2040 Strategy (the 'Strategy') and SEA Environmental Report.

The EPA is one of the statutory environmental authorities under the SEA Regulations. In our role as an SEA environmental authority, we focus on promoting the full and transparent integration of the findings of the Environmental Assessment into the Strategy and advocating that the key environmental challenges for Ireland are addressed as relevant and appropriate to the Strategy. Our functions as an SEA environmental authority do not include approving or enforcing SEAs or plans.

We welcome the opportunity to comment at this stage of the Strategy and SEA process. This submission includes comments/observations on both the Strategy and the SEA Environmental Report to consider. Our comments focus on topics within the EPA's remit and areas of expertise, in particular climate change, air and noise and the inter-relationships between these.

Our observations in this submission are supplementary to those made at the SEA scoping stage of the process. The key points of this submission, highlighted below, relate to consideration of environmental aspects related to the management of environmental noise and air quality, climate change, the Water Framework Directive and hydromorphology, biodiversity, integration of the environmental considerations into the



Strategy and monitoring of significant environmental effects in implementing the Strategy. Appendix I sets out comments on the SEA while specific observations on the Strategy are provided in Appendix II. Appendix III provides a short summary of the key relevant chapters of the EPA's Ireland's Environment – An Integrated Assessment (EPA, 2020) report.

Management of environmental noise and air quality

The Strategy should recognise to a greater extent, the need to address the impacts of transport on air quality and noise, as two main direct environmental impacts of road transport. In this regard, the Strategy would benefit from including more information regarding the need to address environmental noise and air quality issues. The Strategy should include commitments to work with the other relevant bodies to improve both air quality and noise pollution.

Transport-related air quality issues should be a key consideration in the development of transport infrastructure. The transport sector is one of the largest contributors to particulate matter pollution in urban areas (particularly the diesel vehicle fleet). The Strategy's focus on promoting sustainable modes of transport should contribute to reducing transport-related air pollution. In implementing the Strategy, the impacts on air quality should be monitored and evaluated as part of the SEA monitoring.

In addressing transport-related noise, the focus should not be just on engineering solutions for road traffic noise, but on creating a preventative and management strategy through the provision of alternative, more environmentally friendly means of transport in our major urban locations. There should also be a focus on better routing and design of roads in more rural locations.

We note the commitment in the Strategy that *"In line with its legislative remit, TII will minimise the impact of road infrastructure on the environment and support the development and maintenance of ecological corridors along National Roads"*. The Strategy should clarify TII's role regarding environmental noise management. This clarification is necessary for implementation of noise action plans where the roles and responsibilities of all stakeholders involved, including TII, need to be clearly outlined.

Climate change

Our highly fossil fuel dependant transport system results in significant emissions of greenhouse gases and air pollutants. The transport sector is responsible for about 20% of Ireland's greenhouse gas emissions. Urgent and accelerated action and investment is needed to decarbonise transport and transition to more sustainable transport modes, as well as to adapt to the effects of climate change. The scale of the challenges facing Ireland to address the climate emergency are immense. Recent EPA reports show that Ireland will not meet our longer-term targets on reducing greenhouse gas emissions.

Water Framework Directive and hydromorphology considerations

Hydromorphology is the second most significant pressure on water quality in Ireland. This pressure relates to damage to habitat and natural river or lake processes through physical



modification. Such modifications include morphological changes such as river channel alteration, and hydrological modifications such as surface water abstraction.

A clear commitment should be given that wider Water Framework Directive (WFD) objectives are achieved and not compromised during implementation of the Strategy, particularly where any road-related infrastructure or ancillary developments may impact on the hydromorphology or water quality status of water bodies.

Biodiversity considerations

The Strategy would benefit from including information regarding the relevant measures and commitments to improve and enhance biodiversity, in addition to also providing for the protection of designated habitats and protected species.

Integration of environmental considerations

We note the Strategy includes (in subsection 6.4) information relating to the SEA and AA processes carried out. In finalising the Strategy, we recommend that section could also provide a summary the key recommendations from the SEA (and AA) and how they have been considered and integrated into the Strategy.

Strategy implementation, monitoring and review

We note that the Strategy covers a timeframe out to 2040. We recommend that periodic reviews of the Strategy are carried out to report on progress implementing the Strategy to achieve the Strategy objectives.

