North Lincolnshire Council

North Lincolnshire Council

Air Quality Action Plan

In fulfilment of Part IV of the Environment Act 1995

Local Air Quality Management

2023

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Report Reference Number	Version 1
Date	November 2023

Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of our statutory duties required by the Local Air Quality Management framework. It outlines the action we will take to improve air quality in North Lincolnshire between 2023-2028.

This action plan replaces the previous action plan which ran from 2012-2023. Projects delivered through the past action plan include:

- Establishing the Local Industry Forum involving the Environment Agency, North Lincolnshire Council and Local Industry representatives with the potential to emit PM_{10}. The purpose of the group is to identify key issues, agree measures for reduction of PM_{10} and formulate a memorandum of understanding between all industrial operators particularly in respect of issues falling outside the scope of permitting.
- Under the Environmental Permit Improvement Programme, steelworks operators monitor and quantify point source and fugitive PM, by establishing typical release rates and emissions characteristics.
- Traffic count and visual observations at Santon to assess likely contribution from re-suspended road dust.
- Realignment of road sweeping schedules within the Scunthorpe AQMA as appropriate to minimise resuspended dust emissions from areas such as Brigg Road.
- Launched the North Lincolnshire air quality website.

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those

with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas[1,2].

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion[3]. North Lincolnshire Council is committed to reducing the exposure of people in North Lincolnshire to poor air quality in order to improve health.

We have developed actions that can be considered under nine broad topics:

- Environmental permits
- Policy guidance and development control
- Promoting low emission plants
- Promoting low emission transport
- Promoting travel alternatives
- Public information
- Transport planning and infrastructure
- Traffic management
- Vehicle fleet efficiency

Our priorities for the North Lincolnshire AQAP are:

- Priority 1 – Bring the Scunthorpe AQMA for exceedances of the daily mean PM_{10} air quality objective into compliance

[1] Environmental equity, air quality, socioeconomic status and respiratory health, 2010

[2] Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

[3] Defra. Abatement cost guidance for valuing changes in air quality, May 2013

- Priority 2 – Reduce emissions from industrial sources
- Priority 3 – Reduce emissions from non-industrial sources
- Priority 4 – Work collaboratively with the Environment Agency and operators of permitted installations through the Local Industry Forum and AQAP Steering Group to share knowledge and evidence
- Priority 5 – Improve general air quality across North Lincolnshire.

In this AQAP we outline how we plan to effectively tackle air quality issues within our control. However, we recognise that there are a large number of air quality policy areas that are outside of our influence (such as vehicle emissions standards agreed in Europe), but for which we may have useful evidence, and so we will continue to work with regional and central government on policies and issues beyond North Lincolnshire Council's direct influence.

Responsibilities and Commitment

This AQAP was prepared by the Environmental Protection Team of North Lincolnshire Council with the support and agreement of the following officers and departments:

- Liz Hamer, Assistant Group Manager, Environmental Health and Housing
- Miguel Duran, Public Health Manager, Health Protection
- Rebecca Leggott, Development Management Lead, Development Management
- James Durham, Place Planning and Housing Specialist, Economy and Environment
- Chris Barwell, Investment and Delivery Lead, Economy and Environment
- James Todd, Fleet Transport & Cleansing Manager, Transport, Highways and Environment
- Louisa Simpson, Highway Development Services Team Leader, Economy and Environment

This AQAP will be subject to an annual review, appraisal of progress and reported in the Annual Status Reports (ASRs) produced by North Lincolnshire Council, as part of our statutory Local Air Quality Management duties.

If you have any comments on this AQAP please send them to Annie Ward at:

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Table of Contents

List of Tables

List of Figures

1 Introduction

This report outlines the actions that North Lincolnshire Council will deliver between 2023-2028 in order to reduce concentrations of air pollutants and exposure to air pollution; thereby positively impacting on the health and quality of life of residents and visitors to North Lincolnshire.

It has been developed in recognition of the legal requirement on the local authority to work towards Air Quality Strategy (AQS) objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part and to meet the requirements of the Local Air Quality Management (LAQM) statutory process.

This Plan will be reviewed every five years at the latest and progress on measures set out within this Plan will be reported on annually within North Lincolnshire Council's air quality ASR.

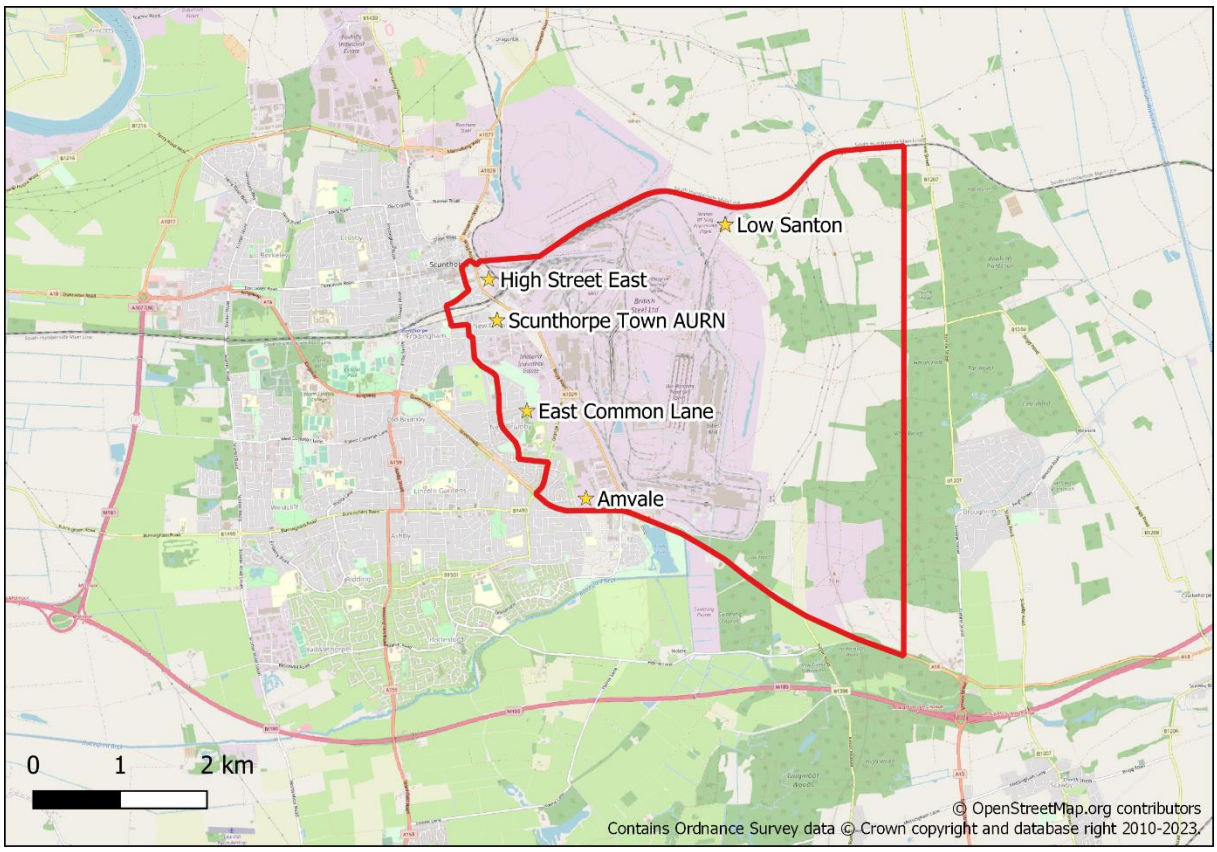
2 Summary of Current Air Quality in North Lincolnshire

The principal town within North Lincolnshire, Scunthorpe, is home to an integrated iron and steel works, which covers over 2,400 acres and is located directly to the east of Scunthorpe. Emissions of PM_{10} (particulate matter with a diameter of 10 microns or less) from this site and neighbouring operators have contributed to the exceedance of legal air quality targets, leading to the declaration of the Scunthorpe Air Quality Management Area (AQMA) in 2005 (amended in 2018) for exceedance of the daily mean PM_{10} Air Quality Objective (AQO). The daily mean PM_{10} AQO is that the PM_{10} concentrations cannot exceed a daily mean of 50 µg/m^3 more than 35 times in one calendar year.

In 2018 an additional AQMA for Low Santon, declared for exceedance of the annual mean PM_{10} AQO (annual mean limit of 40 µg/m^3) was revoked following the Detailed Assessment of the Scunthorpe PM_{10} Air Quality Management Area 2016 Report[4]. This resulted in changes to the boundary of the Scunthorpe AQMA, removing approximately 5,000 residential properties previously within the boundary. The current boundary of the AQMA for exceedance of the daily mean PM_{10} objective is shown in Figure 2-1.

[4] https://www.nlincsair.info/Files/Reports/Detailed%20Assessment%20of%20AQMA%202016%20FINAL.pdf

Figure 2-1 Map of the Scunthorpe AQMA boundary and PM_{10} monitoring locations.



North Lincolnshire Council currently undertakes monitoring for PM_{10} at six automatic sites. Five of these six monitoring sites are located in Scunthorpe in the AQMA, as shown in Figure 2-1. The sixth site, CM6 Killingholme School, is not visible in the map as it is located in South Killingholme, around 20km west of the Scunthorpe AQMA.

At the Scunthorpe Town AURN monitoring site, a TEOM (tapered element oscillating microbalance) monitor is collocated with the BAM (Beta Attenuation Mass) monitor, and at the Low Santon monitoring site, until August 2022 a TEOM monitor was collocated with the FDMS (Filter Dynamics Measurement System) monitor. Changes were made to monitoring instrumentation at the CM3 Low Santon in August 2022. The FDMS and TEOM were both removed and replaced by a single BAM 1020 for measuring PM_{10}. A separate BAM 1020 was also installed for measuring $PM_{2.5}$. This provided the solution for one monitor at this location for measuring PM_{10} that was fully accredited and approved, removing the previous ambiguity around which data set was

more reliable (FDMS v TEOM). All TEOM measurements reported have been corrected by the Volatile Correction Model (VCM) to reflect the equivalent gravimetric results.

Table 2-1 Annual mean PM_{10} monitoring results ($\mu g/m^3$) for 2018 to 2022

Site ID	Site Name	Site Type	2018	2019	2020	2021	2022
CM1 BAM	Scunthorpe Town	Industrial	18	20	17	17	19
CM1 TEOM	Scunthorpe Town	Industrial	20	22	17	17	19
CM2	East Common Lane	Urban background	21	22	19	22	22
CM3 FDMS	Low Santon	Industrial	25	22	21	23	29*
CM3 TEOM	Low Santon	Industrial	31	29	29	27	31**
CM4	Amvale	Industrial	20 (19)	21	22	21	20
CM5	High Street East	Industrial	22 (20)	21	18	19	22
CM6	Killingholme School	Other	19	19	15	11	18

If the period of valid data is less than 85%, the 90.4th percentile of 24-hour means is provided in brackets for years 2018-2021

** CM3 FDMS (FDMS data from January – August 2022 and BAM data from August – December 2022)*
*** CM3 TEOM (TEOM data from January – August 2022 and BAM data from August – December 2022)*

Table 2-2 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50µg/m^3, exceedances of AQO (no more than 35 exceedances per year) highlighted in red.

