

Submission on behalf of Dublin Friends of the Earth to the Department of Communications, Climate Action & Environment on a National Clean Air Strategy for Ireland.

Dublin Friends of the Earth is a voluntary campaign group that works together to champion urgent environmental causes that have a positive and practical effect in helping our environment in Dublin, Ireland and globally.

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1. Do you agree with the five strategic priorities outlined in the draft strategy?

The draft strategy is not ambitious enough. We need urgent action. Ireland is a very wealthy, polluted nation and has yet to produce a National Clean Air Strategy. Its first one was to be published in 2017 but it was abandoned for five whole years. This is a second attempt at that. We have lost five years where we could have made a great start to all that pertains to air quality in this country. No strategy will ever be perfect as the world is constantly in a state of change e.g. technology, legislation, political landscape etc, but we must act now on the research and evidence we have.

As a start the strategy should state that the Clean Air Strategy explicitly recognises that every person in the country has a right to breathe clean air.

Much stronger enforcement measures to reduce air pollution is needed across all sectors. We believe it too late for 'encouragement' e.g. in relation to agriculture and ammonia, the draft strategy states that we have been exceeding the limits under the EU NEC Directive consistently it seems, and yet this continues without intervention.

Targets and enforcement of measures for air quality should be linked to a whole-of-government response to the climate crisis, so that each department is doing what it must do to tackle both air quality and all the other issues connected to our climate emergency.

However, we do welcome the connection made in Section 5.3 of the strategy between air quality and climate/ecosystems, and the emphasis placed by the strategy on the alignment between the actions required to lower air pollution and those needed to reduce greenhouse gas emissions and help our fight against climate change and biodiversity loss.

An overall comment on the strategy is that it is lacking in specifics. We need timelines, specific targets and clear implementation plans for each sector of the strategy.

2. Do you feel there are additional strategic priorities which should be included?

The government, first and foremost, has a duty of care to all Irish citizens and those who spend time in our country, to ensure the air they breathe is not detrimental to their health. This obligation is in addition to any commitment under EU legislation. The Government's approach therefore should be evidence based and take account, for example, of WHO findings showing there is no safe level for particulate matter, P.M. 10 and P.M. 2.5. The latter is so small, 2.5 microns, or twenty five times smaller in diameter than a human hair, it can reach into the deepest part of the lungs and bloodstream. The elderly and infants are particularly vulnerable. Even at low concentrations, air pollution inflicts enormous harm to nearly every organ of our body. For that reason, the WHO significantly reduced its standards for the six pollutants: particulate matter (PM2.5 and PM10), ozone, nitrogen dioxide(N02), sulphur dioxide, and carbon monoxide. The WHO estimates there were 7 million air pollution related deaths worldwide in 2012. Breaking this figure down, 40% were from stroke, 40% from heart disease, 11% from chronic obstructive pulmonary disorder, 6% from lung cancer and 3% from acute lower respiratory disease. Therefore we agree with the Irish *Climate and Health Alliance* that the Irish government must be much more ambitious and adopt the WHO Air Quality Guidelines from 2021 as legally binding measures without delay.

3. How can pollutant emissions data be better used to inform actions at local and national Levels?

The present monitoring system is outdated, inadequate and not fit for purpose. On 23 April 2022, 100 monitoring stations were listed on the EPA website and 25 of these were offline. We believe 75 to 100 stations for a population of nearly 5 million people is totally inadequate. The location of some of these is also questionable - they need to be at the busiest roads for example so that true levels of pollution can be detected, noted, communicated and addressed. A monitoring station hidden away in a quiet part of town behind the town library for example is not going to pick up heavy pollution from a busy street 60 metres away. The monitoring sites are too few and are not located where pollution is highest and potentially most damaging to human health. There are no means by which citizens can estimate their personal exposure. In a TCD study carried out by Associate Prof. Aonghus Mc Nabola and Prof. Laurence Gill they say "This can be quantified by recording personal exposure data over 24-hour periods on a real-time basis incorporating different activities (e.g. commuting, shopping, working, sleeping, etc.) and different locations." They go on to state "The current research study aims to gather sufficient data of this nature to be used in the development of predictive modelling tools. Data has been collected for one such pollutant, particulate matter (PM), with the use of a real-time Aerocet-531 nephelometer monitor."

