An Taisce
The National Trust for Ireland

22 January 2021

Submission of An Taisce to the Department of Environment, Climate Change and Communications

Public Consultation on the National Air Pollution Control Programme

submitted by email to: airquality@decc.gov.ie

1. Introduction

Ambient air degradation is an issue of acute environmental and human health concern in Ireland. The World Health Organisation (WHO) has produced evidence that ambient air degradation is responsible for over 400,000 premature deaths in Europe every year. The WHO has described air pollution as the 'single biggest environmental health risk.'[1] The dangers of air pollution are particularly acute for the Irish population. This country suffers from the third-highest death rate from lung disease in Europe, and the fourth highest rate of asthma in the world – the Asthma Society's figures show over 380,000 asthma sufferers in Ireland. There is also substantial evidence linking air pollution and cardiovascular diseases including stroke.[2] Epidemiological studies have demonstrated that both short- and long-term exposure to air pollution increase the risk of stroke dramatically. In fact, research published in 2020 demonstrated that spikes in air pollution in Dublin, particularly in nitrogen dioxide and sulphur dioxide, have led to an associated 3.5% higher risk of stroke in the community.[3] Air degradation is a matter of life and death for thousands of Irish people every year.

Degradation of ambient air quality in Ireland is driven principally by three factors:

- Over-reliance on heavily pollutant vehicles and ongoing over-investment in vehicle-based infrastructure;
- Non-implementation of a nationwide ban on solid fuel burning;
- Increasingly intensive large-scale agricultural practices.

In addition to the imperative for action presented by human health, Ireland's air degradation is having serious, long-term and potentially catastrophic impacts on Irish ecosystems and biodiversity.[4] These impacts are both direct and indirect: nitrogen oxides and sulphur emissions directly deposit into water, on vegetation and on soils as acid rain, which negatively impacts the entire ecosystem chain. Eutrophication of bodies of water is also a common

[1] https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health
[2] The Regulation of Smoky Fuels in Ireland: Assessing Options for Reform (2020)
[3] Short-term Air Pollution as a risk for Stroke Admission: a Time-Series Analysis (2020)
[4] Assessment of the Impact of Ammonia Emissions from Intensive Agriculture (EPA, 2020)

consequence of air pollution, leading to habitat collapse and biodiversity loss.[5] The factors causing degradation of ambient air quality also have serious indirect impacts on ecosystems and biodiversity. Intensive agriculture, extraction of solid fuels for burning, and the unchecked dominance of vehicle infrastructure, each have serious consequences for Irish wildlife, which cannot be ignored.

These factors are also key contributors to Ireland's greenhouse gas emissions. Effectively combatting the air pollution crisis in Ireland through a robust and substantive NAPCP, will have significant positive consequences for our international legal obligations on greenhouse gas emissions abatements as well.

For both human health and environmental reasons, it is therefore critically important that the NAPCP, and all subsequent policy outcomes deriving thereof, are robust enough to effect meaningful change in respect of the levels of identified pollutant. The NECD specifies five pollutants for reduction, across two temporal bands: initial emissions ceilings are set for the period 2020-29, with more stringent ceilings in place for all member states by 2030. The 2030 emissions reductions commitments across the EU are:

- 79% for Sulphur Dioxide (SO2)
- 19% for Ammonia (NH3)
- 40% for Non-Methane volatile organic compounds (NMVOCs)
- 63% for Nitrogen Oxides (NOx)
- 49% for fine particulate matter (PM2.5)[6]

For its part, Ireland has committed to the following emissions ceiling reductions:

Table 1: National Emissions Ceiling Directive reduction commitments from 2020 and 2030 (EU reference 2.3.1.)

NECD Reduction Commitments for the 2020 and 2030 Periods relative to 2005 Base Year	SO_2	NO_x	NMVOC	NH_3	$PM_{2.5}$
Ceilings from 2020-2029	65%	49%	25%	1%	18%
Ceilings from 2030	85%	69%	32%	5%	41%

The scale of the Directive's emission reduction ambition in the next ten years necessitates bold, robust action on the part of all Member States- including Ireland. In its 2020 Report to the European Parliament, the European Commission assessed each member states' risk of non-compliance with emission reduction commitments, both for the period of 2020-29, and from 2030 and beyond. In the next 9 years, the Commission assessed Ireland to be at high

[5] Assessment of the Impact of Ammonia Emissions from Intensive Agriculture (EPA, 2020)
[6] https://ec.europa.eu/environment/air/reduction/index.htm

risk of non-compliance with two of the five listed pollutants (NMVOCs and NH3). From 2030 and beyond, Ireland is considered to be at medium risk of non-compliance in relation to SO2 limits, and high risk for NOx, NMVOCs and NH3.[7] Ireland rank among the worst in Europe for likelihood of compliance, according to the Commission's assessment.

This is the crucial context within which this draft update to the NAPCP must be placed. Ireland has a steep hill to climb towards compliance. The NAPCP submitted by Ireland in February 2020 failed to show a path to compliance in relation to NOx, NMVOCs, and, most particularly, NH3. The 'compliance challenge' presented by NH3 is deeply concerning, and it is not at all clear that the update to the NAPCP as it is currently constituted goes far enough to address it.

In the forthcoming sections, we have provided feedback on the specific content of the draft update in respect of three of the leading pollutants in question – ammonia, nitrogen oxides, and fine particulate matter.

2.1. Ammonia

Major reductions in vehicular traffic arising from the coronavirus crisis have led to welcome improvements in air quality in Ireland and across Europe. This is all the more critical as studies show that people living in high-pollution areas are more susceptible to the impacts of coronavirus.[8]

However, the reduction in vehicular pollution has drawn attention to another deadly source of air pollution, arising from ammonia, a toxic gas that is a major by-product of animal-based agriculture that harms ecosystems and combines with other pollutants to form dangerous air pollutant particles.

Apart from being a health hazard to farmers, their families and other rural dwellers, ammonia emissions account for around 50% of the total health impacts of polluted air in urban areas as well.[9] Ammonia is acrid and suffocating; residents in Brussels have complained of stinging eyes and headaches as a result of ammonia wafting in from the surrounding farmlands.[10]

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[7] https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1593765728744&uri=CELEX:52020DC0266
[8] World Economic Forum (April 2020) "The deadly link between COVID-19 and air pollution": https://www.weforum.org/agenda/2020/04/the-deadly-link-between-covid- 19-and-air-pollution/
[9] European Environmental Bureau (March 2019) "Time to cap agricultural pollution say MEPs": https://meta.eeb.org/2019/03/14/time-to-cap-agricultural-pollution-say- meps/

[10] European Environmental Bureau (April 2020) "The Big Stink: Europe's lockdown uncovers a surprising source of air pollution": https://meta.eeb.org/2020/04/02/the- big-stink-europes-lockdown-uncovers-a-surprising-source-of-air-pollution/

In Ireland, ammonia emissions have risen steadily, year on year, in line with government policy to expand dairy and other animal agriculture, supported by the Department of Agriculture, Food and the Marine (DAFM) and enabled by Teagasc, the state's agricultural research agency.