Site ID	Site Name	Site Type	2018	2019	2020	2021	2022
CM1 BAM	Scunthorpe Town	Industrial	9	18	3	4	15 (33)
CM1 TEOM	Scunthorpe Town	Industrial	6	22	3	4	11
CM2	East Common Lane	Urban background	16	22	24	30	26
CM3 FDMS	Low Santon	Industrial	22	7	2	11	30*
CM3 TEOM	Low Santon	Industrial	**40**	35	30	30	**42****
CM4	Amvale	Industrial	16	15	30 (**51**)	23	20
CM5	High Street East	Industrial	2	14	1	3	10
CM6	Killingholme School	Other	3	5	0	0	3

If the period of valid data is less than 85%, the 90.4th percentile of 24-hour means is provided in brackets for years 2018-2021

** CM3 FDMS (FDMS data from January – August 2022 and BAM data from August – December 2022)*
*** CM3 TEOM (TEOM data from January – August 2022 and BAM data from August – December 2022)*

From 2018 to 2022, all North Lincolnshire monitoring stations were compliant with the annual mean PM_{10} AQO.

In 2018 and 2022 an exceedance of the daily mean AQO occurred at CM3 Low Santon (TEOM). This is the only monitoring site measuring non-compliance – all other stations have been compliant with the daily mean PM_{10} AQO for the last five years.

For more information, please refer to the latest ASR from North Lincolnshire Council, and the North Lincolnshire Air Quality Website.

3 North Lincolnshire's Air Quality Priorities

3.1 Public Health Context

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. The mortality burden of air pollution within the UK is equivalent to 28,000 to 36,000 deaths at typical ages[5], with a total estimated healthcare cost to the NHS and social care of £157 million in 2017[6].

There is also often a strong correlation with equalities issues because areas with poor air quality are also often less affluent areas[7, 8]. Generally, more air pollution sources and higher pollutant concentrations are found in more socially disadvantaged areas, consequently air pollution tends to cause most harm to people in socially deprived groups[9] . For those on low incomes problems are compounded as they are more likely to have existing medical conditions, they are more likely to live in areas with poorer outdoor and indoor environments and have less access to jobs, healthy food, decent housing and green spaces, which all contribute to poorer health[10].

It is important to consider how vulnerability to pollution impacts is unevenly experienced by different groups in society, where possible action needs to be focussed on pollution and deprivation hotspots. This will help to reduce scenarios where air

[5] Defra. Air quality appraisal: damage cost guidance, July 2020

[6] Public Health England. Estimation of costs to the NHS and social care due to the health impacts of air pollution: summary report, May 2018

[7] Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017

[8] Defra. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

[9] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/690846/CMO_Annual_Report_2017_Health_Impacts_of_All_Pollution_what_do_we_know.pdf

[10] https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution

pollution is exacerbating the existing health disparities associated with deprivation and will provide a focus for the most effective actions in terms of improving public health.

It is important to also consider when implementing measures to improve air quality whether they could put disadvantaged communities at further disadvantage, either economically or because generalised air quality improvements can mask pockets of deteriorating air quality, for example through displacement activity.

When communicating with the public on air quality it is important to consider how effectively you are reaching those in more vulnerable groups. Traditional communication strategies may not always reach those who are most vulnerable.

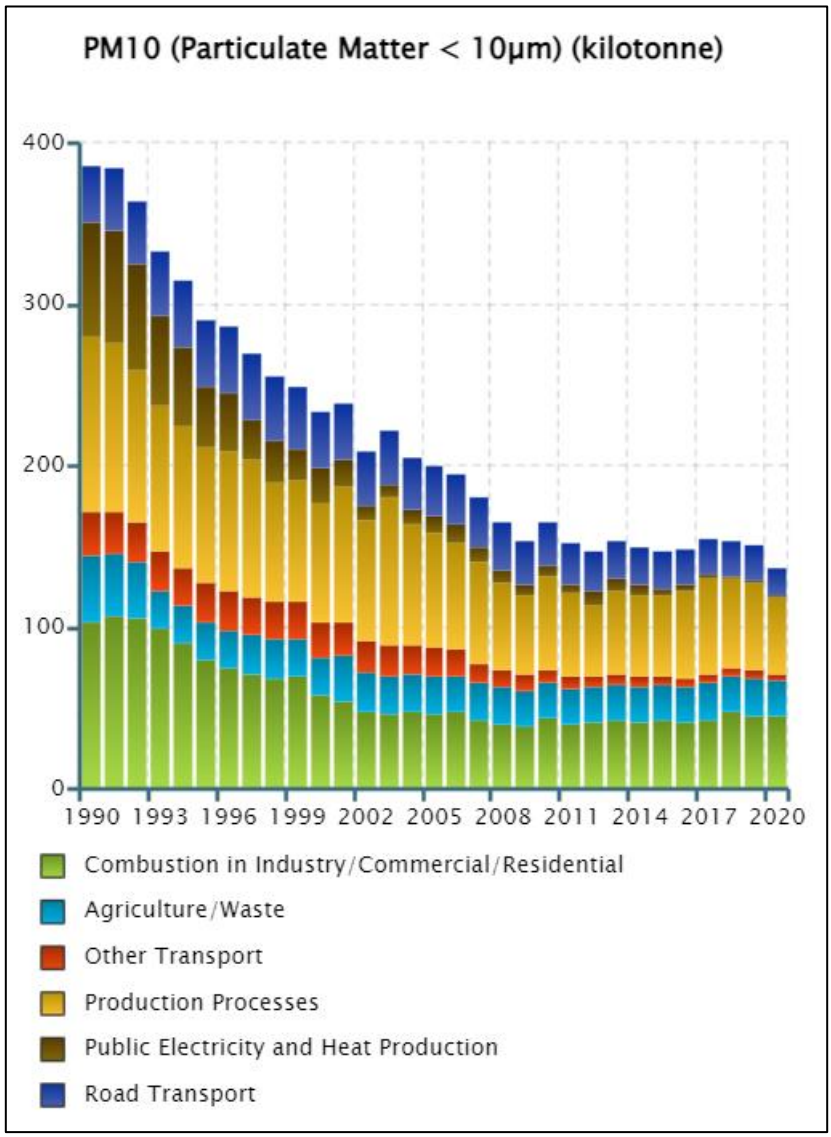
3.2 Planning and Policy Context

3.2.1 National context

Over the period 1990-2020, UK emissions of PM_{10} have decreased by 65%. The contribution of large industrial sources such as power stations and other large combustion plant burning coal and fuel oil has declined from 24% of the UK total in 1990 to 3% in 2020. The ban on the burning of crop residues after 1993 also made a notable contribution to reducing UK emissions since this source was responsible for 4% of the total in 1990. The mass emitted from road transport has also fallen since 1990, but the contribution in percentage terms has increased: from 9% in 1990 to 12% in 2020. Similarly, emissions from industrial processes have almost halved since 1990, yet the contribution that the sector makes to the UK total has increased, from 26% in 1990 to 34% in 2020. All road transport modes emit PM_{10}, but diesel vehicles emit a greater mass of particulates per vehicle kilometre, and the proportion of road transport activity by diesel-engine vehicles has increased over time. More than 70% of the emissions within the industrial processes group are from construction and quarrying. Emissions from residential sector combustion have grown both in real terms and in terms of the contribution to the UK total. This is because of strong growth in the use of

wood as a domestic fuel, which has offset reductions that have occurred due to decreasing use of coal and other solid mineral fuels. [11]

Figure 3-1 Time series of UK PM_{10} emissions by source sector from 1990-2020



The UK 2019 Clean Air Strategy[12] sets out the case for action, with goals even more ambitious than EU requirements, to reduce exposure to harmful pollutants. The Road

[11] https://naei.beis.gov.uk/overview/pollutants?pollutant_id=24

[12] Defra. Clean Air Strategy, 2019

to Zero[13] sets out the approach to reduce exhaust emissions from road transport through several mechanisms; this is extremely important given that the majority of AQMAs are designated due to elevated concentrations heavily influenced by transport emissions. This, however, is not the case within North Lincolnshire.

3.2.2 North Lincolnshire

Located at the mid-point of the United Kingdom's east coast on the south bank of the Humber Estuary (equidistant between London and Edinburgh), North Lincolnshire covers 328 square miles (859 km^2). This location is a national and international asset. It is one of the country's key trade gateways to and from Europe and the wider world and over 50 million people are within a four-hour drive.

North Lincolnshire is a predominately rural area made up of a number of historic market towns: Barton upon Humber; Brigg; Crowle; Epworth; Kirton in Lindsey; and Winterton. These are surrounded by many desirable larger and smaller villages and hamlets as well as an attractive countryside. At the centre of the area lies Scunthorpe, which is the main focus for education, jobs, retail, services and industry.

North Lincolnshire is home to 170,786 people[14] with the population set to grow over the coming years. During the ten years between 2005 and 2015 it grew by over 8% and over the lifetime of the new Local Plan and beyond trends predict that the population will increase by around 6% to reach 178,537 in 2039[15].

3.2.2.1 2022 North Lincolnshire Local Plan[16]

North Lincolnshire Council is preparing a new single Local Plan for North Lincolnshire. Once agreed (formally adopted), it will replace the current North Lincolnshire Core

[13] DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

[14] ONS Mid-Year Population Estimates (June 2016 – published June 2017)

[15] ONS Population Projections - Total (2014 to 2039)

[16] https://localplan.northlincs.gov.uk/

Strategy and the Housing and Employment Land Allocations Development Plan Documents (DPDs). The North Lincolnshire Local Plan is currently in the Submission and Examination stage, which is the final stage before formal adoption of the plan. Adoption is expected to occur in 2024.

The local plan covers the period from 2020 – 2038 and outlines an ambition to make the area and its communities safe, well, prosperous and connected. One of the Key challenges to achieving this goal is improving air quality generated by heavy industry and traffic. Policy DQE2: Landscape Enhancement supports enhancement schemes including trees and hedges which will be expected to deliver benefits to air quality and atmosphere. Air quality is also considered in Policy MN3: Mineral Extraction which states that "all types of mineral extraction must ensure that: …residential amenity and human health is protected from issues including noise, vibration, water pollution and air quality."

Policy DM3: Environmental Protection states that

- "Development proposals as appropriate to their nature and scale, should demonstrate that environmental impacts on receptors have been evaluated and appropriate measures have been taken to minimise the risks of adverse impacts to air, land and water quality, whilst assessing vibration, heat, energy, light and noise pollution."

