



Rialtas na hÉireann
Government of Ireland

Urban Transport Related Air Pollution (UTRAP Group) Synthesis Report January 2023



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Executive Summary

This Synthesis Report provides an account of progress made by the Urban Transport-Related Air Pollution (UTRAP) Group since the publication of Interim Report (2021) within the context of the Group's original Terms of Reference. It outlines what has been achieved relative to those objectives and considers what added value the Group could bring to further addressing urban transport-related air pollution.

Among the key achievements listed is an enhanced awareness of transport-related air pollution among the relevant stakeholder organisations. The Group has acted as a valuable forum for engagement and cooperation between the key urban transport and air quality stakeholders. It has enhanced awareness among stakeholders of clean air legislation and has facilitated increased coordination and coherence between the policies, plans and strategies developed by each of the members concerning air pollution control. This has enabled progress to be made by the Group in progressing the twenty-three recommended actions set out in the Group's Interim Report since its publication in March 2021. Of these, thirteen have been completed and ten are ongoing. Progress in achieving Group objectives has also been underpinned by focused research projects commissioned and undertaken by stakeholders to address evidence gaps identified by the Group.

As a developed and mature stakeholder group, this report recommends that the UTRAP Group should continue to meet on a biannual basis, and continue to advocate for the integration of air quality considerations in urban transport development (including within individual stakeholder plans and strategies) and to act as a coordination and information-sharing forum on the theme of air quality in transport. As outlined in the report, in its next phase of activity, the Group will work together to quantify the impacts and future scenarios for air pollution, to identify further areas for collaboration and to pursue remaining work on the recommendations from the Interim Report. The Group would also provide advice on the design and implementation of policies which have transport-related air quality benefits and consider wider policy developments and proposed policy measures through a transport and air quality lens.

1 Introduction

This is a synthesis report on the work of the Urban Transport-Related Air Pollution (UTRAP) group, as co-chaired by the Department of the Environment, Climate and Communications and the Department of Transport.

The Urban Transport-Related Air Pollution Working Group (UTRAP) was formed in November 2019 to consider and address the level of transport-generated air pollution in certain urban areas. The impetus for the establishment of the Group was the publication of the Environmental Protection Agency's (EPA) *Urban Environmental Indicators Report* (2019)¹ for Dublin. While air pollutant emissions levels in Ireland were generally good and below EU limits in 2018, the EPA report suggested that on certain heavily trafficked streets in Dublin, nitrogen dioxide (NO₂) levels were higher than previously indicated. NO₂ is an air pollutant that is strongly associated with traffic emissions and with older diesel vehicles in particular. The report indicated that at some locations (in Dublin city centre, on the M50 motorway and at the entrance and exit to the Port Tunnel), it was possible that levels of NO₂ exceeded EU limit values. An exceedance at St. John's Road West in Dublin was subsequently reported for 2019.

The UTRAP Working Group was tasked with addressing the findings of the 2019 report as they related to transport-related air pollution. Its primary aims as set out in the Group's Terms of Reference² were to examine transport-related air pollution in urban areas and to develop an evidence-based national policy framework within which local authorities could address the recorded exceedance and any potential future exceedances.

The Group draws together a range of cross-sectoral stakeholders involved in air quality and transport. Through a series of meetings beginning in December 2019, the Group has progressed a work programme³ under several key thematic areas, as follows:

- Air quality and its impact on health;
- Air quality modelling, monitoring and research;
- Vehicle standards and technology;
- Critical infrastructure;

¹ EPA (2019) *Urban environmental indicators report*.

² <https://assets.gov.ie/122126/d464e9da-08d1-4491-985a-8142b4b03637.pdf>

³ Detailed information on UTRAP Group membership, Terms of Reference, meetings and work programme is to be found on the gov.ie website at <https://www.gov.ie/en/publication/3f634-urban-transport-related-air-pollution-utrap-working-group/>, in the UTRAP Interim report (March 2021) referenced below and at <https://assets.gov.ie/222027/aa7a0a42-31fe-4475-a554-7f48b2e5293b.pdf>.

- Traffic demand management.