On the Scottish *Know and Respond* App one can sign up for alerts and be contacted for free in advance when poor air quality is forecast to reach moderate, high or very high levels which allows those with specific health issues to plan accordingly. In Ireland, such a system would greatly increase awareness of the risks of air pollution damage to health; and hundreds of thousands of sufferers from asthma, other respiratory diseases and/or heart conditions would welcome the opportunity to reduce their exposure to air pollution. It should also be considered part of news programming and weather forecasts which issues UV index alerts to caution people against sunburn/skin cancer risk.

A monitoring station at every school would have multiple benefits. Traffic is heavy at schools and while some schools have blocked cars from the immediate approach areas, most are not able to do this. Data from school stations would be useful for a public awareness campaign, would help protect children from dangerous emissions and would highlight one area where citizens need to become aware of the effects of our own driving habits, especially that of engine idling. That said, the ideal scenario is for most children to walk or cycle to school.

We would like to see the EPA being properly resourced to report back to every local authority several times a year on monitoring results. This would alert the council and councillors to problem areas that need immediate attention.

4. What do you feel are the most important current and emerging air quality issues in Ireland that require further research?

Recent research has discovered microplastic pollution lodged deep in the lungs of living people for the first time due to breathing in polluted air. We believe the government should look more into this to find sources of this pollution as plastic is a known endocrine disrupter.

5. How can we better increase awareness of the health impacts of air pollution?

There are precedents. In the past Irish Governments have introduced a smoky coal ban, a plastic bag levy, free travel for pensioners, a smoking ban in public places and health warnings and plain

packaging of tobacco products. All these measures were introduced voluntarily and helped to safeguard the health of citizens and protect the environment. Although these laws were opposed at the time by vested commercial interests they had the support and later the appreciation of the public.

Better buy-in and cooperation is likely to occur amongst the public when their attention to the wide range of benefits that will result from urgent action to improve air quality. There will be a reduction in carbon and other greenhouse gases, it will help us reach our national climate targets as well as our international obligations, lives will be saved and we will have a healthier population. This will ease pressure on the health service and result in significant financial savings that can be diverted elsewhere in the provision of public services.

We feel that as air quality is a public health issue, that the medical profession would be an obvious ally in communicating the health impacts of adverse air quality. GPs, public health nurses and hospital consultants see first hand those suffering from air pollution related illnesses. *Irish Doctors for the Environment* are making good strides in this area and we very much support all their work in relation to air quality.

6. What issues might a national clean air awareness campaign encompass and how could its impact be measured?

A public information campaign should alert citizens to the dangers and public health and environmental impacts of air pollution. But such a campaign is of no use unless the government takes action to ensure that

- first, much greater emissions data is collected
- and secondly, that a set of measures to ensure emissions are reduced in each area is introduced.

The public knowing about air pollution will not itself result in action. For example, it must be ensured that a frequent, regular, cheap and safe public transport system is in place before campaigning for reduced car use.

We would like the public to make the connection between personal actions to reduce air pollution (e.g. driving less and reducing use of solid fuels for heating) and personal values (such as care and consideration shown towards household members, neighbours and wider local community) – similar to communications during the Covid 19 pandemic that was focused on our motivation to protect others.

Highlighting the benefits to personal finances e.g. savings to fuel budget from switching to active transport or reducing engine idling might also encourage a switch in behaviour.

Also, putting the onus on individual action is not helpful. We need the major polluters to stop, and the public need to know that any actions they take individually will be part of a much greater set of actions initiated by the government.

Climate change topics in general are not taken seriously by the media in Ireland. The national broadcaster, RTE, has a duty to report more widely on these issues as they affect people's lives today, and especially to bring the matter of air pollution to the attention of the residents of Ireland as it is now a serious public health issue. If the public is not made aware, there will be no real demand for change.

The Dept of Health and the HSE must get involved. Air pollution is causing a shocking 1,500 premature deaths a year. Thousands more suffer serious illness and the public have no knowledge of these facts. The already burdened health service deals with the fall out from those with lung, heart and other conditions, especially the increasing number of children with asthma. The Dept of

Health must work with the Dept of Communications, Climate Action and Environment and Transport, Tourism and Sport to get policies in place and be honest with the public and make them aware of the facts on this issue.