With regards to air quality specifically it states:

- "The Council will seek to ensure that proposals for new development will not have an unacceptable negative impact on air quality and will not further exacerbate air quality in the Scunthorpe Town AQMA or contribute to air pollution in areas which may result in a new AQMA. Applicants will be required to provide an air quality impact assessment to demonstrate this.
- The Council will seek to ensure that where a sensitive use is being proposed in an area of known poor air quality, the applicant will be required to provide an air quality impact assessment to demonstrate the development will not result in

adverse effects on human health and local amenity. Residential development within the Scunthorpe AQMA will not be permitted where there is evidence of adverse effects on human health and local amenity.

- The Council will support and promote the provision of charging points for ultra-low emission vehicles."

3.2.2.2 North Lincolnshire Local Transport Plan[17]

The Local Transport Plan sets out the 15-year transport strategy for North Lincolnshire from 2011 to 2026. The vision for 2026 is for "A well maintained transport system that supports sustainable communities within a safe and prosperous environment and which contributes to the wider environmental, economic and social well being of the people who live and work in North Lincolnshire". The plan identifies five Local Transport Goals, of which four will have an indirect impact to improvement of air quality:

- "Reduce transport related carbon dioxide emissions and protect and enhance the natural and built environment through sustainable transport solutions;
- Improve transport safety and security relating to death or injury from transport, in order to contribute towards safer and stronger communities;
- Provide equal opportunities through improvements in accessibility to key local hubs and services by sustainable modes of transport;
- Enhance people's health and wellbeing through the promotion of healthy modes of travel and provision of a high quality integrated transport system that contributes towards long term sustainable regeneration".

The transport options selected to achieve these goals include improvements to pedestrian, cycling and public transport infrastructure.

[17] https://www.northlincs.gov.uk/transport-and-streets/local-transport-plan-2011-2026/

3.2.2.3 A Green Future Strategy[18]

North Lincolnshire Council's "A Green Future" strategy centres around four themes and eight aims, to every day leave the environment in a better state than we find it, and make sure our environment is safe, self-sustaining and provides opportunities for everyone. Strategy Aims:

1. By 2030, the council will achieve 'net zero' and we will end the council's contribution to global warming
2. Clean Growth – working together for net zero industry and commerce and good air quality
3. The shift to net zero embeds decarbonisation in our economic growth. Decarbonisation is one of the foundations of our future prosperity
4. Net zero living is easy and accessible. It benefits the environment and improves peoples lives
5. Resources are used more efficiently. The amount of waste North Lincolnshire produces is minimised
6. Everyone is connected with our environment. We enhance and protect it
7. People feel the benefit of our environment and everyone has a stake in it
8. A Network to Achieve Our Vision for 'A Green Future'

A variety of projects and pledges form the actions taken as part of A Green Future. These can be viewed in detail on the North Lincolnshire Council website.

3.2.2.4 2017 Carbon Management Plan[19]

The Carbon Management Plan sets out the strategy and action plan for reducing carbon emissions and associated energy costs over the period from 2017-2022. There

[18] https://www.northlincs.gov.uk/your-council/a-green-future/our-strategy/

[19] https://www.northlincs.gov.uk/wp-content/uploads/2019/05/Carbon-Management-Plan-2017.pdf

are no direct references to air quality, though Priority 4: Low Carbon Transport focuses on reducing energy use and carbon emissions for transport. This includes promoting electric vehicle use, replacing the Council fleet with Euro 6 compliant vehicles, trialling electric vehicles and planning routes efficiently to reduce fuel burned.

3.2.2.5 EV Chargepoint Strategy[20]

The EV Chargepoint strategy was released in 2023. This strategy outlines the council's vision and core objectives to ensure access to charging doesn't form a barrier to entry for adoption of electric vehicles. The strategy contains 5 core objectives:

- Accelerate the rollout of public charging infrastructure
- Ensure public charging is fairly priced and inclusive
- Maintain high levels of reliable public chargepoints
- Stimulate private investment to support deployment
- Adapt to changing technologies and future proof charging infrastructure

The Council aims to deliver between 87 and 118 public or destination charging points per year until 2030. This will be delivered through public grant funds and private investment.

3.2.3 Scunthorpe

Scunthorpe is the principal town within North Lincolnshire. It is home to an Integrated Iron and Steel Works, employing over 3,000 people directly and supports over 20,000 jobs in the supply chain. The site covers over 2,400 acres and is located directly to the east of Scunthorpe. There are a number of different permitted operations on the site and particulate matter arises from a variety of sources, including point source

[20] NLC Electric Vehicle Chargepoint Strategy & Plan 2023-2030

emissions, for example: stacks, vents and chimneys and fugitive emissions from roads, stockpiles, and material handling operations.

As part of their permit requirements, a number of operators have environmental, or specific air quality or dust management plans in place. Within and outside of these plans, various operators have measures in place to monitor, control and reduce emissions of pollutants from their activities. A number of these plans and measures are discussed broadly in the sections below, and where ongoing and relevant to air quality, specific measures from operators have been incorporated into this action plan.

3.2.3.1 British Steel Air Quality Management Plan[21]

British Steel's Scunthorpe integrated iron and steel works (the British Steel site) operates under environmental permit (RP3206BE) issued by the Environment Agency. Condition 3.7 of the permit requires British Steel to produce an Air Quality Management Plan (AQMP) for measures aimed at addressing emissions of Particulate Matter (PM_{10}) and Polycyclic Aromatic Hydrocarbons (PAHs) from significant point sources and diffuse sources.

British Steel has an Environmental Management System (EMS) which is externally certified to the international standard ISO14001:2015. As part of the EMS, the business sets annual Environmental Objectives and Targets. Objectives set the overall aims and Targets set the specific measures to be implemented to meet the objectives. Environmental Targets are set at a plant level, based on the Objectives, and the business measures the overall progress in the monthly Health, Safety, and Environment (HSE) Governance Committee, as well as weekly and monthly Executive and Operational review meetings.

[21] Air Quality Management Plan Scunthorpe Integrated Iron and Steelworks 2022

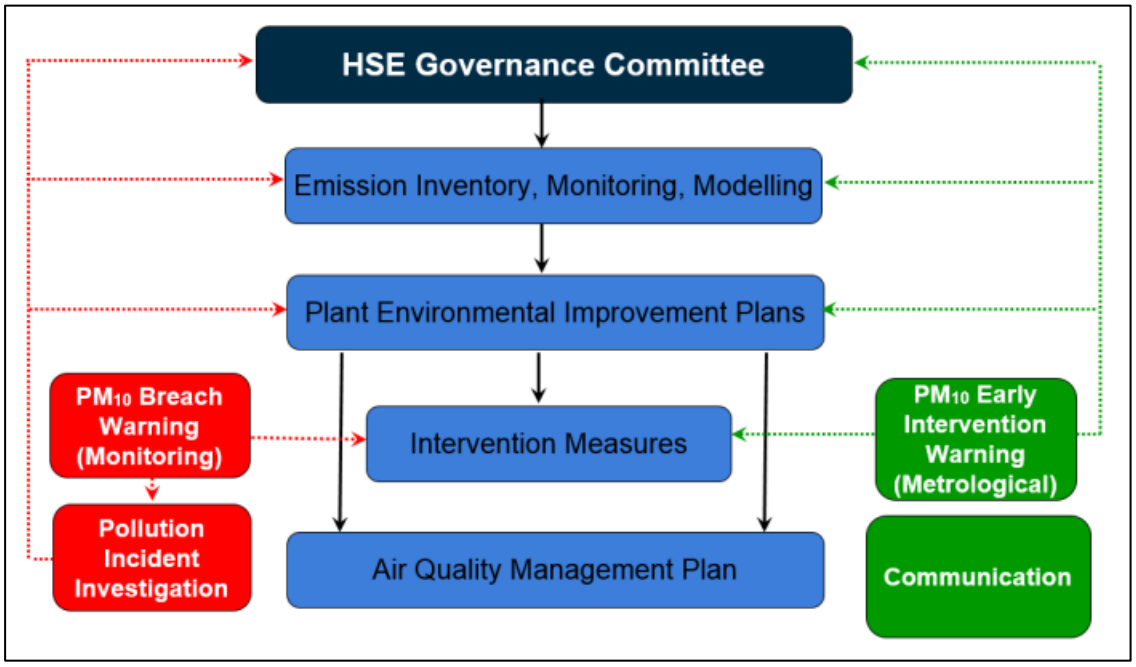
The AQMP is reviewed on a 6 monthly basis. Environmental improvement plans are agreed each year with all plant areas and reviewed on a regular basis.

The key objective for air quality is to:

- "Improve air emissions performance of the Scunthorpe site through the deployment of an Air Quality Management Plan with the effect of reducing by 25% air quality failures."

Additional key objectives relate to reducing CO_2 emissions and reducing waste. Actions for these objectives can also indirectly have co-benefits for air quality.

Figure 3-2 Figure from British Steel's AQMP showing the integration of the AQMP into business activities.



British Steel complete annual pollutant inventory reporting, including an assessment of the largest sources of total particulate, PM_{10}, and $PM_{2.5}$ emissions from diffuse sources. The AQMP also includes a breakdown of the different plant areas and their potential for impacting on local air quality, locations of sensitive receptors and monitoring, reviews of performances against AQOs, a review of 2021 Plant Area Air Quality Improvement Plan, a full list of responsibilities for implementation of the AQMP, and a table of measures to be taken to address PAH (Benzo[a]pyrene).

British Steel Low Carbon Roadmap[22] and Decarbonisation action report[23]

This roadmap aims to deliver an 82% reduction in carbon intensity saving by 2035 and achieve net-zero steelmaking by 2050.

A range of techniques and innovations will be used to help achieve these targets, including:

- Steel product innovation to promote the material benefits to end users, for example through light weighting and life extension
- Deploying circular economy and material efficiency methodologies
- Assessing and adopting several technology options including Carbon Capture and Storage, hydrogen, increasing scrap utilisation and Electric Arc Furnace steelmaking

Many improvements used to reduce CO_2 emissions will also have co-benefits of reducing emissions of pollutants to air.

3.2.3.2 Ellgia Ltd Fugitive Emissions Management Plan

The Emissions Management Plan (EMP) was produced by Ellgia in response to the Enhanced Pre-application advice issued on 19 April 2019. The EMP provides information on the potential fugitive emissions impacts from the Installation and the mitigation measures to be implemented. These include measures for normal and abnormal conditions.

The control measures cover aerial emissions of dusts, fibres and particulates, as well as odour, bioaerosols, and other types of environmental management. Measures

[22] https://britishsteel.co.uk/who-we-are/sustainability/low-carbon-roadmap/

[23] https://britishsteel.co.uk/who-we-are/sustainability/decarbonisation-action-reports/

which are relevant to air quality and dust have been included in this Air Quality Action Plan, in Table 5.1.

The EMP sets out details of how fugitive emissions are monitored, and how incidents and corrective actions are recorded.

3.3 Source Apportionment

The AQAP measures presented in this report are intended to be targeted towards the predominant sources of emissions within North Lincolnshire.

A source apportionment exercise was carried out by North Lincolnshire Council in 2023. Table 3-1, Figure 3-3 and Figure 3-4 provides the percentage source contributions within the Scunthorpe AQMA based on Defra Background Maps.