Based on this programme of work, key outputs of the Group include a series of recommendations published in the **Interim UTRAP Report**⁴ in March 2021. The recommendations, which are listed in Appendix 1 of this report, draw together key issues and areas for action identified by the Group, with a strong focus on:

- Addressing identified evidence gaps in relation to transport-related air pollution;
- Strengthening cooperation and information-sharing between relevant transport stakeholders;
- Supporting relevant stakeholders in the implementation of actions with potential air quality benefits and reducing the impact of transport-related pollution in our cities and towns.

The Purpose of this Report

This synthesis report gives an account of the progress made to date relative to the objectives of the group as set out in the original Terms of Reference. It looks at what the Group has achieved; how these achievements align with the original Group objectives; how and whether the continuation of the Group can add value to addressing urban transport-related air pollution; and what more is required to further progress the work of the Group.

Therefore, this report outlines the progress that has been made to date on the Interim Report's recommendations since its publication (Section 3 and Appendix 1) and considers and proposes the future direction and structures of the UTRAP Group.

The report further sets out a number of new recommendations to be progressed through the proposed second phase of work by the Group (Sections 5 and 6).

⁴ [Interim UTRAP Report](#),

2 UTRAP Members

Group members to date reflect the cross-cutting nature of transport-related air quality and they represent the main stakeholders with responsibility for gathering information on air quality and human health and implementing policies and actions to reduce air pollutant emissions in our towns and cities. Broadly speaking, group members can be grouped into central Government departments with responsibilities for transport, the environment and public finance; public health and road safety authorities; urban local authorities; transport agencies and Public Service Obligation (PSO) transport providers, and the EPA. The list of stakeholders represented is as follows:

- Department of the Environment, Climate and Communications
- Department of Transport
- Department of Finance
- Department of Health
- Department of Public Expenditure and Reform
- National Transport Authority
- Transport Infrastructure Ireland
- Environmental Protection Agency
- Dublin Area Local Authorities
- Iarnród Éireann – Irish Rail
- Bus Éireann
- Dublin Bus
- Dublin Climate Action Regional Office
- Road Safety Authority

The Group agreed that membership should be reviewed regularly to ensure that all relevant stakeholders are included and, where specific issues arise, the possibility of sub-groups can be explored.

3 Review of UTRAP Interim Report Recommendations

In the March 2021 Interim Report, twenty-three recommended actions were identified for progression by the stakeholders of UTRAP. These have been listed in Appendix 1 of this report, and can broadly be grouped into actions aimed at:

- Improving data gathering and air quality modelling, particularly at air pollution hotspots, and building the evidence base for policies and emissions reduction measures;
- Establishing and reviewing the real-life vehicle fleet emissions profile in Irish urban areas;
- Strengthening stakeholder coordination and information sharing;
- Supporting the introduction of air quality pilot trials and measures by transport stakeholders.

At the time of writing, thirteen of these actions are completed and ten are ongoing. Of the twenty-three actions, six involve commissioning research on transport-related emissions from specific sources and on examining the feasibility of technical solutions to address emissions from those sources. This reflects gaps in current levels of knowledge and the key need (as identified through the work of the Group) to build an evidence base for action by developing a better understanding of air pollution, and of how certain conditions or situations can negatively impact on air quality. In addition to identifying and addressing knowledge gaps, air quality monitoring and modelling activities are crucial tools to better understand air pollution and how it affects the population. This was clearly demonstrated during the Covid-19 travel restrictions, when national ambient air quality monitoring activities allowed the identification of significant reductions in transport-related air pollution⁵. The monitoring results also confirmed a strong link between recorded NO_x levels and traffic densities in an Irish context. The value of this information confirms the importance of continuing to support the development of the national air quality monitoring programme as a crucial source of information for transport-related policy and decision-making.