The Strategy implementation, monitoring and reporting should be aligned with the environmental monitoring required under the SEA legislation, and as set out in the SEA Environmental Report. This will assist in enabling the environmental performance of the Strategy to be evaluated as part of the periodic reviews.

If you have any queries or need further information in relation to this submission, please contact the SEA Team at the email address below. I would be grateful if you could send an email confirming receipt of this submission to: sea@epa.ie.

Yours Sincerely,

A handwritten signature in blue ink that reads "Brian Donlon".

Dr Brian Donlon
SEA Section
Office of Evidence and Assessment



Appendix I – Comments on the SEA Environmental Report

The SEA Regulations set out the information to be contained in an Environmental Report.

Non-Technical Summary

Consider amending the reference to the SEA Regulations of the non-technical summary to refer to “**S.I. 435 of 2004, as amended**”.

- Under *Population and Human health*, (page xiii), we note “*The transport sector including road transport will be required to respond to the additional travel demand required over time, in a sustainable manner, while also addressing the related congestion and human health issues such as safety, air, noise, and water quality issues*”. The SEA and Non-Technical Summary could describe the specific measures to address this issue, particularly in urban locations.
- Under *Noise & Vibration*, (page xiv), regarding opportunities to reduce noise due to greater use of quieter vehicles or greater roll out of low noise road surfacing along the network, the SEA could describe what role TII will take in working with the Local Authorities to utilise low noise road surfacing along the network, particularly, in areas where significant noise related issues & potential health impacts are identified. The Strategy could also support research into the use of recycled aggregates in road construction, to promote circular economy considerations.
- *Table 0.9 Proposed SEA Monitoring Programme*, in relation to the Noise environmental protection objective, the indicators could also consider including a reference to the lower WHO Noise Guideline Value where noise impacts will start to occur.

Environmental Baseline Considerations

Landscape

In *Section 4.11 Landscape*, we bring to your attention to the Regional Seascape Character Assessment Final Report, prepared by the Marine Institute, and is available at: <https://emff.marine.ie/blue-growth/project-13-definition-and-classification-ireland%E2%80%99s-seascapes>. It may be useful when considering any transport related infrastructure considerations in coastal areas.

Currently, an 18-month EPA research project is underway relating to reframing Landscape character Assessment for environmental management (RELAVENT). The outputs of this project, which will be available in 2023 and will include a toolkit for how to take into account landscape character, may be useful to consider in implementing the Strategy.

Air Quality

On page 32 of the SEA, consider amending the wording of the ‘Air Quality and Emissions’ section of *Table 5.1 -Overview of the Environment – Ireland*, to describe that Ireland can



meet its non-Emission Trading Scheme (ETS) EU targets of a 30 per cent emission reduction by 2030 (compared to 2005), assuming implementation of planned policies and measures and the use of the flexibilities available all take place. These include a land use flexibility using the Climate Action Plan 2021 afforestation rate of 8,000 hectares per annum.

Under the row for “Climate”, the third column text describing that “*National Inventory for GHG emissions identifies transport as the leading contributor to GHG emissions in Ireland...*”, this should be amended due to the fact that agriculture is the largest sector as per the National Inventory Report, with the transport sector being the second largest.

The Agency’s most recent [Air Quality in Ireland in 2021](#) report (EPA, 2022) shows that nitrogen dioxide, mainly from road transport remains the key threat to air quality. It also acknowledges that, while EPA monitoring shows air quality is currently within EU legal limits, the levels of pollutants exceed the World Health Organisation (WHO) Air Quality Guidelines for health. It is also worth noting that the EPA is currently doubling the national ambient air monitoring network across Ireland, which will provide enhanced real-time air quality information and provide air quality forecasting and modelling. In implementing the Strategy and in subsequent reviews, TII should have regard to the latest up-to-date ambient air quality data.

Noise Considerations

The assessment and management of noise from the main infrastructural transport sources (roads, rail, and airports) are governed by the Environmental Noise Directive and associated 2006 Environmental Noise Regulations (S.I. 140 of 2006). The WHO has also published Environmental Noise Guidelines that should be considered.

Reference should also be made to the lower WHO noise guideline values where health impacts will start to occur. In Table 5.5, (page 99), The SEA could also describe how TII intends to engage and support this process, in the context of noise action plans.