Table 3-1 Source apportionment for PM_{10} in Scunthorpe AQMA based on Defra Background Maps (2020, reference year 2018)

Source sector	Source apportionment for PM_{10} in Scunthorpe AQMA	Source apportionment for PM_{10} in Scunthorpe AQMA, with secondary PM and residual and salt sources removed and remaining concentrations normalised.
Road transport	0%	1%
Brake and tyre wear	1%	4%
Road abrasion	0%	2%
Industry (including point sources)	10%	76%
Domestic	1%	10%
Rail	0%	1%

Other	1%	6%
Secondary PM	41%	excluded
Residual and salt	46%	excluded

Residual and salt is the most significant source sector for PM_{10} concentrations in Scunthorpe AQMA (46%), followed by Secondary PM (41%).

As it is very difficult to regulate and mitigate emissions from these sectors, source apportionment for the remaining sectors was separated and normalised. Removing residual and salt and secondary PM, industry (including point sources) is by far the greatest local source of PM_{10} in the AQMA (76%), with the next greatest contributions from domestic (10%), other (6%) and brake and tyre wear (4%).

Figure 3-3 Source apportionment for PM_{10} in Scunthorpe AQMA based on Defra Background Maps (2020, reference year 2018)

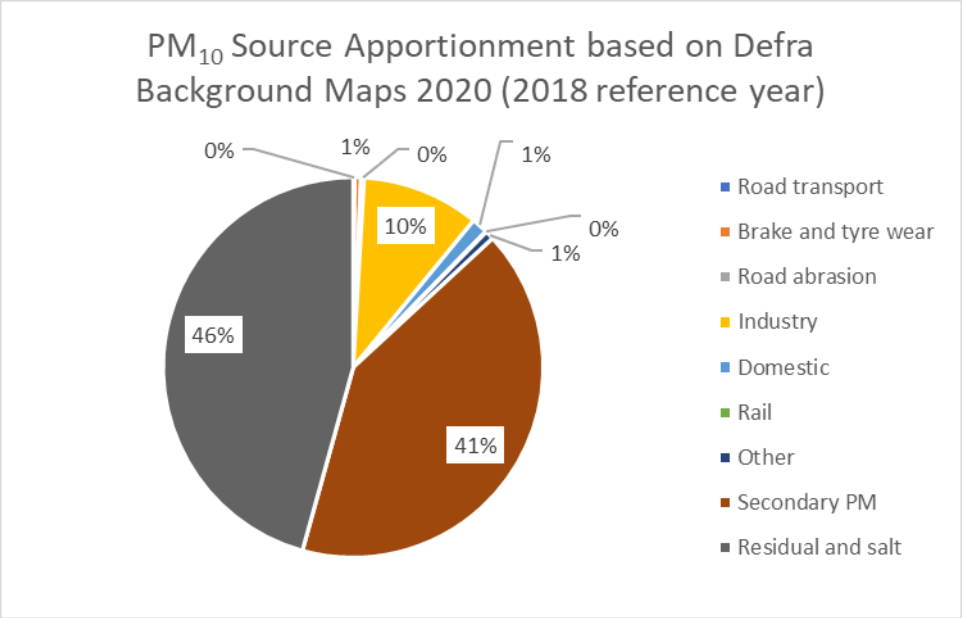
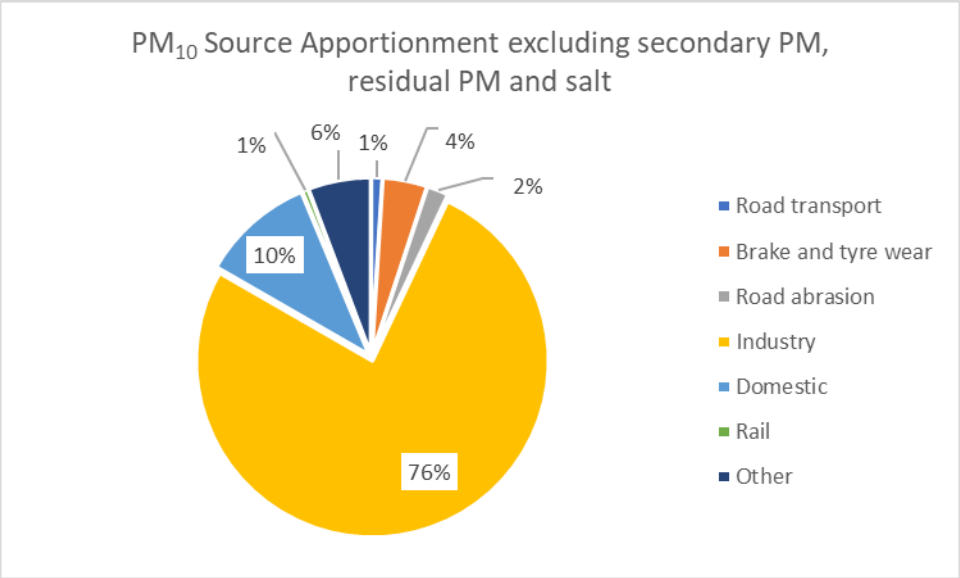


Figure 3-4 Source apportionment for PM_{10} in Scunthorpe AQMA based on Defra Background Maps (2020, reference year 2018), with Secondary PM and Residual and salt removed, and percentages normalised.



While the background maps do not enable more detailed source apportionment between different industrial sources, it is possible to look at measured PM_{10} emissions from permitted industries, which we have supplemented with National Atmospheric Emissions Inventory (NAEI) annual emissions estimates for PM_{10} point sources for the latest year available (2020) where measured data was unavailable. These are presented in Table 3-2. It should be noted that this may not be a comprehensive account of all sources of industrial emissions which impact concentrations within the AQMA.

Table 3-2 Source apportionment of industrial emissions by sites

Operator	Permitted by	PM_{10} (tonnes)	Source	% Source apportionment
British Steel Ltd	EA	1,666.04	PI Scunthorpe 2021 Air	98.2%
Liberty Merchant Bar plc	EA	0.71	NAEI, 2020	0.0%
Tarmac Trading Limited	EA	0.07	NAEI, 2020	0.0%
Marden Power Limited	EA	0.05	NAEI, 2020	0.0%
Sita Holding UK Ltd	EA	1.22	NAEI, 2020	0.1%
SHORT BROS (PLANT) LTD	EA	0.65	NAEI, 2020	0.0%

Skymark Performance Films Ltd	LA	0.01	NAEI, 2020	0.0%
Russel Ductile Castings Ltd	LA	2.07	Measured data, 2020-21	0.1%
Ellgia Ltd	LA	0.27	Measured data, 2022	0.0%
Carbon International Ltd	LA	1.26	Measured data, 2020-22	0.1%
Lebus Upholstery Ltd	LA	0.95	Measured data, 2022	0.1%
LKAB Minerals Ltd	LA	21.97	Measured data, 2022	1.3%
Civil and Marine Ltd	LA	2.13	Measured data, 2022	0.1%

Notes: The source of the emissions data was from the NAEI and/or measured data submitted as part of the permit requirements.

The most significant industrial source of annual PM_{10} emissions in Scunthorpe out of all the permitted sources is British Steel Ltd (98.2%). The next greatest is LKAB Minerals Ltd (1.3%), and the remainder of operators together contribute 0.6% of total annual PM_{10} emissions.

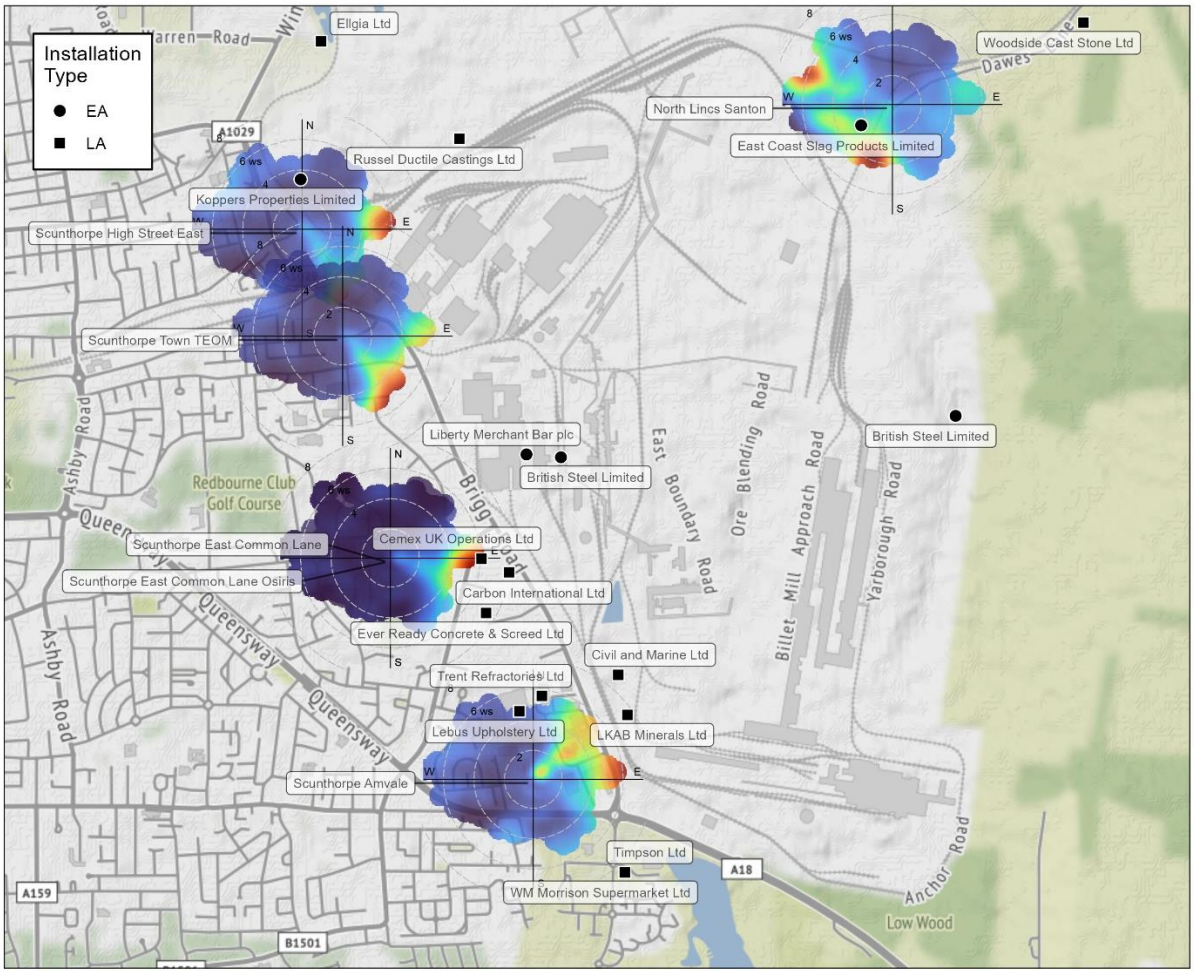
However, it is important to remember that this source apportionment is based on annual PM_{10} emissions which may not necessarily replicate the percentage contributions for annual mean PM_{10} concentrations and for daily mean PM_{10} emissions and concentrations within the AQMA. It is therefore crucial to consider all sources of PM_{10} in the AQMA, as sources which may not be significant in terms of annual PM_{10} could contribute significantly to elevated PM_{10} concentrations in a single day, be it through regular operations or abnormal events.