Real time air quality indications could be displayed on public screens. This could be done by showing them in rotation on existing electronic signs in urban centres, Dublin Bus RTPI screens, traffic information screens in or approaching towns/cities and on multi-storey car park screens. Air quality information screens can be seen at four locations in Seville, Spain for example. This could be done through dedicated mobile apps, similar to the one available from Met. Eireann to inform us of the weather, and by public announcements on local radio and TV and on EPA and Met Éireann websites. Such public information would raise public awareness very quickly and directly, and would stimulate media discussion of the health risks of air pollution and the necessary measures to safeguard our health.

Incorporation of an air quality element into the National Tidy Towns competition (Clean Air Award) is very welcome. This will get communities thinking about the issue and be proactive to protect its inhabitants and make them realise that air pollution occurs everywhere, not just in big cities.

Highlighting the contribution of clean air initiatives to mitigating climate change and protecting Earth as a livable planet, not just for future generations but for young people already born would be an important message also to the public.

7. What particular metrics or benchmarks do you think should be considered in tracking the progress of a Clean Air Strategy?

The below might be useful benchmarks:

- o Increase in active transport mode by general population
- o % of school children walking/cycling to school
- o delivery of new dedicated cycling infrastructure
- o % of new and second-hand car/van sales that are full EVs
- o take-up and impact of various grant schemes for EVs
- o % of public transport and/or taxi fleet that is electric
- o growth in EV charging infrastructure
- reduction in diesel engines in use by Irish Rail
- Sales of bikes/ebikes/cargo bikes/e cargo bikes
- Demand for sail and rail to UK and continent
- Uptake on retrofitting grants
- BER rating assessment results
- Decreased sales of fossil fuels / solid fuels
- Hospital visits/admissions during poor air quality events
- Health statistics on asthma/respiratory/heart/brain conditions
- Sales of asthma medication

8. Are there any other comments you have in relation to the draft national Clean Air Strategy?

Since all the evidence indicates that the main cause of air pollution is the burning of fossil fuels, the main element in eliminating air pollution has to be the urgent phasing out of fossil fuels and their replacement with clean, renewable energy.

The strategy needs to have more emphasis on the allocation and protection of **green space**. The right trees and greenery in the right places aid in air cleansing as well as contributing positively towards climate and biodiversity concerns.

On page 17 of the draft strategy, it states that 'The public response to Covid-19 has demonstrated the capacity and willingness to engage in rapid and profound behavioural change. The enduring experience has led to significant normative shifts in how we work, travel, and live. It is essential that the government capitalise on these shifts and ensure that these behavioural changes are encouraged.

- The public changed chiefly because of strong government information and regulatory framework, along with constant updates every day on the numbers of people ill and dying, and the difficulties created in the health service.
- We need similar structures of education/information on air quality [and on climate issues generally], and updates regularly on how well or otherwise we are doing in relation to our stated aims for air quality.
- We need to become familiar as a nation with the impacts of poor air quality. This all best done within an overall climate crisis campaign which not only links these for public information, but which deals with air quality as an item within our whole climate response.

We need to see air quality in the context of wider decision-making e.g. gold-prospecting licences granted in April 2022 for areas in Co. Leitrim despite air quality considerations in gold mining.

Dublin FoE wish to stress that the time to act is now. It is clear that a huge number of the necessary actions have already been identified and mapped out, whether under this Strategy, under Ireland's Climate Action Plan or other related Strategies. It is crucial that strategies are now followed and that plans are implemented with considerable urgency given the recent reiteration by the UN Intergovernmental Panel on Climate Change (IPCC) that the window has nearly closed on limiting global warming to 1.5 degrees Celsius, a critical threshold for a safe global climate system, and that transformative action is critical in the next couple of years to reverse the emissions trends.

Finally we would like to repeat below the below points from a report just released by the EPA in April 2022 called *Ireland's Air Pollutant Emissions 1990 to 2030*:

- Ireland must implement significant mitigation measures to achieve compliance with emission reduction commitments out to 2030 as outlined in the National Air Pollution Control Programme (NAPCP) and Clean Air Strategy.
- For Ireland to comply with emission reduction commitments for nitrogen oxides for 2030 will
 require full implementation of the measures in the NAPCP, Clean Air Strategy and the
 Climate Action Plan, including significant electrification of the transport sector.