In 2017 for instance, the EPA recorded a 2% increase in ammonia emissions, and projects these to continue to climb to at least 2030.[11] Ireland has been exceeding its agreed national EU limits of ammonia emissions since 2016. Animal manures account for upwards of 90% of Ireland's total ammonia emissions, with chemical fertilisers and road transport accounting for the balance. Overall, Ireland's agricultural sector accounts for 99% of ammonia emissions, with well over 40 million tonnes of animal manures spread on the land annually as well as over 400,000 tonnes of nitrogen inputs in chemical fertilisers.

The Irish agricultural sector's current trajectory of growth, facilitated actively by government policy which underpins the draft updated report, is entirely inconsistent with a strategy to reduce or even meaningfully stabilize ammonia emissions.

The agricultural package of additional measures contained in the draft update do nothing to address this central issue. Ammonia emissions are increasing in direct lockstep with the continued increase in the cattle herd, which is actively facilitated by government policy. For example, the Departments of Agriculture, Food and the Marine's recent publication of its "Roadmap towards Climate Neutrality" (AgClimatise), is silent on the issue of cattle herd reductions. The Department's ten-year (2015-2025) *Foodwise 2025* strategy is a regime of relentless expansion, emphasizing growth in the dairy herd most particularly.

These policies are in direct conflict with advice, published in October 2020, by the Climate Change Advisory Council. In their annual report for 2020, the CCAC state that 'the observed trend in the expansion of the national dairy herd has been the major contributor to increases in the agricultural emissions in recent years.' In fact, the CCAC elaborated its position on the reduction of the herd in its most recent report, which warrants quotation in full:

> 'Many stakeholders take the view that the current and projected size of the cattle herd is fully justified and that the objective should be to maximise production on Irish farms. The Council's view is that Irish livestock output (both milk and meat) should reflect what makes economic sense for farmers, ensuring a positive return over market costs, while also fully reflecting and

[11] EPA (2017) "Ireland's air pollutant emissions 2017 (1990-2030)": https://www.epa.ie/pubs/reports/air/airemissions/irelandsairpollutantemissions 2017/

> internalising biophysical and environmental limits. The Council refers to this as the sustainable level of output, where sustainability refers to the ability to generate an economic return for farmers while safeguarding environmental resources (including water, air, soils and biodiversity) and controlling emissions for the benefit of society as a whole. It is important to emphasise that the sustainable level of output is not a fixed limit and can expand as scientific insight and innovations develop that reduce the environmental footprint of primary production. However, it can also contract as science provides improved insight into the adverse impacts of current farming and land management practices.
>
> **There is incontrovertible evidence that the current level of livestock output (milk and meat) exceeds the sustainable level of output** given current technologies, with important local and regional variations in both economic and environmental sustainability. This is clear from a wide variety of environmental indicators including decline in biodiversity, steady decline in water quality, increased emissions to air and the regularity of adverse impacts in the agriculture sector due to extreme weather conditions.'[12] *(emphasis added)*

An Taisce welcomes many of the With Additional Measures (WAM) selected for adoption in the Agricultural Package. Finding efficiencies for emissions reduction is crucial at every level of agriculture. It should be clear, however, that the listed WAM for Agriculture in the draft update operate at the margins of the issue, and fail to address the core of the 'compliance challenge'. It is not possible for Ireland to meet its obligations under the NECD, without addressing the size of the cattle herd, and the ancillary intensive agricultural practices necessitated by its growth.

The most efficient and effective method of reducing ammonia emissions, along with NOx and greenhouse gas emissions, is manifestly clear: the net size of the cattle herd must be progressively reduced, and farmers supported to transition to less pollutant alternatives. The projected growth of the dairy herd is of particular alarm.

Effective regulatory action is possible, but requires political will. For example, the UK unveiled a sweeping air quality plan in 2020 that includes plans to cut ammonia emissions from agriculture by 16% by 2030. The move came in the wake of a UK Environment Agency finding that ammonia was the only major air pollutant to increase since 2013, and that emissions from farms would continue to rise without "urgent action". Equally urgent action, of a similar scale and ambition, is required in Ireland, but it is not reflected in the draft updated NAPCP.

[12] Climate Change Advisory Council, Annual Review 2020

2.2. Nitrogen Oxides

NOx is a deeply toxic gas, which is responsible for 79,000 premature deaths in Europe every year. In Ireland, 41% of our NOx emissions are from the transport sector – well above the European average. Section 4.1.1. of the update to the NAPCP acknowledges that:

> "Road transport is the principal source of NOx emissions in Ireland at present, accounting for 33% of total national NOx emissions in 2018. Within that sector, passenger cars and heavy-duty vehicles are the most significant emitters. An increased share of diesel vehicles in the fleet, along with a recovering economy have been two of the more important developments seen in the transport sector to 2018 in regard to NOX emissions"

Despite this admission, the draft update lacks coherent programmes or measures to make an impact on the emissions resulting from road transport. To place the importance and urgency of meaningful action to address NOx emissions in context, the EPA's air quality monitoring identified an exceedance of legal limit values of NOx in 2019 at a monitoring station in St John's Road West, in Dublin. As a result, the Urban-Transport Related Air Pollution Working Group was convened, as noted in the draft report. There has been no quantifiable progress made by the group to date, and although the draft update to the NAPCP stated that an interim report would be published by UTRAP before the end of 2020, at the time of writing no such report has been made available.

Although there has only been one formally recorded incidence of exceedance of the legal limit values for NOx, modelling undertaken by the EPA in 2019 indicates that the true scale of the problem is in fact much more serious. According to the modelling data published by the EPA, they estimate that 11 separate monitoring locations are in exceedance, and a great many of Dublin's most congested streets are above the 40ug/m3 annual average limit. The data produced in that EPA report is presented in map and graph format in the figures below.