Additional source apportionment analysis has been conducted through R OpenAir tools, assessing measured hourly PM_{10} concentrations by measured wind speed and direction for 2022.

Figure 3-5 shows a map of polar plots against measuring site locations, within the context of the steelworks site. The polar plots show hourly measured PM_{10} concentrations at each site against hourly wind speed and direction in 2022. The plots indicate the direction and speed of wind which occurred at the time that the highest

PM_{10} concentrations (in red) were measured. The direction indicates the direction from which emissions originated, and the wind speed can indicate the distance of source from the monitoring site. Figure 3-5 demonstrates that across the monitoring sites, the highest measured concentrations and associated emissions are arising from industrial installations.

Figure 3-5 Polar plots of hourly PM10 concentrations against wind speed and wind direction in 2022.



Scunthorpe High Street (CM5) – most likely influenced by a source located to the east, i.e., on the British Steel site

Scunthorpe Town AURN (CM1) - most likely influenced by a source located to the south east i.e., the British Steel site and Liberty Merchant Bar Plc

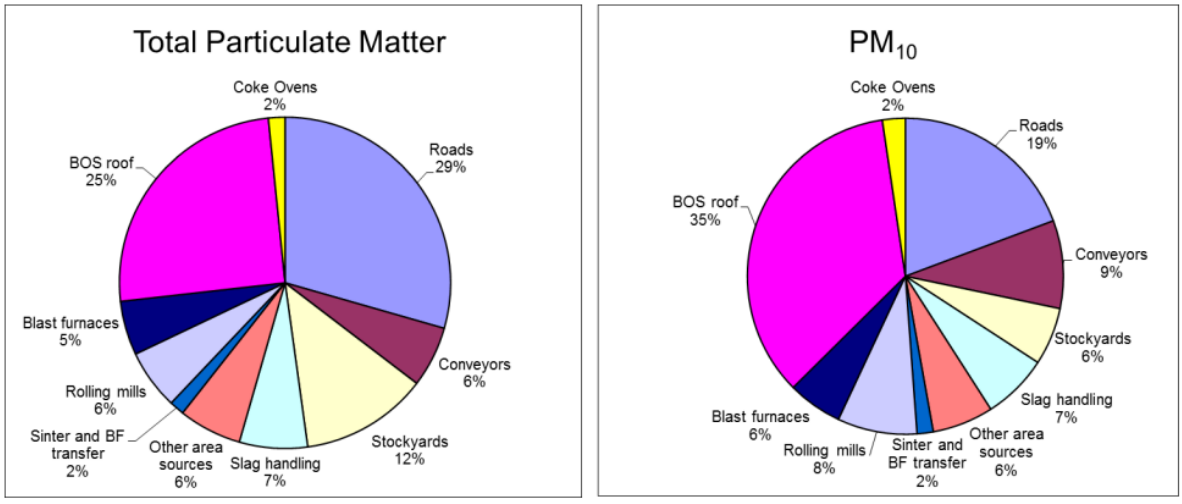
Scunthorpe East Common Lane (CM2)- most likely influenced by a source located to the east, i.e., on the British Steel site and Cemex UK operations

Scunthorpe Amvale (CM4) - most likely influenced by a nearby source (as red dot in middle of plot) and a source located to the east and north east, i.e., LKAB Minerals Ltd, Civil and Marine Ltd and British Steel site operations

Low Santon (CM3) – most likely influenced by a nearby source and a source located to the north west and another to south west i.e., East Coast Slag / Tarmac Trading Ltd and British Steel

British Steel produce an annual assessment of their largest sources of total particulate and PM_{10} emissions from diffuse sources[24] depicted in Figure 3-6, which showed the largest PM sources are the BOS roof. These emissions are derived from measurement exercises undertaken over a period of time and normally expressed as release rate per tonne of output from a relevant process such as iron, steel, or slag.

Figure 3-6 Source apportionment of Total PM and PM_{10} emissions from British Steel diffuse sources in 2021.



[24] Air Quality Management Plan Scunthorpe Integrated Iron and Steelworks 2022

3.4 Key Priorities

As discussed in Section 3.3 (Source Apportionment), the greatest local source of PM_{10} pollution in the Scunthorpe AQMA is industrial sources. The next greatest sources are domestic, other, road abrasion and brake and tyre wear. NLC and the AQAP Steering Group have developed measures which target all these sources, as well as measures which seek to reduce emissions from resuspension.

The key priorities for this AQAP have also been determined by NLC and the AQAP Steering Group. They are as follows:

- Priority 1 – Bring the Scunthorpe AQMA for exceedance of the daily mean PM_{10} air quality objective into compliance
- Priority 2 – Reduce emissions from industrial sources
- Priority 3 – Reduce emissions from non-industrial sources
- Priority 4 – Work collaboratively with the Environment Agency and operators of permitted installations through the Local Industry Forum and AQAP Steering Group to share knowledge and evidence
- Priority 5 – Improve general air quality across North Lincolnshire.

4 Development and Implementation of North Lincolnshire Council's AQAP

4.1 Consultation and Stakeholder Engagement

In developing/updating this AQAP, we have worked with other local authorities, agencies, businesses and the local community to improve local air quality. Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed in Table 4-1.

The response to our consultation stakeholder engagement is given in Appendix A: Response to Consultation.

Table 4-1 – Consultation Undertaken

Consultee	Consultation Undertaken
The Secretary of State	Yes
The Environment Agency	Yes
The highways authority	Yes
All neighbouring local authorities	Yes
Other public authorities as appropriate, such as Public Health officials	Yes
Bodies representing local business interests and other organisations as appropriate	Yes

4.2 Steering Group

In accordance with the Environment Act 2021 Schedule 11[25] Section 82, Subsection (5) (c), the Environment Agency have been designated as an “Air Quality Partner” for this AQAP.

This is based on the evidence presented in Section 3.3, regarding the major contributions from British Steel Ltd to annual PM_{10} emissions in Scunthorpe. British Steel Ltd are considered to be responsible, in part, for the failure to achieve the PM_{10} daily main objective in the Scunthorpe AQMA. As the site is regulated by the Environment Agency, they are the designated Air Quality Partner in this instance.

In accordance with Environment Act 2021 Schedule 11 Section 85A and 85B, Air Quality Partners have a duty to cooperate and to contribute actions they will take to secure the achievement and maintenance of air quality standards and objectives.

Both the Environment Agency and British Steel have therefore been invited to be part of the Steering Group and have played an active role in collaborating to produce measures for the actions list, in addition to other industry operators in the steering group.

4.2.1 Steering Group Members

The Steering Group comprised of the following members:

- Annie Ward, North Lincolnshire Council, Environmental Protection Team Leader

[25] https://www.legislation.gov.uk/ukpga/2021/30/schedule/11/enacted

- Liz Hamer, North Lincolnshire Council, Assistant Group Manager, Environmental Health and Housing
- Miguel Duran, North Lincolnshire Council, Public Health Manager, Health Protection
- Rebecca Leggott, North Lincolnshire Council, Development Management Lead, Development Management
- Chris Barwell, North Lincolnshire Council, Investment and Delivery Lead, Economy and Environment
- James Durham, Place Planning and Housing Specialist, Economy and Environment
- James Todd, Fleet Transport & Cleansing Manager, Transport, Highways and Environment
- Louisa Simpson, Highway Development Services Team Leader, Economy and Environment
- Robert Vickers, Environment Agency, Senior Regulated Industry Officer
- Cathal O'Leary, Environment Agency, Senior Technical Leader
- Luke Jeffcott, British Steel Ltd, Scunthorpe Environment Manager
- Tom Ellerton, British Steel Ltd, Senior Environment Specialist – Air Quality
- Steve Turgoose, Civil and Marine Ltd, Works Manager
- Paul John Richards, Cemex UK operations, Sustainability Manager
- Greg Reeder, Tarmac Trading Ltd, Supervisor
- Cameron Murdoch, Ellgia Ltd, Technical Director
- Paul Wilson, LKAB Minerals Ltd, Works Manager

4.2.2 Steering Group Activities

- Steering Group Workshop 1: At this workshop, members of the Steering Group were provided with an overview of the health effects of PM, the air quality

situation in North Lincolnshire, including monitoring results for the last five years, and an overview of source apportionment using Defra background maps. Following this, measures which had been collated from North Lincolnshire policy and plans, and industrial operator air quality plans were presented to the group for discussion. The discussion included:

  - The status of measures – and if any are completed or not relevant moving forward.
  - Measures which had been missed in the review which should be included in the action plan longlist.
  - Opportunities to go further than what is already being done.

- Following the workshop, the Steering Group members played an active role in providing information for the measures they are involved in.
- Steering Group Workshop 2: The measures longlist was presented to the Steering Group members for discussion. This included:
  - Confirmation of which measures should be retained for the shortlist.
  - Identifying whether any measures needed amendment to the wording.
  - Identifying any additional measures not previously included.
  - Gap-filling information needed for the AQAP table.
  - Discussing options for AQAP Key Priorities.
  - Discussion of next steps.
- Following the workshop, the Steering Group members played an active role in providing the remaining outstanding information for gap-filling the actions table for the measures they are involved in. Members also provided feedback regarding the overall Key Priorities of the AQAP, and which measures they considered to be priorities for their organisation.

5 AQAP Measures

Table 5-1 shows the North Lincolnshire Council AQAP measures. It contains:

- a list of the actions that form part of the plan
- the responsible individual and departments/organisations who will deliver this action
- estimated cost of implementing each action (overall cost and cost to the local authority)
- expected benefit in terms of pollutant emission and/or concentration reduction
    - “High” – measures which directly abate or remove key sources of particulate emissions, either permanently or temporarily during high-risk conditions.
    - “Medium” – measures which directly or indirectly achieve a quantifiable reduction in emissions.
    - “Low” – measures which are likely to have a positive but unquantifiable impact on air quality. Effectiveness of such measures may be constrained by engagement or enforcement. This can include “soft actions” such as knowledge sharing or gathering actions to inform on air quality and measures.
- the timescale for implementation
- how progress will be monitored

NB: Please see future ASRs for regular annual updates on implementation of these measures.

The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 require that in England by the end of 2040 an annual average of 10 µg/m^3 for $PM_{2.5}$ (particulate matter with an aerodynamic diameter of 2.5µm or less) is not exceeded at any monitoring station. As such, local authorities are expected to work towards reducing emissions and/or concentrations of $PM_{2.5}$ as detailed in Policy Guidance LAQM.PG22 (Chapter 7).

Although the AQAP measures are aimed at reducing emissions of PM_{10}, these measures will also have the co-benefit of reducing $PM_{2.5}$ emissions.