Equally, the work referenced above will support the multiple actions that are underway to facilitate the transition of transport fleets to cleaner fuels. Such actions include the rollout of zero-emission buses in the Bus Éireann and Dublin Bus fleets as part of the NTA's

⁵ EPA (2021) [Air quality in Ireland 2020](#), pp. 4, 14.

commitment to decarbonise. Similar initiatives will be rolled out across the country. For example, Athlone will have an entirely electric public transport bus fleet from early 2023. Addressing the national rail fleet, in 2021, Iarnród Éireann signed a contract for up to 750 new rail carriages over a ten-year period with a first order for delivery of 95 carriages placed as part of this agreement⁶. This represents the largest ever order of rail fleet by Iarnród Éireann. In November 2022, agreement was received by Government for Iarnród Éireann to place an order for an additional 90 new battery-electric train carriages under this framework. These new electric trains and carriages will be used in the GDA as part of the Dart+ programme, which – under the National Development Plan – will see the expansion of Dart services across three existing commuter routes to Drogheda, Maynooth and Hazelhatch.

Government policies and initiatives to transition public fleets to clean and zero emission vehicle technologies will bring important air quality benefits. The revised ‘Clean Vehicles Directive’ was transposed into Irish law (through S.I. 381/2021⁷) and entered into force on 2 August 2021. It will ensure that a certain proportion of the procurement of vehicles by all public bodies will be low or zero-emission. Going a step further than this, the ‘Public Sector Mandate’ of the Climate Action Plan 2021 will require all public bodies to purchase only zero-emission vehicles where possible⁸.

Additionally, the Department of Transport’s Sustainable Mobility Policy (SMP)⁹, which was published in April 2022, contains 91 actions aimed at supporting the increased use of more sustainable modes of travel – walking, cycling and public transport – through significant investment in active travel infrastructure, and critically strategic initiatives like the Safe Routes to Schools Programme¹⁰ and Bus Connects¹¹.

The SMP also includes a range of actions related to demand management including the establishment of a demand management unit within the Department of Transport and the development of a demand management scheme for the Greater Dublin Area. Demand management has the potential to leverage significant co-benefits for air quality in urban areas and can be most effective when deployed in tandem with sustainable travel infrastructure and services. Building on the actions of the SMP and informed by the 5 Cities Traffic Demand Management Study¹², the Climate Action Plan 2023 entrusts the

⁶ Iarnród Éireann (2022) [Iarnród Éireann Annual Report 2021](#), p. 5 and p. 19.

⁷ <https://www.irishstatutebook.ie/eli/2021/si/381/made/en/pdf>

⁸ <https://www.gov.ie/en/publication/6223e-climate-action-plan-2021/>

⁹ <https://www.gov.ie/en/publication/848df-national-sustainable-mobility-policy/>

¹⁰ <https://greenschoolsireland.org/saferoutestoschool/>

¹¹ <https://busconnects.ie/>

¹² [gov.ie - Five Cities Demand Management Study \(www.gov.ie\)](https://www.gov.ie/en/publication/5c1e5-five-cities-demand-management-study/)

development of a new National Demand Management Strategy to the Department of Transport. The Strategy, which will consider the broad range of measures required, their relative impacts both in terms of demand reduction and wider economic impacts, and their sequencing/timing in parallel with the delivery of improved sustainable mobility alternatives, will be developed in 2023.

4 Review of Terms of Reference and Group Objectives

Since the establishment of the Group in 2019, its work has been structured under the objectives set out in the original Terms of Reference as follows:

1. Enhance awareness of clean air legislation and its requirements generally, and specifically concerning NO₂ and other transport-related air pollutants, amongst relevant stakeholder organisations;
2. Provide a forum to enhance understanding of the causes and the health and environmental impacts of NO₂ air pollution and other transport-related air pollutants in conurbations;
3. Identify developments that may impact NO₂ levels and other transport-related air pollutants in conurbations, e.g., evolving technical standards, and quantify the impact under likely future scenarios;
4. Identify examples of best practices in combatting NO₂ air pollution and other transport-related air pollutants in conurbations, particularly road traffic-related air pollution, and assess the applicability and any barriers to their implementation in an Irish context;
5. Consider a range of options for potential measures and any associated actions and supports required to facilitate their effective uptake to address NO₂ and other air pollution; identify measures most suitable to Ireland and appropriate implementation bodies; and
6. Present the final UTRAP recommendations to both Ministers for consideration by Government.

UTRAP Group Objectives: Progress To Date

One of the key successes of the UTRAP Group has been in relation to Objectives 1 and 2 of the Terms of Reference, and to enhancing awareness among relevant stakeholder organisations of air quality and the impacts of transport-related air pollution. The Group has acted as a valuable forum for engagement and cooperation between the key urban transport and air quality stakeholders (Objective 2). It has enhanced awareness among stakeholders of clean air legislation and has facilitated increased coordination and coherence between the policies, plans and strategies developed by each of the members concerning air pollution control.