Fig. 1 – *Modelled annual average NO2 concentrations in Dublin City Centre. The EU limit value is 40ug/m3.*[13]

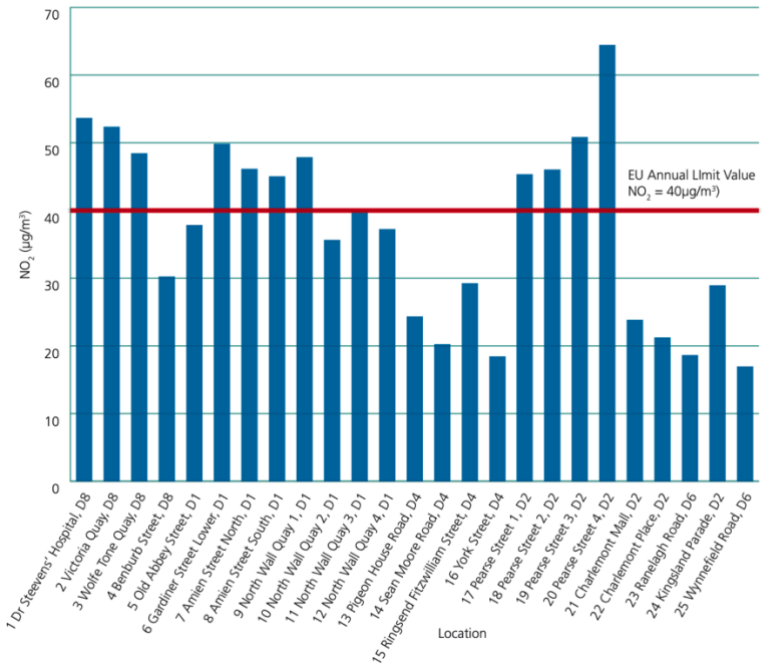


Fig. 2 – Nitrogen Dioxide Diffusion Tube Results in Dublin, 2017

[13] EPA, *Urban Environmental Indicators* (2019)

This data was collected using diffusion tube sampling and dispersion modelling, in addition to the standard network of monitoring stations across Dublin. The heightened levels of NOx modelled across the city in comparison to that formally captured by the monitoring station network alone is striking. Although similar studies have not yet been undertaken in other cities and towns across the country, it is reasonable to expect that equally raised levels of NOx are likely to be present elsewhere as well. Traffic congestion is endemic to all of our major population and commercial zones, and air pollution policy must reflect the scale of the challenge.

Unfortunately, the Policies and Measures contained in the draft update do not represent a policy outlook which is capable of curbing our transport-based NOx emissions.

- *Over-reliance on Electric Vehicle delivery*

  It is manifestly obvious that Ireland's transport landscape is overly dominated by diesel vehicles – more than half of the passenger car fleet is made up of diesel vehicles, according to 2017 data. The Climate Action Plan 2019 addresses the problem in large part through its promise to promote the purchase of one million Electric Vehicles by 2030. Notwithstanding the misguided wisdom of continuing to promote private car use over cycling, walking and mass transit, this objective has been universally criticized as being unrealistic. In 2020, only 17,525 of the nearly 3 million vehicles on Irish roads were electric.[14] At current rates of car sales in Ireland, almost every car sold between now and 2030 would have to be an EV in order to even approach the rate promised by the government. This is clearly not a realistic vision, and the continued reliance on EVs as the 'silver bullet' to solve transport-based air pollution is fanciful. In addition, although the absence of tailpipe emissions in EVs as compared to diesel or petrol vehicles is welcome, continued reliance on private car use, whether EV, diesel, or petrol, is deeply problematic. Without concurrent commitments to reduce the total number of cars on our roads, introduction of a greater proportion of EVs to the market is an exercise in futility. Total numbers of car registrations in Ireland have increased in Ireland every year since 1990, from 801,000 in 1990 to 2,180,000 in 2018. This rate of increase is manifestly unsustainable, and must be addressed.

  Rather than simple addition of EVs to the Irish passenger fleet, policies and measures in the transport sector should be attempting to comprehensively address society's reliance on the private car through infrastructural investments in cycling, walking and subsidized mass transit, as well as progressive measures to disincentivize private car use in towns and cities across the country. This could include:

[14] https://www.seai.ie/technologies/electric-vehicles/

- *A more comprehensive conception of "Encouraging modal shift":*

  The draft update refers to measures intended to encourage modal shift towards sustainable transport modes – cycling, walking and public transport. The encouragement of sustainable transport as an alternative to private car use is of course most welcome, but the draft update's scope of analysis is excessively narrow.

  The draft update limits its analysis of the increase in mode share for sustainable transport almost exclusively to Dublin, and primarily to the area within the Canal Cordon. While the centre of the capital city is of course an area of crucial concern, it is one of many major residential and commercial hubs across the country. Any serious modal shift to cycling, walking and mass transit infrastructure should be a nationwide strategy, with infrastructural incentives implemented in every village, town and city in the country.

  Section 4.2.1.4 also limits its analysis almost entirely to commuting activity. Recreational use of sustainable modes of transport is also crucial – national policy should actively discourage the use of private vehicles in every instance, by prioritizing sustainable transport, incentivizing its use, and developing suitably accessible infrastructure.

- *Limiting access to city centres for pollutant vehicles – Low Emission Zones*

  Over 200 European cities have implemented Low Emission Zones (LEZs) at the time of writing. The LEZ network across the continent varies in design and format, but the essential purpose of their implementation is consistent and effective: the exclusion of heavily pollutant vehicles from the centre of the city. Typically, LEZ schemes include:

  - A ban on high emission vehicles, both for private use and heavy goods vehicles;
  - Retrofit subsidy schemes;
  - Charges for access to the LEZ by pollutant vehicles, organised by category and severity of pollution;
  - Investment in alternatives to driving: sustainable transport, particularly cycling, walking and low-emission mass transit.

  Neither the NAPCP, nor any of its accompanying policy documents, broach the topic of the introduction of LEZs. This absence must be remedied, if meaningful progress is to be made within our cities. If a LEZ were introduced, it would immediately have a dramatic impact on the ambient air quality of our city centres. It would also have the

effect, as has been demonstrated across Europe, of triggering accelerated fleet transformation nationwide.

Crucially, as demonstrated across Europe, the successful implementation of a LEZ requires not only the dis-incentivisation of pollutant private car and HGV use, but the active encouragement of non-pollutant alternatives – specifically, cycling, walking, and low-emission mass transit options made available to all in society. In fact, as will be discussed in a later section of these submissions, the mere replacement of pollutant vehicles with electric vehicles, while certainly will not be sufficient in isolation. A society-wide re-orientation away from private car use and towards zero carbon cycling, walking and mass transit is the only method by which Ireland's ambient air degradation and carbon emissions abatement targets can feasibly be met.

2.3. Fine Particulate Matter (PM2.5)

Since 2011, the European Environment Agency has consistently found that more than 1,100 deaths a year in Ireland may be attributable to outdoor fine particulate matter pollution alone. This accounts for roughly 3.5-5% of all deaths recorded by the Central Statistics Office each year. Solid fuel burning for home heating is the most significant source of PM2.5 pollution. Any plan to address air pollution must therefore include concrete measures to enable a transition to cleaner methods of home heating.