5.1 Priority actions

The actions which are considered greatest priority in this action plan to the Council are:

- Measure 1: Reinstating the Local Industry Forum and holding regular meetings to review annual air quality data and investigate occurrences of very high exceedances.
- Measure 3: Continue regulatory functions in respect of emissions to air through the Environmental Permitting Regulations (2016).
- Measure 7: PM_{10} pollution forecasting: 5-day PM_{10} forecasts are issued to all plant areas by the Environment Department on a daily basis to give guidance to plant areas where measures may need to be taken to prevent or reduce the off-site impact on air quality (responsible owner: British Steel).
- Measure 10: Closure of coke ovens at British Steel - transitioning from coal to coke (responsible owner: British Steel).
- Measure 76: Continue operation of the air quality network and website, with associated data analysis and ratification (responsible owner: NLC).

The closure of the coke ovens is expected to reduce PM_{10} emissions by 22 tonnes[24]. With the implementation of this measure and other priority measures, it is expected that NLC will achieve daily mean PM_{10} compliance by 2024, as there is only one monitoring site currently measuring non-compliance (CM3 Low Santon (TEOM)) while the other stations have been compliant with the daily mean PM_{10} AQO for the last five years.

Steering Group organisations who are responsible owners for actions in Table 5.1 also have selected key priorities for their organisation as follows:

5.1.1 Environment Agency's priority actions:

- Measure 3 - To continue regulatory functions in respect of emissions to air through the Environmental Permitting (England & Wales) Regulations 2016. This includes a review of relevant data and reports, an annual programme of compliance audits and inspections, quarterly meetings with Environmental Services Team and biannual Ironworks and Steelmaking meetings with Senior Operations Managers.
- Measure 4 - To continue to provide planning consultation responses which take into consideration local air quality.
- Measure 5 - To continually review site permits to ensure that they are updated as necessary to reflect new and updated guidance or legislation and changes in operation or site infrastructure.

5.1.2 Ellgia's priority measures:

- Measure 46 – Moving operations inside where possible
- Measure 42 – The screening operations will be monitored (as per shredding) and if found necessary, water sprays will be provided on the screening equipment.
- Measure 45 – Increase concrete coverage to reduce dust.

5.1.3 Tarmac's priority measures:

- Measure 34 - reduced drop heights from stock out conveyors
- Measure 35 - reduce windblown movement of pm using drapes
- Measure 38 - investigate reducing length of haul roads

Table 5-1 – Air Quality Action Plan Measures

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
1	Reinstating the Local Industry Forum, and holding regular meetings to review air quality data, investigate occurrences of very high exceedances, and feed back on measures to improve local air quality.	Promoting Low Emission Plant	Other Policy	2023	2028	NLC, EA, industry operators	NLC	No	Not funded	<10k	Implementation	Low - no quantifiable reduction in emissions, effectiveness reliant on engagement.	Local Industry Forum to meet annually	Local Industry Forum was established circa 2007 and has met annually except during the COVID-19 pandemic. The last meeting was held in June 2022	Cost and staff availability. Terms of reference for the needs to be updated
2	Reporting of exceedances to operators	Promoting Low Emission Plant	Other Policy	Ongoing	Ongoing	NLC	NLC	No	Not funded	<10k	Implementation	Low - no quantifiable reduction in emissions.	Exceedances sent the next working day	This is an existing measure which will continue.	None
3	Continue regulatory functions in respect of emissions to air through the Environmental Permitting Regulations (2016).	Environmental Permits	Other	Ongoing	Ongoing	NLC and EA	NLC	No	Not funded	<10k (sites within AQMA only)	Implementation	High - ongoing measure has previously and may continue to directly abate or remove emissions.	Continue to effectively regulate Part B's and A2's within and in close proximity to AQMA	This is an existing measure which will continue.	Staff resourcing
4	To continue to provide planning consultation responses which takes into consideration local air quality.	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	Ongoing	Ongoing	NLC and EA	NLC	No	Not funded	Dependant on number and complexity of apps	Implementation	Low - no quantifiable reduction in emissions.	Provision of consultation responses to planning applications, planning conditions which concern air quality.	This is an existing measure which will continue.	Staff resourcing
5	To continually review site permits to ensure that they are updated as necessary to reflect new and updated guidance or legislation and changes in operation or site infrastructure.	Environmental Permits	Other	Ongoing	Ongoing	NLC and EA	NLC	No	Not funded	N/A - part of ongoing operations	Implementation	High - permits secure and enforce permanent actions to prevent or reduce emissions	Ongoing review of guidance and best practice, updates to permits.	This is an existing measure which will continue.	Staff resourcing
6	Complaints in respect of dust and smoke from commercial premises (not regulated under IPPC regime), and domestic smoke control will be investigated as a	Environmental Permits	Other	Ongoing	Ongoing	NLC	NLC	No	Not funded	<10k	Implementation	Low - no quantifiable reduction in emissions.	Enforcement action taken against those contravening the Environmental Protection Act 1990 and Clean Air Act 1993	This is an existing measure which will continue.	Staff resourcing

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
	priority and enforcement action taken in accordance with the enforcement policy.														
7	PM_{10} pollution forecasting: 5-day PM_{10} forecasts are issued to all plant areas by the Environment Department on a daily basis to give guidance to plant areas where measures may need to be taken to prevent or reduce the impact on off-site air quality.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	British Steel	British Steel	No	Fully funded	N/A - part of ongoing operations	Implementation	High - direct reduction in emissions due to actions which may be taken to prevent or reduce emissions during high-risk conditions.	Warning emails sent, logs of actions taken in response to warning.	Ongoing measure. Scoping for improvements to forecasting.	Monitor downtime resulting in lack of data for a period of time - rare occurrence
8	Monitoring of NLC automatic air quality monitoring data for PM_{10} by 10am. If, by 10am, any of the monitoring stations are already recording PM_{10} measurements of 40 µg/m^3, then an air quality warning email is sent to plant areas to communicate the increased risk of exceeding the 50 µg/m^3 mean that day.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	British Steel	British Steel	No	Fully funded	N/A - part of ongoing operations	Implementation	High - direct reduction in emissions due to actions which may be taken to prevent or reduce emissions during high-risk conditions.	Warning emails sent, logs of actions taken in response to warning.	Ongoing	Monitor downtime resulting in lack of data for a period of time - rare occurrence
9	Each week day, the previous day's daily mean for each monitoring station across the NLC monitoring network is checked and if the daily average is greater than 50 µg/m^3, an exceedance report is prepared to investigate and document the event and actions taken to mitigate during the day.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	British Steel	British Steel	No	Fully funded	N/A - part of ongoing operations	Implementation	Low - no quantifiable reduction in emissions.	Warning emails sent, logs of actions taken in response to warning.	Ongoing	Monitor downtime resulting in lack of data for a period of time - rare occurrence

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
10	Closure of coke ovens at British Steel - transitioning from coal to coke.	Promoting Low Emission Plant	Other Policy	2023	2023	British Steel	British Steel	No	Fully funded	N/A	Planning	High - Direct reduction of point source emissions from coke ovens approx 20 tonnes. Total impact to emissions with new coke handling activities not yet known.	Completed closure of the coke ovens and transition to coke transported to and stored on site.	Estimated closure currently June 2023. Closure will have immediate effect, but transition to new coke transportation and handling processes will occur over a longer period of time.	Emissions associated with transporting coke to site and storage (as opposed to previous coal storage) still uncertain. Work being done from June to develop a quantitative evidence base.
11	Pilot low-cost sensor monitoring network within British Steel site perimeter, pilot plant area being identified potentially sinter plant or BOS plant.	Promoting Low Emission Plant	Other Policy	2023	2025	British Steel	British Steel	No	CapEx	£150k	Planning	Low - No direct reduction in emissions, but monitoring network to be used in source apportionment of pollution episodes, forecasting and handling dust complaints.	Installation of monitors, receipt of data, use of data in source apportionment, forecasting and handling dust complaints.	Pilot study in planning stage and will either commence in 2023 or 2024.	Subject to funding
12	Investigating greening areas with grass where operations are stopping at British Steel.	Promoting Low Emission Plant	Other Policy	2023	2024	British Steel	To be confirmed	To be confirmed	To be confirmed	To be confirmed	Not yet started	Low - no quantifiable reduction in emissions.	Completion of investigation, proposed area(s) greened with grass (m2)	Planning meeting scheduled for June 2023.	Uncertainty surrounding locations and timescales.
13	Road Sweeper provision being increased irrespective of coke oven closure, to be kept under review during the transitional period of coke transport by road (with closure of the coke ovens).	Promoting Low Emission Plant	Other Policy	2023	Ongoing	British Steel	British Steel	No	OpEx	£150k	Implementation	Medium - direct reduction in fugitive emissions. 183 tonnes of PM_{10} currently attributed to roads. This could be reduced by 10% with increased sweeping[26]	Frequency of road sweeper use	Ongoing	None

[26] Air Quality News Bulletin (8 March 2023) Road Sweeping: A Low-Tech Efficient and Affordable Solution for Improving UK Air Quality viewed on 9/11/2023 (https://airqualitynews.com/advertorial/road-sweeping-a-low-tech-efficient-and-affordable-solution-for-improving-uk-air-quality/)

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
												(approx. 18 tonnes)			
14	Bowser provisions and wheel wash systems increased, being reviewed irrespective of coke oven closure, to be kept under review during the transitional period of coke transport by road. (with closure of the coke ovens).	Promoting Low Emission Plant	Other Policy	2023	Ongoing	British Steel	British Steel	No	OpEx	To be confirmed	Planning	Medium - direct reduction in fugitive emissions.	Frequency of bowser and wheel wash use	Ongoing	None
15	Introduction of localised site-specific Dust Management Plans at the plant.	Promoting Low Emission Plant	Other Policy	2023	Ongoing	British Steel	British Steel	No	OpEx	N/A	Implementation	Low - no quantifiable reduction in emissions, effectiveness reliant on enforcement of mitigation actions secured within DMPs.	Number of Dust Management Plans secured, logs and checks against mitigation actions	In process of developing rolling out	None
16	Trial use of binding agent on unpaved slag haulage roads on site, to reduce dust resuspension.	Promoting Low Emission Plant	Other Policy	2023	2023 (trial complete) 2024 (review of trial)	British Steel	British Steel	No	Fully funded	N/A	Planning	Medium - direct reduction in fugitive emissions. 183 tonnes of PM_{10} currently attributed to roads. This could be reduced by up to 80% with chemical dust suppressants (approx.144 tonnes) when applied at regular intervals of 2	Completion of trial, measured reduction in dust emissions.	In planning stage	Reapplication rate of every three years likely, assuming trial is successful.