- No Measures have yet been proposed that will address compliance with the NMVOC emission reduction commitment for 2030. Further research on possible measures is required, particularly to tackle growing sources such as spirit production.
- Full Implementation at farm level of ammonia abatement measures outlined in the AgClimatise plan (inline with the Teagasc Marginal Abatement Cost Curve analysis on ammonia emissions) is required to bring Ireland into compliance with the 2030 emission reduction commitment for ammonia. These measures include Low Emission Slurry Spreading (LESS) and use of inhibited urea fertiliser.
- Fine Particulate matter (PM2.5) emissions are projected to remain in compliance with the
 emission reduction commitments until at least 2030. However, to address air quality issues
 in towns and villages, a continued transition away from solid fuels for residential heating is
 required.

Residential

The residential sector accounts for 27% of all energy usage in Ireland and emits 10.5 million tons of CO2 annually. Residential air pollution is caused by the burning of fossil fuels to heat homes and water. Consequently a phasing out of fossil fuels must be central to any plan to reduce residential sector air pollution.

The main source of PM 2.5 is residential home heating (55%). Whether it is an open fire or closed stove burner, the public are generally unaware of the level of harmful PM emissions that are discharged directly into their own homes. For the benefit of public health, the Clean Air Strategy must prioritise the transition away from solid fuels (smoky coal, smokeless coal, peat briquettes, sod turf, and both dry and wet wood) towards sustainable forms of home heating (electric, heat pumps, etc), expedite the National Retrofitting plan targeting those most at risk of energy poverty.

Dublin FoE believes that further incentives should be provided to encourage a bigger uptake of home retrofitting. For many low and middle income home owners the main impediment is the large capital outlay required. This is really holding people back. Consideration should be given to an SSIA type scheme dedicated to energy upgrade. Loan and easy repayment schemes should be introduced and extra financial incentives provided to encourage community energy and district heating schemes. The SEAI supported an energy efficiency pilot scheme at the EPS Group Company in Mallow, Co. Cork, a number of years ago, where EPS gave loans to its employees for home upgrades, shows how access to cheap finance can be used successfully. Schemes like this should be rolled out nationwide, especially where an employer has employees working fully or partly from home. These staff are using their own home heating during working hours, so it could be argued that the employer should be assisting in some way.

Ireland has the fourth highest incidence of asthma in the world (1 in 13 people, which is shocking) and the Asthma Society of Ireland is calling for a "just transition that sees fuel allowance increased and additional investment to accelerate rollout of the National Retrofitting Programme, with prioritised subsidies for those most at risk of fuel poverty, lower income households and the medically vulnerable". We are fully in support of this ask.

The new regulations on solid fuel burning (smoky coal and wet wood), and prohibiting the commercial sale of sod turf, will save lives, but provide for continued turf extraction by those with turbary rights and distribution within small communities is also welcomed by us.

Dublin Friends of the Earth strongly supports the use of a Climate Action Fund and Just Transition Fund (Section 8.3. 6.1) for targeted initiatives to reduce fuel poverty. This should be applied in certain towns or rural areas where data shows relatively high reliance on solid fuels and should

involve SEAI, EPA, local authorities working together to find solutions and tailored incentives targeted at specific households rather than waiting for people to apply through general nationwide grants schemes. This is likely to be more effective for the small proportion of the households who still have no alternative form of heating than solid fuel than just information campaigns or supply regulations/restrictions. It would also support the Just Transition objectives as households with lower incomes, older people and people in rented accommodation are likely to be less able to avail of existing grant schemes.

Incentivisation for landlords in the private rental sector through specific grants or tax incentives is also essential to get rental stock up retrofitted as soon as possible.

Transport

Dublin FoE supports clean energy public transport, electric vehicles, cycling, scooters and e-scooters, cargo bikes, electric taxis, e cargo bikes and walking as the ways to achieve clean air in our cities. This will also help considerably reduce our climate polluting emissions from the transport sector, which are shamefully projected by the EPA to increase rather than reduce up to 2030. This will only happen if a number of steps are taken, of which a congestion charge is one, based on the most polluting vehicles paying a higher charge. We would like to see all government, semi-state, local authority, construction and business vehicles become electric. National and local government needs to lead by example. Free centre city car parks for public servants should be phased out and public transport encouraged. Most people have never been in an EV or on an e-bike/cargo bike. We would like to see the local authorities have regular events where the public can try them out e.g. in a large park/car park area so people can do a test drive/ride and ask questions without the duress of being in a salesroom etc.

Traffic on the M50 is reported to be increasing by 10% a year, with many motorists using it as a rat run between just one or two junctions. To encourage bus travel from outside the M50, free park and-ride facilities should be available outside each junction, with Dublin Bus services or Luas, as at the Red Cow roundabout, linking with each of those parking facilities.