The sharing of information through this forum is reflected in the meetings of the Group¹³, during which national, international and EU policy developments, legislative matters, monitoring, modelling, best practice and plans have been considered.

The Group has also facilitated stakeholder cooperation in the areas of identifying possible environmental impacts of NO₂ and other pollutants (Objective 3) and identifying examples of best practices and measures to reduce urban air pollutant emissions from transport, as well as possible barriers to their implementation (Objectives 4 and 5). These objectives have been addressed through:

- The development of cooperative research projects by Group members to better understand the causes and impacts of transport-related air pollution;
- Increased awareness of and support for co-ordinated and enhanced monitoring and modelling efforts (under the lead of the EPA);
- Consideration of the wider air pollution impacts of policies and plans implemented by stakeholder organisations;
- The sharing of information to inform and support key stakeholder policy developments; and
- Consideration of the impacts of planned and projected climate and other cross-cutting policy developments on air pollution levels.

¹³Meeting overviews <https://www.gov.ie/en/publication/3f634-urban-transport-related-air-pollution-utrap-working-group/>

These key elements have been actioned through the interim recommendations of the Group and significant progress has been made in collaboration on research projects, information and data sharing, as highlighted in the updates provided in Appendix 1.

The Interim and Final Reports produced by the UTRAP Group are key outputs of the Group, as they represent a clear overview of the sector, and bring together in one place all of the transport-related issues that impact air quality in the urban setting in Ireland. As such, the Interim Report (2021) and the Final Report together provide a comprehensive overview of the current state of play in the area of urban transport-related air pollution in Ireland including policy developments, research, technical standards and legislative frameworks.

The research programme and supported monitoring and modelling actions of the Interim Report's recommendations partly address the aim of quantifying the impacts of future scenarios of air quality set out in Objective 3 of the Terms of Reference. When the Interim Report was published in 2021, both the Department of Transport's Five Cities Demand Management Study and the Dublin Regional Air Quality Action Plan were still to be completed and published. Both of these initiatives involved quantitative analysis and modelling to support proposed or potential air pollutant emissions reduction measures.

The Five Cities Traffic Demand Management Study was commissioned to better understand transport demand, and to create a greater shift to more sustainable forms of travel in the 5 cities — Dublin, Cork, Waterford, Limerick, and Galway. It assessed four criteria, including air quality issues due to vehicular traffic. The other three criteria were vehicular traffic congestion; greenhouse gas (GHG) emissions from traffic congestion; and the quality of the urban environment.

The Study reinforced that, in Ireland, as elsewhere, transport demand management involves a much wider focus than on air quality alone. To maximise their benefits, the Study's recommendations require implementing actions to be integrated across the wider area of sustainable mobility by a broad cross-sectoral range of actors and stakeholders. In this context, a wider consideration of traffic demand management lies outside the objectives and structure of the UTRAP Group. That said, the UTRAP Group will be a critical stakeholder in the development of the new National Demand Management Strategy and will be well positioned, given the specialised air quality expertise of its members, to act as the air quality advisory body to the Department of Transport. UTRAP members will continue to identify knowledge gaps and to commission research on transport-related air pollution, to ensure that the Department of Transport and other key transport stakeholders are provided with the most up-to-date research and data for integration into the design of sustainable mobility

actions, and the new Strategy. This will, in turn, inform the design of individual traffic demand measures for specific cities and towns at local authority level.

To further support the quantification of transport-related air pollutants in Irish cities and towns set out in Objective 3, the Group notes that the impacts of pollutant emissions on ambient air quality will require further consideration by stakeholders on an ongoing basis. While the impacts of future policy on national emissions levels are set out in the EPA Informative Inventory Report (IIR)¹⁴ and projections report, stakeholders will continue to monitor and address the impacts of air pollutant emissions through future stakeholder research projects and through the EPA's LIFE EMERALD¹⁵ project.

To ensure ongoing improvements in modelling, UTRAP members will continue to work closely together, and to share data and information for the purposes of supporting future work on quantifying transport-related air pollution.