We note the reference (in Section 5.6, page 70) to the National Roads Authority *Guidelines for Treatment of Air Quality During the Planning and Construction of National Road Schemes* document, which were published in 2011. There is merit in including a commitment in the Strategy to reviewing these guidelines to ensure they remain fit for purpose over the lifetime of the Strategy bearing in mind the revised WHO guidelines (air, noise) outlined above.

In finalising the Strategy, consider supporting measures to protect any designated quiet areas in open country, in collaboration with the local authorities. In 2003, the EPA commissioned a [research project](#) to establish baseline data for the identification of quiet areas in rural locations. Quiet Areas, in this research project are defined as “*an area in open country, substantially unaffected by anthropogenic noise.*” A range of minimum distance criteria from man-made noise sources such as urban areas, industry and major road sources were defined, and the report includes recommendations for the identification and control of Quiet Areas.



Additionally, we bring your attention to a recent EPA research report - [EPA Research Report 423: Environmental Transport Noise and Health: Evidence from Ireland \(Noise–Health\)](#) (EPA, 2022) that may be useful to consider in finalising and implementing the Strategy. It could help inform efforts in the Strategy to reduce health impacts associated with transport-related noise disturbance and pollution.

Water Quality

Hydromorphological pressures have been identified as the second most significant pressure type within ‘At Risk’ waterbodies during the 3rd cycle Water Framework Directive Characterisation process. This pressure relates to damage to habitat and natural river or lake processes, through physical modification. Examples of such modifications include morphological changes such as river channel alteration, and hydrological modifications such as surface water abstraction.

Any developments which involve permanent alteration of river riparian habitat can have a significant and lasting impact on the hydromorphological condition of a waterbody. This can have implications for Ireland’s ability to meet the objectives of the Water Framework Directive and can also contribute to waterbodies being designated as ‘heavily modified’, depending on the nature and scale of the physical alterations. Any proposed developments associated with the Strategy within the riparian zone of rivers and lakes, should carefully consider their potential long-term future impact on water quality and hydromorphology.

Relationship with Plans and Programmes

In *Section 4 – Key Relevant Plans and Programmes*, we acknowledge that the national policy context within which the Strategy is being prepared is clearly presented. It will be important in implementing the Strategy and in undertaking periodic reviews that it remains aligned with national environmental commitments and continues to support environmentally sustainable development.

With regards tourism and recreation considerations in Appendix A, the Strategy could consider how it can support greater uptake of clean or low carbon mobility alternatives (such as or electric vehicles and cycle lanes) for the tourism sector. This section of the report could also consider how implementation of the Strategy can support sustainable national and regional tourism. It is worth noting that the National Transport Authority have recently started the SEA process for Cycle Connects – Ireland’s Cycle Network plan, which may be relevant to acknowledge and take account of in implementing the Strategy.

Environmental Protection Objectives

In *Table 6.1 – Environmental Protection Objectives* (p104), regarding the Noise objective, it would be useful to describe how this will be achieved through the Strategy. For example, would TII be generating noise guidance with noise intervention levels specified?

SEA Mitigation Measures

We note the proposed mitigation measures as set out in Section 9 of the SEA. In finalising and implementing the Strategy, the proposed mitigation measures and recommendations arising from the SEA should be fully incorporated into the Strategy and reflected in the various projects arising out of its implementation.

Monitoring Programme

We recommend incorporating the SEA-related monitoring into any Strategy implementation monitoring/review proposed over the lifetime of the Strategy, so that the environmental performance of the Strategy can be evaluated. The EPA has published guidance on SEA-related monitoring is available on the EPA website at <https://www.epa.ie/pubs/advice/ea/guidanceonseastatementsandmonitoring.html>

The monitoring programme should be flexible to consider specific environmental issues and unforeseen adverse impacts should they arise. It should consider and deal with the possibility of cumulative effects. Monitoring of both positive and negative effects of implementing the Strategy should be considered. The monitoring programme should set out the various data sources and responsibilities and should specify the frequency of monitoring for all relevant criteria, where possible.

If the monitoring identifies adverse impacts during the implementation of the Strategy, TII should ensure that suitable and effective remedial action is taken.

Guidance on SEA-related monitoring is available on the EPA website at <https://www.epa.ie/pubs/advice/ea/guidanceonseastatementsandmonitoring.html>

Future Amendments to the Strategy

You should screen any future amendments to the Strategy for likely significant effects, using the same method of assessment applied in the “environmental assessment” of the Strategy, in accordance with the requirements of the SEA Directive and Habitats Directives.