This is a matter of utmost urgency. Human health is being threatened all over the country, due to the ongoing failure to implement a ban on solid fuel burning. Severely elevated levels of PM2.5 have been recorded in towns, villages and cities the length and breadth of the country, from Letterkenny to Macroom, Birr and Tralee. In Dublin, air pollution recently reached levels not seen in 30 years, due to the extreme spikes in PM2.5 in the city as a result of thousands of fires burning in thousands of homes across the city. The Centre for Research into Atmospheric Chemistry (CRAC), based in University College Cork, has confirmed that pollution levels, although unacceptably high in our major cities, are often even higher in small towns and villages where the incidence of residential fireplaces is greater. CRAC is of the view that the only effectively way to address the crisis of PM2.5 pollution is to begin the transition away from burning all kinds of solid fuels across the entire country. The EPA has endorsed this view as well – Dr Ciara McManus, Director of the EPA's office on environmental monitoring, said that PM2.5 from solid fuels is unacceptable:

> "Open fires lead to very large levels of these particles getting directly into the air in our living room and also into the air in our environment. That's why we see it so much in towns and villages because you've got an accumulation of what's coming out of everybody's house… What we need to consider as a country, is to look at the feasibility of not just banning smoky coal in urban areas, but also all

smoky fuels, that would be all solid fuels which emit particles above a certain level."[15]

The commitment contained in the Programme for Government to 'extend the smoky coal ban to new towns and over the term of the government move towards a full nationwide ban' does not go far enough. Merely banning one form of solid fuel is insufficient, and there is an absence of evidence to support its effectiveness. Instead, government must pursue a nationwide, comprehensive transition away from solid fuel burning as a matter of priority, sensitive at all time to the realities of fuel poverty, which is a barrier to transition for some households.

It should be noted that although gas heating results in less PM2.5 emissions than the burning of solid fuels, it is a major source of greenhouse gas emissions, and the primary cause of a wide array of environmental harms during its extraction, processing and transport. The transition away from solid fuel burning should not simply rely on the fantasy of natural gas as a 'transition fuel', which is inconsistent with Ireland's commitments under the Paris Agreement. The imperative, and major opportunity, presented to government is to transition away from solid fuel heating and towards green, renewable energy.

3. EU Infringement Complaint

In 2020, An Taisce initiated a legal infringement complaint to the EU Commission on Ireland's ongoing exceedance of the ammonia ceiling threshold, commencing in 2016. An Taisce has lodged a parallel complaint to this on the failure of the Department of Agriculture, Food and the Marine to comply with the obligations of Article 10 of the Strategic Environmental Assessment (SEA) Directive with regard to mitigating the adverse impacts of dairy expansion under the FoodWise 2025 Strategy, adopted in 2015. We attach a copy An Taisce's infringement complaint in Appendix 1, and a comprehensive update on the current position, including the EU Commission's response, in Appendix 2.

4. Transboundary Impact with Northern Ireland

Northern Ireland, because of the scale of its intensive animal agriculture sector, has significantly higher ammonia emissions per square kilometre than the average for England, Scotland and Wales, as well as the Irish State. In 2020, An Taisce raised the issue of transboundary impact on the border counties in a submission to the Northern Ireland Department of Agriculture, Environment and Rural Affairs. (APPENDIX 3)

[15]https://www.google.com/search?q=soild+fuel+burning+ciara+mcmanus&oq=soild+fuel+burning+ciara+mcmanus&aqs=chrome..69i57.6280j1j4&sourceid=chrome&ie=UTF-8

5. Conclusion

Urgent, robust and comprehensive action must be taken to combat air pollution in Ireland, and it must be taken now. In these submissions, a clear roadmap to a cleaner, greener, safer Ireland has been presented. The three primary drivers of air pollution in Ireland – heavily polluting vehicles, intensive agriculture, and solid-fuel burning in our homes – were identified, and measures to meaningfully combat them were outlined.

It is possible to realise a cleaner air future for Ireland, but only if our most heavily polluting activities are brought under control as a matter of utmost urgency. Thousands of premature deaths in Ireland could be avoided each year through: reducing the size and intensity of the cattle herd and its feed sourcing, a large-scale, nationwide transition to sustainable transport, and ending the unnecessary solid fuel burning in Irish homes. There is no doubt that this vision can be realised – all that it requires is political will.

The development of a robust NAPCP, grounded in these three fundamental principles, would lead to a greener, cleaner, safer Ireland, which is better equipped to meet its international obligations on not only air quality, but climate change as well.

An Taisce is available to discuss any element of these submissions further with any interested party.

CONTACT:

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Appendix 1 – Legal Infringement Complaint submitted by An Taisce to the European Commission, July 2020

EUROPEAN COMMISSION

Complaint – Infringement of EU law

Before filling in this form, please read '*How to submit a complaint to the European Commission*': https://ec.europa.eu/assets/sg/report-a-breach/complaints_en/
All fields with * are mandatory. Please be concise and if necessary continue on a separate page.

1. Identity & contact details

	Complainant*	Your representative (*if applicable*)
Title* Mr/Ms/Mrs	Mr	
First name*	Ian	
Surname*	Lumley	
Organisation:	An Taisce – The National Trust for Ireland	
Address*	Tailors' Hall, Back Lane	
Town/City *	Dublin	
Postcode*	D08 X2A3	
Country*	Ireland	
Telephone	01 707 7072	
E-mail	planning@antaisce.org	
Language*	English	
Should we send correspondence to you or your representative*:	X	☐

2. How has EU law been infringed?*

	Authority or body you are complaining about:
Name*	Department of Communications, Climate Action and Environment
Address	29-31 Adelaide Road
Town/City	Dublin
Postcode	D02 X285
EU Country*	Ireland
Telephone	+353 1 687 2000
Mobile	N/A
E-mail	secretary.general@dccae.gov.ie

	Also:
Name*	Department of Agriculture, Food and the Marine
Address	Agriculture House, Kildare Street
Town/City	Dublin
Postcode	D02 WK12
EU Country*	Ireland
Telephone	+353 1 607 2000
Mobile	N/A
E-mail	Brendan.gleeson@agriculture.gov.ie (Secretary General)

2.1 Which national measure(s) do you think are in breach of EU law and why?*

FoodWise 2025: It is submitted that the Department of Communications, Climate and Action and Environment as well as the Department of Agriculture, Food and the Marine (DAFM) are acting in breach of the National Emissions Ceiling Directive (NECD) and the Strategic Environmental Assessment (SEA) Directive in relation to DAFM's *FoodWise 2025* strategy, which was subject to SEA. However, the published strategy did not identify accelerating exceedances of ammonia levels in its support for dairy expansion, which has caused the NECD ammonia emissions ceiling threshold to be exceeded since 2016. DCCAE, which has responsibility for air pollution, has failed to effectively act on this breach. They rely on **the Code of Good of Agricultural Practice for Reducing Ammonia Emissions from Agriculture**, a document mandated under the NECD, which sets out entirely voluntary measures and is not effectively reducing ammonia emissions.

2.2 Which is the EU law in question?

1) National Emissions Ceiling Directive (NECD) (2016/2284/EU); and
2) Strategic Environmental Assessment (SEA) Directive (2001/42/EC).