¹⁴ https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Ireland-IIRv3_2021.pdf

¹⁵ <https://www.epa.ie/environment-and-you/air/life-emerald/>

5 Future Role of UTRAP Group

Alongside the publication of the final report and the completion of the first phase of the UTRAP Group's programme, work on the associated recommendations is ongoing. As can be seen from the preceding chapters, there is a continuing need to develop and monitor actions to address air pollutant emissions, as well as to respond to the changing policy landscape (including the Clean Air Strategy, updated Climate Action Plan, and National Air Pollution Control Plan); to provide support to the Dublin local authorities to implement the Dublin Air Quality Action Plan; and to ensure the integration of air quality consideration into cross-cutting policies and initiatives in sustainable mobility.

While no single organisation has overall responsibility for the implementation of all transport policies, which may impact air quality, the UTRAP forum provides an opportunity for key stakeholders to work together to facilitate and support the implementation of actions which require coordination and cooperation across multiple organisations.

For that reason, it is recommended that the Group will continue to leverage its status as a valuable stakeholder coordination and information-sharing forum, helping to ensure that all stakeholders operating in the areas of transport and air quality have access to the most up-to-date information across all policy areas, and continue to integrate air quality matters into the development of their plans and strategies. In this context, it is expected that UTRAP will be a key stakeholder in the development of the Department of Transport's National Demand Management Strategy and in the implementation of the Clean Air Strategy.

It is therefore recommended that UTRAP should continue to meet on a biannual basis with the aim of continuing to advocate for the air quality considerations to be integrated into urban transport. Members of UTRAP will also continue to work together outside of the formal meetings to progress the actions of the Interim Report as well as to identify further areas for collaboration.

The continued operation of the UTRAP group as a forum for ongoing engagement between the key transport stakeholders will be included in actions under the Clean Air Strategy (CAS). Alignment with the CAS will embed the UTRAP Group in the overall national air quality structures which are being established under the Strategy, including the provision of annual sectoral reports under the proposed CAS progress reports to Government.

An annual update on the work of the UTRAP Group will be provided to Government as part of these wider updates under the CAS.

Updated UTRAP Group Objectives

Based on the above, the next phase for the UTRAP Group, following the publication of this synthesis report and the Final Report, will be based on a revised set objectives as agreed by the UTRAP Group. The revised objectives are to:

- Provide a national forum for key urban transport-related air quality stakeholders to enhance awareness and information sharing concerning legislation, policy, best practice, causes and impacts of transport-related air pollutants in urban areas;
- Discuss transport policy and project developments, to consider whether they accurately and satisfactorily consider air quality;
- Work together to share data that will assist in quantifying the impacts of new policy developments and likely future scenarios on air pollution levels;
- Consider specific policy measures as they are being developed to assess their applicability in an Irish context, and identify any national or local barriers to their implementation;
- Provide advice in the design and implementation of policies which have transport-related air quality benefits;
- Prepare a review of the work of the Group, to be included in the annual progress report of the CAS.

A recommendation of this report is that UTRAP will review its Terms of Reference to reflect the newly agreed objectives above.

6 Final Recommendations

The final recommendations as agreed by UTRAP stakeholders are as follows:

No.	Recommendation	Responsible Body
1	UTRAP will continue to meet on a biannual basis.	DECC/DTransport
2	UTRAP membership will be regularly reviewed to ensure appropriate regional balance.	DECC/DTransport
3	UTRAP will review and amend its Terms of Reference.	DECC/DTransport
4	UTRAP will report annually under Clean Air Strategy (CAS).	DECC/DTransport
5	UTRAP will contribute to work of communication group concerning transport-related air pollution under CAS.	DECC
6	A standing agenda will be developed ensuring it reflects the updated objectives.	DECC/DTransport
7	Interim Report recommendations will continue to be monitored and reviewed until completed.	DECC/DTransport
8	Ensure latest data, research, emissions and modelling outputs are shared and made available to the group	All stakeholders
9	Any emerging issues are presented to the group for discussion and possible actions.	All stakeholders
10	Consideration of key transport-related initiatives to ensure that they accurately consider air quality implications, including the development and implementation of measures under the National Demand Management Strategy.	All stakeholders