SEA Statement – “Information on the Decision”

Once the Strategy is adopted, you should prepare an SEA Statement that summarises:

- How environmental considerations have been integrated into the Strategy;
- How the Environmental Report, submissions, observations and consultations have been taken into account during the preparation of the Strategy;
- The reasons for choosing the Strategy adopted in the light of other reasonable alternatives dealt with; and,
- The measures decided upon to monitor the significant environmental effects of implementation of the Strategy.

You should send a copy of the SEA Statement with the above information to any environmental authority consulted during the SEA process.



Guidance on preparing SEA Statements is available on the EPA website at the following link: <https://www.epa.ie/publications/research/environmental-technologies/research-306-guidance.php>

Environmental Authorities

Under the SEA Regulations, you should consult with:

- Environmental Protection Agency;
- Minister for Housing, Local Government and Heritage;
- Minister for Environment, Climate and Communications; and
- Minister for Agriculture, Food and the Marine.



Appendix II – Specific comments on the Strategy

Strategy Implementation

There is merit in codifying the commitments made in Strategy. This will assist in monitoring how the Strategy progresses these commitments, over its lifetime. It also helps assess these commitments against the Strategic Environmental Objectives of the SEA.

Sustainable Transport and Climate Change

Transport is a major consumer of energy and material resources, as well as being a key source of environmental pressures in Ireland, particularly greenhouse gases, air pollutants and noise. The EPA recommends a holistic and integrated systems approach for the transport sector following the 'Avoid, Shift, Improve' hierarchy framework. This will have multiple benefits such as reducing greenhouse gas emissions, improving air quality and enhancing wellbeing. Improving walking and cycling facilities in cities and large urban centres to encourage these modes of travel in a safe and sustainable way will also be an important part of the decarbonisation response. Freight transport is an important component of the transport emission profile, and investment in measures for decarbonising freight transport should be considered in the Strategy.

Climate Change Adaptation

In planning for transport up to 2040, the need to adapt to the effects of climate could be further considered in the Strategy. The Strategy should consider the requirements of the National Adaptation Framework (DCCA, 2018), the non-statutory '*Developing Resilience to Climate Change in the Irish Transport Sector*' adaptation plan (DTTAS, 2017) and the statutory Adaptation Plan for Transport Infrastructure (DTTAS, 2019). The Strategy should consider the exposure and vulnerability to weather and climate events, and the range of projected scenarios and changes to these scenarios due to climate change. The Strategy should also consider more extreme temperatures, soil erosion/landslides, coastal erosion, etc., which have potential to impact on transport systems. The potential for co-benefits (for example, positive impacts on air quality, biodiversity, noise, etc.) and the potential for mal adaptation should also be considered.

In *Section 3.3 Climate Adaptation and Resilience*, given that the road network and the people that rely on it are vulnerable to the range of possible climate change effects and the SEA considers these aspects, the Strategy could discuss these aspects to a greater extent also.

Management of Environmental Noise and Air Quality

The Strategy should recognise, to a greater extent, the need to address the impacts of transport on air quality and noise as two main direct environmental impacts of road transport. While reference is made to the SEA monitoring framework for the National Investment Framework for Transport in Ireland, which considers air quality and noise, overall there appears to be little mention of environmental noise and air quality in the Strategy.



In *Section 5.4.5* (of the SEA), we note that while TII are not an Action Planning Authority (APA), any significant noise impacts would need to be considered under the relevant noise roads action plan, drawn up by the Local Authorities. It is our understanding that TII have recently informed the LAs that it has no role in the implementation of Noise Action Plans under the Noise Regulations.

We also note in the Strategy the commitment which states *“In line with its legislative remit, TII will minimise the impact of road infrastructure on the environment and support the development and maintenance of ecological corridors along National Roads”*. The Strategy should clarify TII’s role regarding environmental noise management. This clarification is necessary for implementation of noise action plans where the roles and responsibilities of all stakeholders involved, including those of TII, need to be clearly outlined.