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
												weeks to 1 month[27]			
17	Visual assessments of all operational areas made at regular intervals whilst operating.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	Cemex	Cemex	No	Fully funded	N/A - part of ongoing operations	Implementation	Low - no quantifiable reduction in emissions.	Records of faults or unusual activities.	Ongoing measures in place to ensure compliance with permit requirements, internal procedures and ISO 14001 certification	None
18	Road sweeper employed when required.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	Cemex	Cemex	No	Fully funded	N/A - part of ongoing operations	Implementation	Medium - direct reduction in fugitive emissions.	Log of road sweeping activities and records of actions taken.	Ongoing measures in place to ensure compliance with permit requirements, internal procedures and ISO 14001 certification	None
19	Regular plant maintenance inspection program assessing all emission points	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	Cemex	Cemex	No	Fully funded	N/A - part of ongoing operations	Implementation	Low - no quantifiable reduction in emissions.	Inspection logs, and records of actions taken to address faults.	Ongoing measures in place to ensure compliance with permit requirements, internal procedures and ISO 14001 certification	None
20	Staff training - all operational staff trained in permit, plant operation and dust assessment requirements.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	Cemex	Cemex	No	Fully funded	N/A - part of ongoing operations	Implementation	Low - no quantifiable reduction in emissions.	Completion of staff training.	Ongoing measures in place to ensure compliance with permit requirements, internal procedures and ISO 14001 certification	None
21	Weekly checks of silo protection devices.	Environmental Permits	Other measure through permit systems and economic	Ongoing	Ongoing	Cemex	Cemex	No	Fully funded	N/A - part of ongoing operations	Implementation	Low - no quantifiable reduction in emissions.	Log of checks	Ongoing measures in place to ensure compliance with permit requirements, internal procedures and ISO 14001 certification	None

[27] United States Environmental Protection Agency (2006) AP-42: Compilation of Air Emissions Factors for Unpaved Roads viewed on 09/11/2023 (https://www3.epa.gov/ttnchie1/ap42/ch13/final/c13s0202.pdf)

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
			instruments												
22	Auto shutoff of delivery to cement silos in the event of high pressure	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	Cemex	Cemex	No	Fully funded	N/A - part of ongoing operations	Implementation	High - direct reduction of emissions during high-risk scenarios.	Occurrences of high-pressure events and log of auto-shut offs	Ongoing measures in place to ensure compliance with permit requirements, internal procedures and ISO 14001 certification	None
23	All employees understand permit conditions and dust management protocols.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	Civil and Marine Ltd	Civil and Marine Ltd	No	Fully funded	N/A - part of ongoing operations	Implementation	Low - no quantifiable reduction in emissions.	Frequency of employee communication and completion of training on permit conditions and dust management protocols.	Ongoing measure as part of permit to operate	None
24	Emission points to air continuously monitored for particulates (and/or visually monitored).	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	Civil and Marine Ltd	Civil and Marine Ltd	No	Fully funded	N/A - part of ongoing operations	Implementation	Low - no quantifiable reduction in emissions.	Monitoring data capture	Ongoing measure as part of permit to operate	None
25	All emission points to air quantitively monitored for particulate matter every 12 months.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	Civil and Marine Ltd	Civil and Marine Ltd	No	Fully funded	N/A - part of ongoing operations	Implementation	Low - no quantifiable reduction in emissions.	Monitoring data capture	Ongoing measure as part of permit to operate	None
26	Visual assessments of raw material stockyard and operational areas during each shift and records made.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	Civil and Marine Ltd	Civil and Marine Ltd	No	Fully funded	N/A - part of ongoing operations	Implementation	Low - no quantifiable reduction in emissions.	Records of visual assessments	Ongoing measure as part of permit to operate	None

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
27	Weekly road sweeping and, when required, use of water bowser to dampen stockyard, roadways and operational areas.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	Civil and Marine Ltd	Civil and Marine Ltd	No	Fully funded	N/A - part of ongoing operations	Implementation	Medium - direct reduction of emissions.	Records of road sweeping and bowser activities	Ongoing measure as part of permit to operate	None
28	Housekeeping schedule (use of vacuum and wet sweeping).	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	Civil and Marine Ltd	Civil and Marine Ltd	No	Fully funded	N/A - part of ongoing operations	Implementation	Medium - direct reduction of emissions.	Records of vacuuming and sweeping activities	Ongoing measure as part of permit to operate	None
29	Regular plant maintenance to repair / replace / improve existing process equipment.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	Civil and Marine Ltd	Civil and Marine Ltd	No	Fully funded	N/A - part of ongoing operations	Implementation	Medium - direct reduction in emissions when repairs and replacements are carried out.	Maintenance records	Ongoing measure as part of permit to operate	None
30	Installation of Inter-Load 650 on conveyor transfer point (table house dust plant / crusher feed belt)	Promoting Low Emission Plant	Other Policy	2023	2023	Civil and Marine Ltd	Civil and Marine Ltd	No	Not funded	<£10k	Awaiting installation	High - direct and permanent reduction in emissions at the conveyor transfer point.	Completion of installation.	Purchased (Installation planned June 2023)	None
31	Trial with double side-skirt seal (return conveyor / crusher feed belt)	Promoting Low Emission Plant	Other Policy	2023	2023	Civil and Marine Ltd	Civil and Marine Ltd	No	Not funded	<£10k	Awaiting installation	High - direct and reduction in emissions at the conveyor transfer point.	Completion of trial.	Purchased (Installation planned June 2023)	None

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
32	Alterations to feed chute between return and crusher feed conveyors	Promoting Low Emission Plant	Other Policy	2023	2023	Civil and Marine Ltd	Civil and Marine Ltd	No	Not funded	<£10k	Awaiting installation	Medium - direct reduction of emissions by Fabrication of alternative feed chute arrangement to further control the impact of material falling from one conveyor onto another.	Completion of alterations.	Purchased (Installation planned June 2023)	None
33	Upon receipt of a [British Steel] warning e-mail, the Air Quality Warning Exceedance check sheet must be completed, which outlines what actions should be reviewed and, if necessary, taken, including making employees and contractors aware of the AQ warning, checking for visible dust releases and consider stopping operations causing fugitive dust, and checking that bowsers, dust suppression sprinklers and wheel wash are operational.	Promoting Low Emission Plant	Other Policy	Ongoing	Ongoing	Tarmac	Tarmac	No	Fully funded	N/A - part of ongoing operations	Implementation	High - direct reduction in emissions due to actions which may be taken to prevent or reduce emissions during high-risk conditions.	Number and frequency of warnings, records of actions implemented in response.	Already being followed, ongoing action	Changes to management at site level
34	Reduced drop heights from conveyors	Promoting Low Emission Plant	Other Policy	2022	2024	Tarmac	Tarmac	No	Fully funded	N/A	Implementation	High - direct and permanent reduction in emissions at conveyors.	Drop height reduction, number of conveyor points action has been applied to.	Coaching of loading shovel operators to let belt ends build up. Monitoring of operations is ongoing.	None
35	Reducing wind-blown movement of PM using drapes	Promoting Low Emission Plant	Other Policy	2022	2023	Tarmac	Tarmac	No	Fully funded	<£2000	Implementation	Medium - direct reduction of dust emissions through interception.	Number of locations with drapes installed	Some contractor fines belts already fitted.	None

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
36	Communication of AQ warnings and measures to implement to employees.	Promoting Low Emission Plant	Other Policy	Ongoing	Ongoing	Tarmac	Tarmac	No	Not funded	N/A - part of ongoing operations	Implementation	Low - no quantifiable reduction in emissions.	Number and frequency of warnings, records of actions implemented in response.	In use, ongoing measure	None
37	Monitoring mobile plant idle time	Promoting Low Emission Plant	Other Policy	2019	Ongoing	Tarmac	Tarmac	No	Fully funded	<10k	Implementation	Low - no quantifiable reduction in emissions.	National Target 15%. Site target decided by ourselves 8%	Daily, weekly & quarterly monitoring of each machine. March 2023 average idle time 7%. April 2023 average idle time 6%.	Measure ongoing. Future discussion to be held around reducing site specific target even further.
38	Investigating reducing length of haul roads onsite - are there any shortcuts or options for redesign so vehicles don't have to travel so far to get to their destinations.	Promoting Low Emission Plant	Other Policy	2022	Ongoing	Tarmac	Tarmac	No	Not funded	N/A	Implementation	Medium - direct reduction of fugitive emissions arising from vehicle movements.	No visible dust lift off from the disused haul road	One haul route already shortened by 475 metres. Another changed route being considered.	Proposal is limited to haul roads within Tarmac site boundary. Minimal impact on haul roads within British Steel complex.
39	Undertake visual monitoring of aerial emissions during vehicle movements and the reception and pre-treatment of waste, and on detection of visible aerial emissions, immediate action will be taken to spray the source of dust emission with additional water or stop the waste handling operations. The incident and remedial action shall be recorded.	Promoting Low Emission Plant	Other Policy	Ongoing	Ongoing	Ellgia	Ellgia	No	Fully Funded	N/A - part of ongoing operations	Implementation	High - direct reduction in emissions due to actions which may be taken to prevent or reduce emissions during high-risk conditions.	Records of incidences and remedial actions taken.	Already in place, ongoing measure	N/A
40	During shredding operations, an exclusion zone will be maintained around the shredding equipment to ensure that site operatives and waste vehicle drivers are outside the area where airborne dusts would be concentrated.	Promoting Low Emission Plant	Other Policy	Ongoing	Ongoing	Ellgia	Ellgia	No	Fully Funded	N/A - part of ongoing operations	Implementation	Medium - reduction in exposure of site employees to increased PM concentrations.	Extent of exclusion zone, monitoring to ensure exclusion zone is maintained.	Already in place, ongoing measure	N/A

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
41	Composting materials as well as wastes in the stockpiles will be kept at a suitable moisture content, using water sprays when necessary.	Promoting Low Emission Plant	Other Policy	Ongoing	Ongoing	Ellgia	Ellgia	No	Fully Funded	N/A - part of ongoing operations	Implementation	Medium - direct reduction of dust emissions.	Number and frequency of water spray actions taken.	Already in place, ongoing measure	N/A
42	The screening operations will be monitored (as per shredding) and if found necessary, water sprays will be provided on the screening equipment.	Promoting Low Emission Plant	Other Policy	Ongoing	Ongoing	Ellgia	Ellgia	No	Fully Funded	N/A - part of ongoing operations	Implementation	Medium - direct reduction of dust emissions.	Number and frequency of water spray actions taken.	Already in place, ongoing measure	N/A
43	Bioaerosol and dust generation attributable to vehicle movements will be controlled by the maintenance and sweeping of the site access road.	Promoting Low Emission Plant	Other Policy	Ongoing	Ongoing	Ellgia	Ellgia	No	Fully Funded	N/A - part of ongoing operations	Implementation	Medium - direct reduction of dust emissions.	Number and frequency of maintenance and sweeping activities.	Already in place, ongoing measure	N/A
44	During dry weather, action will be taken to spray the roads using a water bowser.	Promoting Low Emission Plant	Other Policy	Ongoing	Ongoing	Ellgia	Ellgia	No	Fully Funded	N/A - part of ongoing operations	Implementation	Medium - direct reduction of dust emissions.	Number of bowser spray actions taken.	Already in place, ongoing measure	N/A
45	Increase concrete coverage to reduce dust.	Promoting Low Emission Plant	Other Policy	Ongoing	Ongoing	Ellgia	Ellgia	No	Fully Funded	N/A - part of ongoing operations	Implementation	Medium - direct reduction of dust emissions.	Percentage of concrete coverage.	Already in place, ongoing measure to increase as part of site development plan	N/A
46	Moving operations inside where possible.	Promoting Low Emission Plant	Other Policy	Ongoing	Ongoing	Ellgia	Ellgia	No	Fully Funded	N/A - part of ongoing operations	Implementation	High - direct and permanent reduction in emissions from operations moved inside.	Number of operations moved inside, estimated emissions from operations moved inside	Already in place, ongoing measure	Planning permission cycle requires time
47	All employees understand permit conditions and dust management protocols.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	LKAB	LKAB	No	Fully funded	N/A - part of ongoing operations	Implemented	Low - no quantifiable reduction in emissions.	Frequency of employee communication and completion of training on permit conditions and dust management protocols.	Ongoing measure as part of permit to operate	None