Appendix 1

Update on Interim Recommendations according to completion status (green = completed, amber = ongoing, red = delayed)				
Recommendations		Lead	Status	Notes
1	UTRAP Group to determine the most appropriate ways to support the development of the Air Quality Action Plan for Dublin Agglomeration (Zone A).	DECC	Completed	A statement of support was approved by the group and all stakeholders assisted when requested.
2.	The EPA and relevant stakeholders to identify and support targeted indicative monitoring programmes at areas of recorded or suspected high transport-related air pollutant emissions levels in urban areas, to feed into the development of policy measures and the expansion of air pollutant modelling activities.	EPA	Completed	Based on the results at official monitoring stations or specific requests, the EPA work with relevant stakeholders to deliver more targeted monitoring. For example, the EPA has recently operated programmes in Lucan and Abbeyleigh. Clean Air Together – Dublin has launched its findings available at www.cleanairtogether.ie Clean Air Together – Cork have deployed tubes in Q3 2022.
3.	The EPA and DoT to progress the postponed Dublin Port transport-related air pollutant emissions source apportionment study.	EPA	Completed	This project commenced in 2021, funded solely by the EPA. DoT is on the Steering Committee.
4.	CIÉ, Iarnród Éireann and the EPA to examine how best to share information, including on rail operation patterns in urban terminal stations and available traffic data, to determine the contribution of heavy rail to ambient air pollutant emissions and for possible inclusion in air quality models.	DoT/DEC C/ CIÉ/EPA	Ongoing	A research project related to this topic has been approved to proceed. DoT/EPA are funding a study looking at the impact of rail on AQ and the researchers are talking directly to CIÉ and Irish Rail.

Update on Interim Recommendations according to completion status (green = completed, amber = ongoing, red = delayed)				
Recommendations	Lead	Status	Notes	
5.	CIÉ, Iarnród Éireann and the DoT to commission a feasibility study on the potential installation of platform-side shore power electricity in terminal rail stations to eliminate engine idling by trains.	DoT	Complete	A feasibility study has been undertaken. While Iarnród Éireann now use shore power at their maintenance depots for locomotives, the level of plug-ins required for shore power connection at active stations was considered unfeasible in the context of turnarounds. Moving towards electrification as rapidly as possible was recognised as the better option for improvements at these stations.
6	The DoT to provide funding for the rollout of EV charging infrastructure at train stations, and other transport hubs, nationally with funding provided by the Carbon Tax Fund.	DoT	Complete	In 2020, €1.5 million was allocated to support a Small Public Service Vehicle Recharging Network Scheme. Chargers were installed at Dublin and Cork Airports as well as Heuston (Dublin), Kent (Cork) and Colbert (Limerick) train stations. Additional funding was allocated to this project with further charge points to be installed at an additional five Irish Rail stations. Work has begun on this and the charge points are expected to be installed in Q1 2023.
7.	Examine and improve the pathways by which central government departments and their agencies supply the EPA with traffic-related data for inclusion in urban ambient air quality models.	DECC	Ongoing	The EPA is reviewing the best option(s) to ensure the data pathways and linkages are maintained. This is being considered under the work of the LIFE EMERALD project and a recommendation will be presented to the group at a future meeting.
8.	Ensure that air quality considerations, including the collection of data on transport-related air pollutant emissions, continue to be mainstreamed into broader transport-related research and emissions projects co-funded by central government departments and agencies, such as the DoT, and the EPA.	DoT	Complete	Air quality considerations have been taken into account in DoT policies and research projects, including those relating to sustainable mobility and demand management. DoT reviews and comments on transport-related air quality referenced in cross-sectoral or cross-departmental policies and initiatives.
9.	DECC, EPA and relevant stakeholders to develop the capacity to perform	DECC	Ongoing	Modelling of air pollution is being progressed through the EPA LIFE EMERALD programme. Consideration regarding the most appropriate frequency of modelling will be decided as the project progresses.