2.3 Describe the problem, providing facts and reasons for your complaint* (max. 7000 characters):

1. NECD ammonia breaches

Irish animal agricultural expansion under the Department of Agriculture, Food and the Marine (DAFM) supported ten-year (2015-2025) *FoodWise 2025* strategy has caused the ammonia ceiling threshold to be exceeded since 2016, as evidenced by data published annually by the Irish Environmental Protection Agency (EPA). This exceedance is continuing and increasing as shown by the most recently published data for 2018, published in May 2020.

An Taisce made complaints on 27th April 2020 to the Irish Government Department for Communications, Climate Action and Environment (DCCAE) with responsibility for air pollution, as well as to the Department of Agriculture Food and the Marine (DAFM). A reply was received from DCCAE on 3rd June 2020. To date, no reply has been received from DAFM.

The DCCAE reply does not set out any effective action to bring ammonia air pollution levels back below EU emissions ceiling thresholds in any stated timeframe. The response refers to individual voluntary farm measures proposed by the Department of Agriculture, Food and the Marine (DAFM) in the draft Code of Good Agricultural Practice for ammonia, a document mandated under the National Emission Ceiling Directive (NECD). The reply also makes reference to further changes that are being considered DAFM's Climate and Air Roadmap. However, this Roadmap relies entirely on the Code of Good Agricultural Practice to provide any ammonia reductions, and does not introduce any new measures. In regard to those measures, it was recognised by Teagasc in 2015 (Ireland's Agriculture and Food Development Authority) that significant policy measures would be necessary to implement uptake of ammonia abatement measures, and many could only be implemented at significant cost. Low Emissions Slurry Spreader technology was just one of the multiple measures that Teagasc has indicated would collectively be necessary to achieve NECD compliance, and relying on it alone cannot address the breaches.

The most recent Environmental Sustainability Committee report submitted to the 2030 Agri-Food Strategy group outlined in a table that fertiliser (in tonnes of nitrogen) were projected in 2015 to reach 345,558 tonnes by 2020. The actual reported figure for 2019 was 367,364 tonnes. This report also states that dairy cow numbers have increased by 41% between 2010 and 2019 and that: "*Dairy cow numbers and nitrogen fertiliser use over the period 2012 to 2018 were the most significant drivers of increased ammonia emissions.*" The 2030 Agri-Food Strategy group is a largely agriculture industry led lobby group appointed

to drive and produce the strategy for Irish food, agriculture and the marine, including oversight of the SEA process.

2. SEA Directive Obligations

It is submitted that the Department of Agriculture, Food and the Marine is acting in breach of the Strategic Environmental Assessment (SEA) Directive. DAFM's *FoodWise 2025* strategy was subject to SEA. However, the published strategy did not identify accelerating exceedances of ammonia levels in its support for dairy expansion, which has caused the NECD ammonia ceiling threshold to be exceeded since 2016.

It is further submitted that DAFM has systematically abrogated its responsibility under Article 10 of the SEA Directive. Article 10(1) and (2) set out the provisions for monitoring of a programme subject to SEA and the obligations for remedial action where unforeseen adverse effects arise. Section 8.12 of the 2001 European Commission guidance on the implementation of the SEA Directive states that, *"Unforeseen adverse effects is better interpreted as referring to shortcomings of the prognostic statements in the environmental report (e.g regarding the predicted intensity of the environmental effect) or unforeseen effects resulting from change of circumstances."*

We also wish to put on record our concern that the Irish EPA, which advises on the SEA process in Ireland, was represented on the DAFM-appointed Committee which approved *FoodWise 2025*, and is not properly exercising its oversight function.

3. Human health impacts

We request that this complaint be given urgent attention in view of potential human health impacts. Research and monitoring on exposure of workers in agricultural facilities with high ammonia levels is not being carried out, despite the potentially greater risk of various health impacts, including respiratory diseases and viruses (Lelieveld, et. al., 2015). NECD ammonia thresholds have been exceeded since 2016, with 98% of ammonia pollution in Ireland caused by agriculture.

We note that Annex I(f) of the SEA Directive provides for the consideration of likely significant effects human health (as well as other impacts).

4. Transboundary impacts with Northern Ireland

Since 2012 the Northern Ireland Department of Agriculture Environment and Rural Affairs has embarked on the animal agriculture intensification strategy "Going For Growth - A strategic action plan", which largely supports the Northern Ireland agri-food industry. Northern Ireland's ammonia levels have also been responsible for pushing the UK overall level in excess of the EU emissions ceiling limit. This has resulted in significantly higher ammonia air pollution levels than the Irish State, with particular trans-boundary impacts on the border counties of Cavan and Monaghan, both due to drifting air pollution from Northern Ireland, and as a result animal wastes being transported south over the border. We request that the trans-boundary issues be addressed as part of this complaint.

5. Irish accommodation of migration of Dutch agriculture emissions

On 3rd July 2020, the Dutch parliament voted to reduce ammonia emissions. In the same week, the Irish state planning consent body, An Bord Pleanála, granted planning permission to a Dutch cheese company, Royal-A-Ware, to develop a new Dutch cheese manufacturing plant adjacent to an existing Glanbia milk powder processing plant at Belview, Slieverue, Co. Kilkenny, near Waterford City (An Bord Pleanála Ref. 306136).

The An Bord Pleanála consent did not address its obligation under the Environmental Impact Assessment Directive to address the direct, indirect and cumulative impacts of the plant, including the milk supply source from the surrounding sensitive catchment area, which covers the Rivers Suir, Nore, and Barrow Special Areas of Conservation.

The Planning Inspector's Report informing the final grant of permission states that: "*The Government and Teagasc have programmes (Code of Good Agricultural Practise and MACC for ammonia emissions) in place to address these [ammonia] emissions with the projected dairy productivity and dairy herd size increase.*" However, these programmes are voluntary and there are no data to indicate that they are effective in reducing ammonia air pollution, which is increasing.

2.4 Does the Country concerned receive (or could it receive in future) EU funding relating to the subject of your complaint?

X Yes, please specify below ✎ No ✎ I don't know

The TAMS II programme (Targeted Agricultural Modernisation Scheme) includes funding for Low Emissions Slurry Spreader (LESS) technology for reducing ammonia. The scheme is co-funded in Ireland by the National Exchequer and the EU under Ireland's Rural Development Programme 2014-2020.

2.5 Does your complaint relate to a breach of the EU Charter of Fundamental Rights?

The Commission can only investigate such cases if the breach is due to national implementation of EU law.

✎ Yes, please specify below X No ✎ I don't know

3. Previous action taken to solve the problem*

Have you already taken any action in the Country in question to solve the problem?*

IF YES, was it: ○○ Administrative ○○ Legal ?

3.1 Please describe: (a) the body/authority/court that was involved and the type of decision that resulted; (b) any other action you are aware of.

An Taisce made complaints on 27th April 2020 to the Irish Government Department for Communications, Climate Action and Environment (DCCAE) with responsibility for air pollution as well as to the Department of Agriculture Food and the Marine (DAFM). A reply was received from DCCAE on 3rd June 2020. The reply did not outline any effective, targeted, or timelined action to reduce ammonia emissions and instead relies on voluntary measures and programmes for which there are no data on efficacy (see above). To date, no reply has been received from DAFM.