One simple and radical way to promote public transport would be to provide free or heavily discounted travel for school children, both on school buses and on public transport services. This would help greatly to cut air polluting heavy traffic on our urban streets and in particular at school gates, where children and parents congregate. It could be introduced on a phased basis, for example, one day a week or for a week each term to start with, thus demonstrating its benefits; and it could rise to three or five days a week over a similar number of years. The cost would be recouped by a reduction in the costs of traffic congestion and the health costs of air pollution.

Public transport needs to be fast, reliable, efficient and cheap. In Dublin the Dart and the Luas have been very successful, taking thousands of cars off the roads. Dedicated bus lanes have shortened travel times and real time information at bus stops and on apps to mobile phones have improved matters for bus users. But public transport needs to be cheaper and we need to convert our urban buses to clean energy.

In the meantime Ireland should conform to the EU Clean Vehicles Directive by retrofitting HGVs and buses with NOX abatement technology.

Buses, coaches, cars and taxis should be discouraged from keeping engines running for long periods while stationary. An information awareness programme should be instigated among

bus, coach and car drivers on the health and climate emissions impacts of this.

Citibike and the Bike to Work scheme have been great successes and should be extended to all large towns in Ireland. A ebike / e cargo bike scheme could be piloted in villages. Investment in bicycle infrastructure is a modern and intelligent move. Plenty of research shows the social, economic, environmental, and health benefits of urban cycling. Studies from Denmark tell us that for every kilometre cycled, society enjoys a net profit of 23 cents, whereas for every kilometre driven by car we suffer a net loss of 16 cents. A recent large-scale University of Glasgow study published in the British Medical Journal shows that commuting by bicycle cuts the risks of heart disease and cancer by almost half. This is a dramatic finding and demonstrates that doubling or trebling the number of regular cyclists in Irish cities and towns will lead to significant health cost savings in time.

Infrastructure is the key. We need wider, more protected, one-way bike lanes that aren't shared by cars, buses or pedestrians. Bike security and bike parking facilities need to be improved. We need to limit the number and speed of cars in city centres, making public spaces safe and welcoming for everyone.

To encourage people to walk to work and within our city we need to increase the number of pedestrian zones, improve the air quality and also provide people with real time information about air pollution so they can plot their route.

Rural Ireland dwellers have been neglected in terms of public transportation and they should be given greater help in moving to fossil free cars, whereas urban dwellers should be enticed towards active travel and public transport - not private cars, even if they are electric. That said, there is still too much mystery and lack of confidence in the general public for them to buy electric cars / ebikes etc. They feel daunted by this new technology, range anxiety and charging facilities, both on the road and at home. A one stop service from start to finish would instil confidence and trust in the whole process as disconnects are being reported between the car dealer and after sales service/malfunctions and even specialised electricians who install the home chargers. The need for planning permission in some residences for home chargers is also putting off people from going with an electric car. Charging facilities need to be drastically increased with further incentives for electric vehicles owners like free/reduced parking

Low Emission Zones are common and are working effectively throughout Europe. As the major health dangers from diesel emissions are becoming apparent many cities are deciding to limit or ban such vehicles from city centres. We should consider doing the same starting with periods of high congestion.

Since the introduction of a €5 charge for vehicles to enter central Milan on weekdays, a 14.5% reduction in traffic numbers and a 6-17% reduction in emissions has been recorded (Gibson and Carnovale, 2015). This is estimated to provide healthcare savings of up to US\$3 billion annually. Similar 'cordoned' zones in Singapore, Stockholm and London have led to reductions in traffic volumes and the introduction of a charged 'low-emission zone' (LEZ) in Germany reduced mean PM10 levels by 9%.

Vehicle Registration Tax and motor tax can be used to encourage people to buy cleaner energy vehicles and a fuel tax on fossil fuels can discourage unnecessary journeys and encourage a shift over to public transport, electric vehicles and other clean modes of transport.

Initially with a publicity campaign pointing out the seriousness of Diesel Particulate Filter Removal and the consequences it has for public health. Then by making it an offence punishable by fine and penalty points. The NCT should also be expanded to include DPF examination. A programme of national emission testing should be conducted in Ireland, as has been done in other countries,

to assess real driving emissions from vehicles on the roads.