Update on Interim Recommendations according to completion status (green = completed, amber = ongoing, red = delayed)				
Recommendations	Lead	Status	Notes	
	modelling on an ongoing basis across the five cities in Ireland.			
10.	The EPA, DECC, DoT and relevant stakeholders support the implementation of the LIFE Emerald project through the provision of data and any other necessary resources.	DECC/DoT/EPA	Completed	LIFE Emerald has commenced its second year with ongoing support from relevant stakeholders.
11.	Examine initiatives to strengthen and expand the communication of accurate transport-related air pollutant information to the public (as per the Aarhus Convention), with the cross-cutting aims of encouraging a behavioural shift towards low emission and active travel modes, improving public health, and reducing air pollutant emissions.	DECC	Ongoing	DECC is working with the EPA and other stakeholders to enhance communication through the appropriate channels. Under the Clean Air Strategy, a communications group will be established, and transport-related pollution will be an element of the work of this group. An initial workshop of key stakeholders took place in November 2022.
12.	The DoT and the RSA to organise a pilot study to assess the emissions profile of ICE vehicles as they age.	DoT/RSA	Ongoing	Both Recommendations 12 and 13 are being explored by the researchers of the EPA and DoT co-funded RED-MAP project ¹⁶ . This work will inform the Department's plans to address these recommendations.
13.	DoT and the RSA to organise a pilot study to assess the rate of DPF removal in the Irish fleet.	DoT/RSA	Ongoing	As above

¹⁶ https://www.tcd.ie/news_events/articles/researchers-kick-off-irelands-first-project-to-measure-real-world-driving-emissions-using-remote-sensing/, accessed 27/05/2022.

Update on Interim Recommendations according to completion status (green = completed, amber = ongoing, red = delayed)				
Recommendations		Lead	Status	Notes
14.	Review the impact of the NO _x surcharge once more data is available to give an accurate reflection of its efficacy.	D/Finance	Completed	An update was provided in the final report.
15.	To ensure that we are up to date on alternatively fuelled vehicles and continue to trial alternative fuel technologies where possible to inform the “Technology Pathway” of the NTA.	DoT	Completed	DoT has completed the alternatively fuelled bus trials. The report was published in May 2022 and is available to consult online. ¹⁷
16.	Support CIÉ and the SEAI in running a trial of behavioural interventions to improve air quality and fuel economy.	DoT/DEC C	Ongoing	Bus Éireann intends to commence an eco-driving/telematics programme for drivers in 2023. Due to capacity constraints, SEAI won't be part of this initiative.
17.	Examine the evidence basis for operational activities relating to major urban railway stations, collate available data and establish a framework within which this information might be supplied to the EPA for inclusion in ambient air quality models.	DoT/DEC C/ EPA/CIÉ	Completed	DoT and the EPA are co-funding research looking at rail stations and their impacts on AQ.
18.	Develop and implement air quality studies and associated monitoring programmes to address the current knowledge gap relating to the impact of heavy rail air pollutant emissions within and in the vicinity of Ireland's urban	DoT/DEC C/ EPA/CIÉ	Completed	See above

¹⁷ www.gov.ie - Low-Emission Bus Trial Final Report Phase Two (www.gov.ie), accessed 27/05/2022.

Update on Interim Recommendations according to completion status (green = completed, amber = ongoing, red = delayed)				
Recommendations	Lead	Status	Notes	
	terminal railway stations (including Pearse Station, Dublin).			
19.	Support the introduction of Variable Speed Limits across Ireland's national motorway infrastructure in accordance with national plans and support the implementation of the MTFO.	TII	Completed	Variable speed limits were introduced in October 2021 and extended in 2022.
20.	Develop a Park & Ride Strategy and support the delivery of park and ride sites.	NTA	Ongoing	
21.	Keep abreast of international best practices for air pollution barriers.	TII/UTRAP Group	Ongoing	
22.	UTRAP Group to reconvene and review the findings and 'Road Map' of the Five Cities Traffic Demand Management Study to support local authorities in implementing suitable traffic demand management measures identified for specific cities.	DECC/Do T	Completed	Documents were circulated before meeting 8 in November 2021, observations were discussed at the meeting, and recommendations were incorporated into new recommendations and updated Group objectives.
23.	UTRAP Group to continue to meet at least bi-annually to monitor the implementation of the recommendations until completed.	DECC/Do T to continue co-chair	Ongoing	