3.2 Was your complaint settled by the body/authority/court or is it still pending? If pending, when can a decision be expected?*

DCCAE appeared to consider it settled, but An Taisce contests this as outlined above. No reply was received from DAFM.

IF NOT please specify below as appropriate

○○ Another case on the same issue is pending before a national or EU Court
○○ No remedy is available for the problem
○○ A remedy exists, but is too costly
○○ Time limit for action has expired
○○ No legal standing (not legally entitled to bring an action before the Court) please indicate why:

⊗⊗ No legal aid/no lawyer
○○ I do not know which remedies are available for the problem
○○ Other – specify

4. If you have already contacted any of the EU institutions dealing with problems of this type, please give the reference for your file/correspondence:

✎ Petition to the European Parliament – Ref:……..
✎ European Commission – Ref:……..
✎ European Ombudsman – Ref:……..
✎ Other – name the institution or body you contacted and the reference for your complaint (e.g. SOLVIT, FIN-Net, European Consumer Centres)

N/A

5. List any supporting documents/evidence which you could – if requested – send to the Commission.

⚠ Don't enclose any documents at this stage.

- Original An Taisce complaints to the Department of Communications, Climate Action and Environment and to the Department of Agriculture Food and the Marine;
- Response to An Taisce from the Department of Communications, Climate Action and Environment;
- Latest EPA data on ammonia emissions;
- Environmental Sustainability Committee report submitted to the 2030 Agri-Food Strategy group (referenced above)
- Lelieveld, et. al. (2015) "The contribution of outdoor air pollution sources to premature mortality on a global scale," Nature, 525 (referenced above)
- Teagasc report (referenced above) regarding the need for significant policy measures to implement uptake of ammonia abatement measures;
- Northern Ireland Department of Agriculture Environment and Rural Affairs animal agriculture intensification strategy "Going For Growth - A strategic action plan" (referenced above)

6. Personal data*

Do you authorise the Commission to disclose your identity in its contacts with the authorities you are lodging a complaint against?

X Yes ✎ No

⚠ *In some cases, disclosing your identity may make it easier for us to deal with your complaint.*

Appendix 2 – Briefing Document on Ammonia Air Pollution, including details of European Commission Response to legal infringement complaint

An Taisce
The National Trust for Ireland

22 January 2021

An Taisce Briefing Document in Relation to Legal Infringement Complaint on Ammonia Emissions, submitted to the European Commission

Since 2016, ammonia air pollution emissions in Ireland have exceeded EU threshold ceiling limits (National Emissions Ceilings Directive, 2016/2284/EU) and are continuing to rise.

Ammonia is a toxic gas, which is a major by-product of animal-based agriculture. According to government statistics, 99% of all ammonia emissions in Ireland emanate from the agricultural sector. The impact of ammonia on ecosystems is profound – EPA research has found that many of Ireland's Special Areas of Conservation and Natura 2000 sites are being damaged and destroyed, in part by ammonia emissions from intensive agriculture.[i]

The intensification of animal agriculture though the Department of Agriculture, industry and Bord Bia promoted Foodwise 2025 strategy adopted in 2015 has pushed Ireland in excess of the EU ammonia emission ceiling directive since 2015. Ammonia has multiple adverse impacts both on human health, nature and biodiversity.[ii]

The risk posed to human health should not be underestimated. Air pollution from PM2.5 alone is linked to some 1,300 premature deaths in 2019.[iii] The Department of Communications, Climate Action and Environment's own data asserts that air pollution in Ireland causes a loss in life expectancy of 394 years per 100,000 inhabitants. Across the country, the Department estimated that, for example, a total of 18,200 years of life were lost to air pollution in 2013.[iv] According to a study carried out in Denmark, ammonia exposure to children increases the incidence of asthma development.[v] Ireland is already peculiarly vulnerable to respiratory illnesses, including asthma – Ireland is ninth in the world for prevalence of asthma in children.[vi]

Apart from being a health hazard to farmers, their families and other rural dwellers, ammonia emissions account for around 50% of the total health impacts of polluted air in urban areas across Europe as well – as found in a European Environment Agency study.[vii] Ammonia is acrid and suffocating; residents in Brussels regularly complain of stinging eyes and headaches as a result of ammonia wafting in from the surrounding farmlands.[viii]

Despite the public health imperative of ammonia emission reduction, government policy continues to relentlessly support expansion of agricultural practices which emit extreme quantities of ammonia, most notably dairy production. In particular, the Foodwise 2025 strategy has been the subject of a legal infringement complaint in July 2020 by An Taisce to the European Commission, on the grounds that the published strategy did not identify accelerating exceedances of ammonia levels in its support for dairy expansion.

An Taisce made separate but related complaints to the legal affairs unit of the European Commission on:

(1) infringement of the Emissions Ceiling Directive (2016/2284/EU) in relation to agricultural ammonia

and

(2) infringement of the monitoring an remediation obligations of the Strategic Environmental Assessment (SEA) Directive process for the ten year national agrif food strategy Foodwsie2025 adopted in 2015

Article 10 of the SEA Directive sets out the provisions for monitoring of a programme subject to SEA and the obligation for remedial action where unforeseen adverse effects arise:

1. *Member States shall monitor the significant environmental effects of the implementation of plans and programmes in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action.*
2. *In order to comply with paragraph 1, existing monitoring arrangements may be used if appropriate, with a view to avoiding duplication of monitoring.*

The provisions of Article 10 are therefore not just for monitoring, but notably for the remediation of unforeseen adverse effects.

Section 8.12 of the 2001 European Commission guidance on SEA states that *"Unforeseen adverse effects is better interpreted as referring to shortcomings of the prognostic statements in the environmental report (e.g. regarding the predicted intensity of the environmental effect) or unforeseen effects resulting from change of circumstances."*

Monitoring was carried out by the Department of Agriculture Food and Marine coordinated High Level Implementation Committee (HILC) and was in particular set out the May 2020 " *"Environmental sustainability Committee report to the 2030 Agri Food Strategy Group ESC Environmental Monitoring*" This shows that GHG emissions, dairy cow numbers and fertilizer use in 2019, exceeded the projection for 2020 on which the 2015 SEA process and consideration of mitigation measures were based

The report then went on to state that there was "*Continued decline in water quality since 2013* "and exceedance EU emissions ceilings for ammonia since 2016 98% caused by agriculture and continuing.

No effective action has been taken by the Department of Agriculture Food and the Marine under Article 10 of the SEA Directive to remediate these significant adverse effects, including for agricultural ammonia. Dairy herd numbers have continued to increase to a significant level, particularly in Co Cork.