Additional air pollutants sources we would like to highlight include trains. Intercity trains warming diesel engines and idling, especially in covered railway stations, represent a serious health hazard from emissions, including particulate matter. Connolly Station, Dublin, is a case in point, where Dart commuters have to pass along the mainline platform to access their trains. In both Connolly and Heuston stations CIE personnel and those working in retail kiosks are required to work for eight hours a day in enclosed emission laden environments. Is the technology available to enable trains warming engines or idling to run on electricity while in the station? If not, then means have to be found to separate the people from the pollution.

Travel by air is a huge emitter of emissions and as an island we need to seriously improve sail and rail type connections between us, the UK and the continent. The North Runway project at Dublin airport should be cancelled by the Government. Investment should go to integrated infrastructure like ferries and trains instead. We are also a small enough nation that our train service should be more attractive as an option rather than in-country flying. We have a lot of work to do in this regard.

Agriculture Sector

In sections 10.3 & 10.4 of the draft strategy there are lists of measures to ensure the agriculture sector reaches its air quality targets. But then states that these are all subject to implementation by the Dept of Agriculture. It is not clear if this suggests that the Dept of Agriculture may not implement these measures? To produce a National Clean Air Strategy and accompanying public campaign without the support and full backing of the relevant government departments would seem to suggest a basic failure of communication and committment at government level. How can individual farmers be expected to take important steps to bring agriculture in Ireland into a healthier place when government departments are not in full accord on the steps being set out?

Subsidy and grant schemes should be introduced that facilitate farmers to reduce the intensity of their ammonia emissions, and to diversify their farms.

We call for greater fines for those convicted of illegal gorse burning in Ireland. With much drier conditions at certain times of the year due to climate change, the ground is much more vulnerable to catastrophic fires like the one in Killarney National Park in 2021.

As a preventative measure, we need better education and awareness of the hazards of illegal burning on farms and at private residences, where people are still burning their own household waste. This is contributing to our greenhouse / carbon emissions but also causes the release of carcinogenic dioxins, which are very harmful to humans.

Overall, we need to give farmers a new way to look after the land of Ireland. The current system is compelling them to destroy it e.g. cutting back hedgerows, chopping trees, overdosing the land with chemicals, run-off polluting rivers, over-draining and de-greening upstreams lands which contribute to flooding downstream. The present ways of working need to be changed and a new land use strategy formed. Instead of them receiving payment to interfere with nature, can they not be compensated for working with nature and for nature?

Energy

Despite the recent encouraging growth in electricity from renewables, mainly wind, Ireland remains overwhelmingly reliant on imports of fossil fuels for the vast bulk of our energy supply. Dublin Friends of the Earth is calling for **a much stronger commitment to renewable energy** in this strategy. We need to stop our increasing reliance on fossil gas, which has a very high methane component. Ireland has excellent clean renewable energy resources. With the right policy framework we could become a centre of excellence for renewable energy design and manufacturing with an active and growing job market in clean technologies and communities at the heart of the transition.

More needs to be done to **support and encourage community energy efficiency and micro generation projects**. Local investment keeps money local and supports jobs and communities.

Grant aid from the Sustainable Energy Authority of Ireland through Better Energy Homes and Better Energy Communities should not be limited to energy efficiency measures but should include community renewable energy generation projects.

We should promote and give incentives to all businesses, with help from the National Standards Authority of Ireland, to attain ISO 14001 environmental and/or ISO 5001 energy management accreditation. These focus an organisation to operate in an environmentally responsible way and conserve resources, of which energy is a key component. Current status is documented and goals are set to reduce waste, conserve resources and move towards being carbon neutral where possible.

Citizen Engagement and Adaptation Awareness

The effectiveness and potential of any air quality data can only be realised once the general public becomes more aware and more knowledgeable about how to access and interpret its data. Similarly, measures to encourage people to switch to less polluting methods of home heating or to make different transport choices can only achieve maximum success if we gain sufficient levels of public support through increased public awareness, improved understanding and the promotion of positive behaviours.' As already mentioned above, different transport choices cannot be made while new transport services are not delivered; and switching to less polluting methods of home heating being hampered by failure to get the micro-generation scheme operational.

Citizens cannot be expected to be up-to-date with all aspects of air quality and the changes that need to be made to achieve it unless there is information available in the places where people will hear or read it, especially in TV and radio news bulletins, newspapers and social media. While much airtime is given to arguments between politicians, there is no good source of information for people to help them make informed judgements and choices.

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