The Strategy mentions that *“environmental sustainability is the bedrock for social and economic sustainability in Ireland; avoiding and where unavoidable mitigating environmental impacts including climate change, air quality and noise as well as biodiversity impacts of National Roads”*. This could be explained further in so far as it relates to environmental noise. The Strategy should clearly state what this means for road noise policy and what the Strategy actions for avoiding and mitigating against environmental noise will be, to cover the areas identified in the SEA.

It is noted under decarbonisation commitments that TII will continue to *“develop and enhance its Road Emissions Model to explore the emissions impact of changes in transport demand, supply of transport networks/services and changes in vehicle fleet technology”*. A similar commitment could be included for environmental noise using the noise mapping and modelling process.

Maintaining roads to reduce noise exposure could be a consideration that is covered under the investment priority on Asset Management and Network Operations.

It is encouraging to see that TII will *“incorporate economic, social and environmental sustainability objectives and goals in all decisions, policies, projects and processes”*. We would advocate that specific environmental objectives covering environmental noise, noise action plans, mitigations and support for Local Authorities out to 2040 are outlined in the Strategy.

The EC zero pollution vision for 2050 and [Zero pollution action plan \(europa.eu\)](https://european-council.europa.eu/media/en/press-communications/infographic/infographic-zero-pollution-2050) have targets for reducing the share of people chronically disturbed by transport noise by 30%. Under the Strategy commitments, there should be consideration given to including a target around reducing the population exposed to environmental noise from national roads. The health aspects of environmental noise from roads including the 2018 WHO noise guideline values – as well as any national indicators – are also areas for consideration in this regard.

Green Procurement Considerations



We recommend that TII consider including a commitment in the Strategy, to promote sustainable and green project level procurement practices, for any projects arising out of implementing the Strategy. This would help to integrate sustainable and green procurement considerations and look for opportunities to progress national commitments regarding action on climate change and biodiversity and promoting a more circular economy. The EPA's [Green Public Procurement Guidance](#) (EPA, 2021) may be useful to consider in this regard.

Appendix III: Key Chapters of Ireland's Environment – An Integrated Assessment 2020

In finalising the Strategy and integrating the findings of the SEA into the Strategy, the recommendations, key issues and challenges described in our State of the Environment Report [Ireland's Environment – An Integrated Assessment 2020](#) (EPA, 2020) should be considered, as relevant and appropriate. This should also be taken into account, in preparing the Strategy and SEA. Some specific sections of this report are summarised in Appendix III of this submission.

Chapter 2 of the SOER2020 relates to [Climate Change](#). This chapter clearly states that the scale and pace of greenhouse gas emissions reductions must accelerate. Reducing emissions requires far reaching transformative change across the whole economy, including in transport. Ireland's greenhouse gas emissions profile, with over 20% of emissions coming from transport, is particularly challenging. Ireland must also maximise the use of land as carbon stores, for example through grasslands, wetlands and forestry, to meet targets. These requirements must be balanced in the Strategy with a need to ensure sustainable agriculture in Ireland.

Chapter 3 refers to [Air Quality](#) issues and concerning air monitoring network considerations. Identified solutions for poor air quality need to be implemented, including emissions from transport. Reducing our reliance on diesel and petrol fuelled passenger cars and adopting best practices will have co-benefits for air quality, climate, human health and biodiversity. The need for a National Clean Air Strategy supported by WHO standards is more pressing than ever to provide for a higher level of public health protection.

Chapter 11 of the SOER2020 relates to [Environment and Transport](#) and states that transport is responsible for 20% of Ireland's greenhouse gases, making it a significant pressure on the environment. The sector requires transformation to shift to more sustainable modes of transport, including cycling. This shift is an essential part of a sustainable and climate-neutral transition for the transport sector. The chapter also outlines the multiple benefits that can be delivered by a modal shift in transport options reducing greenhouse gases, tackling growing traffic congestion, reducing air pollution and noise emissions, and enhancing wellbeing and the economy.

Chapter 14 of the SOER2020 relates to [Environment Health and Wellbeing](#). The chapter highlights that a good-quality, well-protected environment has significant health and wellbeing benefits. Research has shown that access to clean green and blue spaces in our environment is good for us. The provision of health-promoting environments in urban planning is central to Ireland's transition to more compact and urban living. Greater individual action needs to be taken to proactively tackle avoidable health consequences linked to the environment, including making sustainable commuting decisions.

These chapters should be consulted along with the related Key Messages prior to finalising the Strategy and the SEA process.