Instead of addressing the remediation obligations required for the AgriFood2025 strategy in November 2019 the Department of Agriculture Food and Marine appointed economist Tom Arnold to chair a committee or mainly agri industry representatives to advise the Department on a new ten-year Agri-food strategy, to replace and supersede FoodWise 2025. The Department commissioned UK consultants RSK to prepare a ***Draft Strategic Environmental Assessment (SEA) Scoping Report*** which was published for consultation in August 2020. It failed to address the fact that the existing 10-year strategy Foodwise 2025 which was approved in 2015 had five years to run.

In response to its complaint, An Taisce received a response from the European Commission in January 2020 stating that:

> In your complaint, you raise concerns over exceedances of ammonia emissions limits by Ireland in the context of the FoodWise 2025 strategy. We thank you for raising these concerns and we wish to inform you that the Commission share your concerns in this area. The Commission has raised this matter with the Irish authorities and is actively discussing this issue with them.
>
> The Commission is taking action in the area of enforcing compliance with the National Emissions Ceiling Directive, particularly regarding ammonia. In its report on the progress made on the implementation of the National Emissions Ceiling Directive, presented in June 2020, the Commission identified Ireland among fourteen Member States considered at high-risk of non-compliance with emission reduction commitments for ammonia. The Commission's priority for its enforcement policy in this area will be to make sure that Member States respect their emission reduction commitments under the Directive by checking on inventory data submitted by Member States. For this purpose the submission of emission inventories in 2022, where Member States will report 2020 data against the new reduction commitments under the Directive for the first time, will be given particular attention by the Commission.
>
> The Commission is working with the national authorities of Member States for which the attainment of the ammonia commitment may pose problems, even with measures foreseen in the National Air Pollution Control Programme, to develop further measures as a matter of urgency as required by Article 6(4) of the Directive. The Commission will continue working with and supporting the Member States through technical and financial assistance in order to advance the implementation of the Directive."

In 2020, An Taisce lodged a complaint to the Northern Ireland Department of Agriculture and Rural Affairs, on the transboundary impact of ammonia emissions from agricultural intensification in the border counties. This is an issue which will require transboundary resolution under the post-Brexit regulatory regime.

Urgent, robust and comprehensive action is required on ammonia emissions. The relentless increase in Ireland's ammonia emissions is matched in lockstep with Government-promoted determination to facilitate continuous growth of intensive, heavily pollutant animal-based agriculture. An Taisce is calling for Government to recognize the scale of the air pollution crisis in the agricultural sector, and to act accordingly: transitioning the sector away from the most heavily pollutant activities – dairy production in particular – towards less pollutant alternatives is crucial.

For further information in relation to this document and its contents, contact:

Ian Lumley – Head of Advocacy (heritage@antaisce.org)

Kevin Keane – Advocacy Officer (kevin.keane@antaisce.org

[i] http://www.epa.ie/pubs/reports/research/health/Research_Report_347.pdf
[ii] EPA Research, *Assessment of the Impact of Ammonia Emissions from Intensive Agriculture* (2020)
[iii] EPA, *Air Quality in Ireland 2019* (p2)
[iv] Department of Communications, Climate Action and Environment, *Cleaning our Air: Public Consultation to inform the development of a Clean Air Strategy* (2017) p. 8
[v] Holste, Gitte et al, *Ammonia, Ammonium, and the risk of asthma: A register-based case-control study in Danish children* (Environmental Epidemiology, 2018)
[vi] Global Initiative for Asthma, *Global Strategy for Asthma Management and Prevention* (2016) available at: https://ginasthma.org/ wp-content/uploads/2016/04/GINA-Appendix-2016- final.pdf (accessed January 2021).
[vii] European Environmental Bureau (March 2019) "Time to cap agricultural pollution say MEPs": https://meta.eeb.org/2019/03/14/time-to-cap-agricultural-pollution-say-meps/
[viii] European Environmental Bureau (April 2020) "The Big Stink: Europe's lockdown uncovers a surprising source of air pollution": https://meta.eeb.org/2020/04/02/the-big-stink-europes-lockdown-uncovers-a-surprising-source-of-air-pollution/

Appendix 3 – Submission to Northern Ireland Department of Agriculture, Environment and Rural Affairs in relation to transboundary impact of ammonia emissions on border counties

An Taisce
The National Trust for Ireland

Denis McMahon
Permanent Secretary
Department of Agriculture, Environment and Rural Affairs
Dundonald House
Upper Newtownards Road
Ballymiscaw
Belfast

Sent by email to: denis.mcmahon@daera-ni.gov.uk
Copied to: George Eustice, Secretary of State, Department of Environment, Food and Rural Affairs: george.eustice.mp@parliament.uk

16th July 2020

Re: Legal infringement complaint on the United Kingdom and Northern Ireland breach of the EU Ammonia Ceiling Threshold

Dear Mr McMahon,

We are seeking to advance legal action and establish administrative responsibility for the high level of agricultural ammonia emissions in Northern Ireland (see Figure 1) resulting from the *"Going for Growth - A strategic action plan in support of the NI agri-food industry".* Ammonia emissions have both adverse human health and ecosystem impacts. In addition the strategy and its impacts:

1. Have brought the UK as a whole in excess of the EU Emissions Ceiling threshold level for ammonia;
2. Are having a trans-national boundary impact on Counties Monaghan and Cavan with the Irish State having exceeded the EU Emissions Ceiling level since 2016;
3. Are affecting the ecosystem of transboundary European sites, including the area of Sliabh Beagh straddling the County Tyrone and County Monagahan border in the ownership of An Taisce. As a member of the International National Trusts Organization (INTO), we seek to maintain properties in accordance with International Union for the Conservation of Nature (IUCN) standards. Ammonia air pollution is undermining this objective.

We have already initiated a legal infringement complaint to the European Commission on the Irish State ammonia emissions threshold exceedance (attached).

We are now seeking action on the UK/Northern Ireland transboundary situation. We consider the NI ammonia exceedance to be a significantly more serious matter than the "Cash for Ash" debacle as it affects human health and ecosystems.

Air pollution causes at least 1200 premature deaths in Ireland annually, and has an exacerbating impact on those with asthma or with respiratory vulnerabilities. The research is

inadequate on the potentially higher vulnerability viral respiratory infections of agricultural workers exposed to higher levels of ammonia.

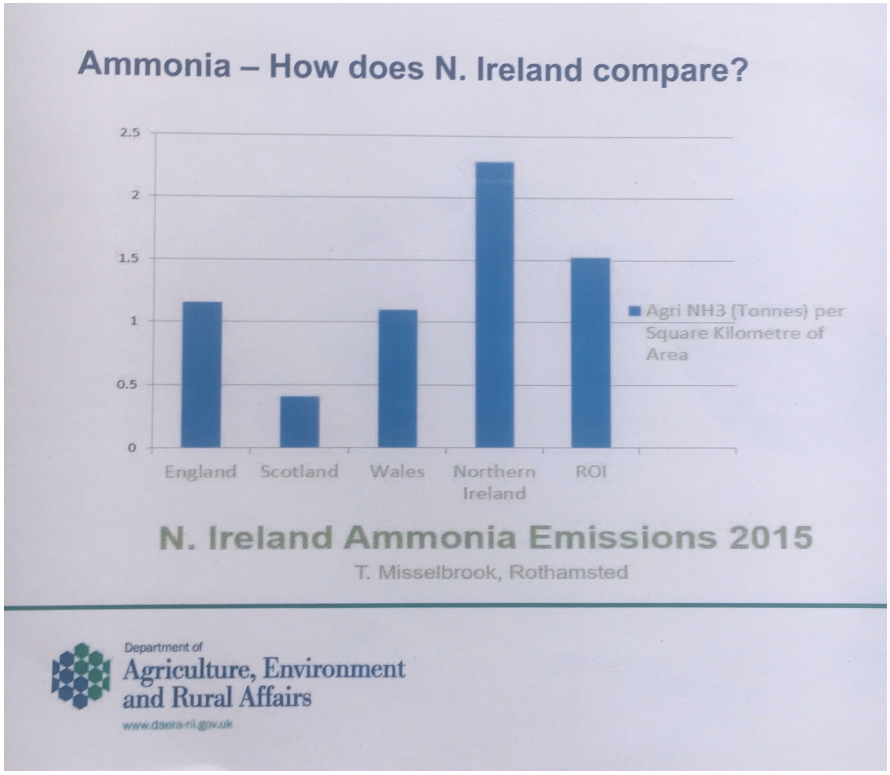


Figure 1
Source: Department of Agriculture, Environment and Rural Affairs, 2015

Northern Ireland's State of the Environment Report (NIEA 2013) reveals overall declines in priority habitats and breeding waders with agriculture, invasive species and fishing as key pressures. The continued decrease in wetland birds is confirmed in the Northern Ireland Breeding Bird Survey (NIEA and DAERA 2020). See Figure 2 mapping sensitive habitats and ammonia risk.

The most recently published data on ammonia impacts on Special Areas of Conservation (SACs) in NI is alarming, particularly the 2018 recorded air pollution levels at Northern Ireland SACs[1].

Of the 57 SACs listed on the APIS website, 48 are sensitive to nitrogen and 39 (81%) are listed as exceeding their Critical Load Threshold for nitrogen deposition at which ecological damage occurs. One site, Peatlands Park, had levels which were 322% of the threshold.

[1] http://www.apis.ac.uk/srcl/select-a-feature?site=UK0030318&SiteType=SAC&submit=Next

The worst SAC sites were:

Aughnadarragh Lough 209%
Ballynahone Bog 205%
Breen Wood 236%
Curran Bog 226%
Derryleckagh 269%
Eastern Mournes 220%
Hollymount 229%
Main Valley Bogs 223%
Owenkillew River 232%
Peatlands Park 322%

Other SACs which exceeded their Critical Thresholds were:

Banagher Glen 154%
Bann Estuary 108%
Binevenagh 103%
Black Bog 140%
Carn-Glenshane Pass 166%
Cranny Bogs 194%
Dead Island Bog 189%
Deroran Bog 189%
Fairy Water Bogs 144%
Garron Plateau 164%
Garry Bog 179%
Moneygal Bog 123%
Moninea Bog 128%
Murlough 129%
North Antrim Coast 122%
River Faughan & Tributaries 147%
River Roe & Tributaries 152%
Rostrevor Wood 159%
Slieve Beagh 157%
Slieve Gullion 101%
Strangford Lough 104%
Teal Lough 161%
Tonnagh Beg Bog 175%
Tully Bog 196%
Turmennan 143%
Upper Lough Erne 134%
Wolf Island Bog 189%

SAC sites which exceed their nitrogen deposition Critical Load Thresholds demonstrate that there is no additional loading capacity at these sites for new nitrogen emitting projects such

as new housing, roads, intensive agriculture, anaerobic digesters and waste discharges. Planning approval for such projects is unlawful under the Habitats Regulations.

Under the Habitats Regulations, Competent Authorities have a legal duty to ensure no further degradation of these sites and for their restoration to Favourable Management Condition.

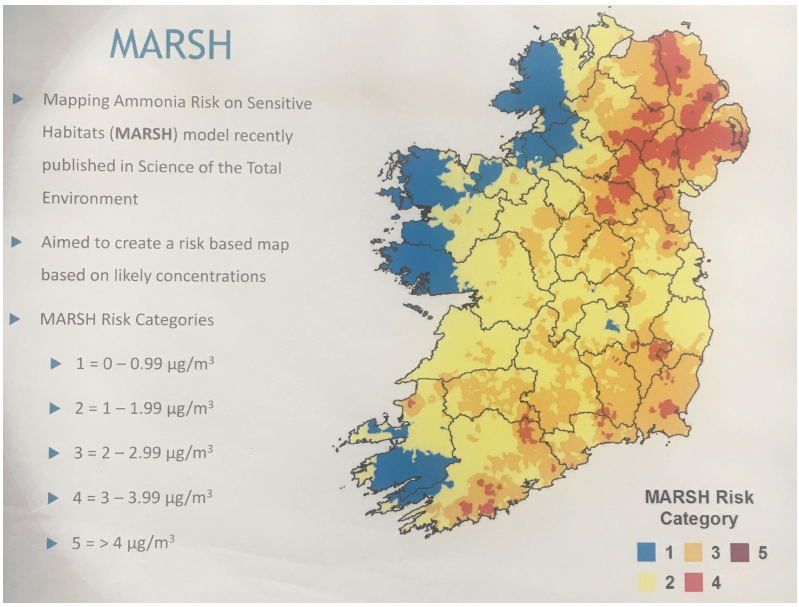


Figure 2
Source: Department of Agriculture, Environment and Rural Affairs, 2015

Accordingly we request the following:

Explanation of public heath and European Site protection failures

Who at NI senior public service level was responsible for the final approval of "*Going for Growth - A strategic action plan in support of the NI agri-food industry",* and what consideration was given to the public health and ecosystem impacts of the resulting ammonia increase?

Action to bring the UK and NI under the EU ammonia emission ceiling threshold

What action do you propose to reduce NI's ammonia emissions to bring NI to at least a level below the EU emissions ceiling threshold?

Public health

What action are you taking to properly research the public heath impacts of the ammonia air pollution threshold exceedance, including increased vulnerability to respiratory infection for those working in locations with high ammonia exposure?

Damage to Special Areas of Conservation and ecosystems

What action are you taking to significantly reduce damage to SACs and ecosystems, including Sliabh Beagh, as a result of ammonia pollution?

I look forward to your detailed response.

Yours sincerely,

Ian Lumley
Head of Advocacy
An Taisce – The National Trust for Ireland

Attached: EU infringement complaint on ammonia exceedance and transboundary impacts from Northern Ireland