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
48	Emission points to air continuously monitored for particulates (and/or visually monitored).	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	LKAB	LKAB	No	Fully funded	N/A - part of ongoing operations	Implemented	Low - no quantifiable reduction in emissions.	Monitoring data capture.	Ongoing measure as part of permit to operate	None
49	Continuous monitoring equipment calibrated and serviced annually by OEM.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	LKAB	LKAB	No	Fully funded	N/A - part of ongoing operations	Implemented	Low - no quantifiable reduction in emissions.	Monitoring data capture.	Ongoing measure as part of permit to operate	None
50	Continuous monitoring equipment maintained every 6 months.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	LKAB	LKAB	No	Fully funded	N/A - part of ongoing operations	Implemented	Low - no quantifiable reduction in emissions.	Monitoring data capture.	Ongoing measure as part of permit to operate	None
51	All emission points to air quantitively monitored for particulate matter every 12 months.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	LKAB	LKAB	No	Fully funded	N/A - part of ongoing operations	Implemented	Low - no quantifiable reduction in emissions.	Monitoring data capture.	Ongoing measure as part of permit to operate	None
52	Visual assessments of raw material stockyard and operational areas during each shift and records made.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	LKAB	LKAB	No	Fully funded	N/A - part of ongoing operations	Implemented	Low - no quantifiable reduction in emissions.	Records of visual assessments.	Ongoing measure as part of permit to operate	None
53	Dust suppression sprays used where appropriate to damp down trafficked areas in the stockyard.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	LKAB	LKAB	No	Fully funded	N/A - part of ongoing operations	Implemented	Medium - direct reduction of emissions from dust resuspension.	Records of road sweeping and bowser activities.	Ongoing measure as part of permit to operate	None

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
54	Twice weekly road sweeping and, when required, use of water bowser to dampen stockyard, roadways and operational areas.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	LKAB	LKAB	No	Fully funded	N/A - part of ongoing operations	Implemented	Medium - direct reduction of emissions from dust resuspension.	Records of road sweeping and bowser activities.	Ongoing measure as part of permit to operate	None
55	Housekeeping schedule (use of vacuum and wet sweeping).	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	LKAB	LKAB	No	Fully funded	N/A - part of ongoing operations	Implemented	Medium - direct reduction of emissions from dust resuspension.	Visual inspections within the production facility.	Ongoing measure as part of permit to operate	None
56	Regular plant maintenance to repair / replace / improve existing process equipment.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	LKAB	LKAB	No	Fully funded	N/A - part of ongoing operations	Implemented	Medium - direct reduction in emissions when repairs and replacements are carried out.	Maintenance records.	Ongoing measure as part of permit to operate	None
57	6 Monthly maintenance and inspection regime of silo protection devices.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	LKAB	LKAB	No	Fully funded	N/A - part of ongoing operations	Implemented	Low - no quantifiable reduction in emissions.	Maintenance records.	Ongoing measure as part of permit to operate	None
58	Auto shut off of delivery by tanker to silos in the event of high level.	Environmental Permits	Other measure through permit systems and economic instruments	Ongoing	Ongoing	LKAB	LKAB	No	Fully funded	N/A - part of ongoing operations	Implemented	High - direct reduction of emissions during high-risk scenarios.	Maintenance records = Occurrences of high-pressure events and log of auto-shut offs	Ongoing measure as part of permit to operate	None

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
59	Requirements for EV charging points at new developments through Building Regulations Approval Document S	Policy Guidance and Development Control	Other policy	2023	2023	NLC	NLC	No	Not funded	N/A	Implementation	Low - no quantifiable reduction in emissions, effectiveness reliant on engagement and increased uptake of EVs.	Number of charging points installed through requirement.	Ongoing	None
60	Active Travel Programme, including cycle training and bike repair workshops.	Promoting Travel Alternatives	Promotion of cycling and walking	2022	2023	NLC Public Health	NLC	No	Not funded	N/A	Implementation	Low - no quantifiable reduction in emissions, effectiveness reliant on engagement and increased modal shift.	Number of training courses and workshops delivered.	As active travel is a program created to increase physical activity we can not change the message to increase air quality, however, we will add to the comms that one of the benefits of active travel is the reduction of air pollution. Active travel is a summer program that lasts a month. However, we will work in public health to create a campaign to promote throughout the year, by linking with the Green Future agenda lead.	No barriers, we plan to repeat this every year. We work closely with a charity that supports the community with bike repairs, therefore promotion to signpost people to them will be part of the campaign. The all-year-round campaign linking with the green future agenda is yet to be developed and will provide updates throughout the year to the steering group.
61	Improve active travel infrastructure in the Scunthorpe urban area	Transport Planning and Infrastructure	Cycle network	2023	Ongoing	NLC	Active Travel England/ Department for Transport	No	Some funding received from Active Travel England	<50k	Implementation	Low - no quantifiable reduction in emissions, effectiveness reliant on engagement and increased modal shift.	Number of infrastructure improvement schemes delivered, number of users of infrastructure.	Work is ongoing to identify suitable routes and produce detailed designs for schemes	Availability of funding
62	Bikeability cycle training – school aged children	Road Safety	Developing cycle skills	2022	Ongoing	NLC Road Safety	DfT Bikeability Funding	No	Currently funded	Unknown	Implementation	Low - no quantifiable reduction in emissions, effectiveness reliant on engagement and increased modal shift.	Number of training courses delivered, number of spaces on courses.	Ongoing initiative	Availability of funding

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
63	Investigate the possibility of developing a Local Cycling and Walking Infrastructure Plan (LCWIP)	Transport Planning and Infrastructure	Cycle network and Other	2024	2025	NLC	Active Travel England/ Department for Transport	No	Not funded	<£25K	Not yet started	Low - no quantifiable reduction in emissions, effectiveness reliant on engagement and increased modal shift.	Completion of investigation	Ongoing initiative	Availability of funding
64	Provision of accessible information on walking and cycling routes via council website.	Public Information	Via the Internet	2024	2025	NLC	Internal NLC funding	No	Not funded	<£5k	Not yet started	Low - no quantifiable reduction in emissions, effectiveness reliant on engagement and increased modal shift.	Numbers of traffic on website	Ongoing initiative	Availability of funding
65	Through the Safer Roads Humber partnership we will deliver continued enforcement of speed limits and driving standards.	Traffic Management	Other	2023	Ongoing initiative	NLC	Internal NLC Funding	No	Not funded	Unknown	Implementation	Low - no quantifiable reduction in emissions due to transport travelling at lower speeds.	Enforcement actions	Ongoing initiative	Availability of funding
66	Continued provision of charging for electric vehicles, including at council buildings, and projects such as On Street Residential Charge Points.	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	2030	NLC	Workplace Charging Grant scheme, On-Street Residential Charge Scheme Fund.	No	Partially funded	£2m+	Implementation	Low - no quantifiable reduction in emissions, effectiveness reliant on engagement and increased uptake of EVs.	Number of charging points, rates of usage, CO_2 saving.	We have installed 20 charging points to date and have seen good usage of the points. The Council will be procuring a delivery partner to scale up and accelerate the rollout of public EV charging infrastructure during 2023 in line with demand.	Local distribution electricity network operator and the pace/resistance restricting the rollout.

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
67	Improving the Council's fleet of vehicles, including ensuing new vehicles purchased are Euro 6 compliant, phasing out diesel vehicles, considering electric and hybrid vehicle use, and route planning.	Vehicle Fleet Efficiency	Other	2017	2030	NLC	Internal Capital Funding	No	Partially funded	£30 Million Est.	Implementation and Planning	Medium - direct reduction in emissions from vehicular exhaust	Implementation of fleet improvement plan	Y1 funding secured. Commenced procurement of 6 x RCV, 5 x Road Sweepers and commenced trials on electrification of some specialist and generic vehicles	Links in to Council's Green Futures Plan; Capital Funding
68	Council driver awareness training and policies	Vehicle Fleet Efficiency	Other	2023	2023	NLC	NLC	No	Fully funded	<£10k	Planning	Medium - direct reduction in emissions from vehicular exhaust, brake and tyre wear and road wear.	Delivery of staff training events	None	Driver uptake
69	Anti-Idling public information campaign	Public Information	Via the Internet and other mechanisms	2024	2024	NLC	NLC	No	Not funded	<£10k	Planning	Low - unquantifiable reduction in emissions.	Publication or provision of information in relation to anti-idling	Ongoing measure	None
70	Anti-idling enforcement	Traffic Management	Anti-idling enforcement	2024	Ongoing	NLC	NLC	No	Not funded	<£10k	Not yet started	Low - unquantifiable reduction in emissions.	Number of fines issued for idling	None	Cllr approval for further changes to the PSPO
71	Maintenance of highways and road cleaning	Transport Planning and Infrastructure	Other	Ongoing	Ongoing	NLC and National Highways	NLC and National Highways	No	Fully funded	Unknown	Implemented	Medium - direct reduction in emissions from resuspension through removal of dust.	Road cleaning logs and schedules, number of routine and non-routine activities and locations.	Ongoing measure	None
72	Establishing and maintaining communication between highway maintenance road cleaning team and air quality monitoring team, to notify road cleaning team of 5 day forecast high pollution days and arrange rescheduling of routine fortnightly road cleaning.	Transport Planning and Infrastructure	Other	2023	2023	NLC	NLC	No	Not funded	<£10k	Planning	Low - unquantifiable reduction in emissions.	Communication of forecast high pollution days to highway maintenance/road cleaning teams, re-scheduling of road cleaning activities.	Ongoing measure	12-week notification of closures, flood risk and drainage road closures

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
73	Conduct a public information campaign about domestic burning e.g. solid fuel heating and bonfires and implications of living in a smoke control area, publishing through Direct Magazine as well as keeping the air quality website up to date with information for the public.	Public Information	Via the Internet and other mechanisms	2023	2024	NLC	NLC	No	Not funded	<£10k	Implementation and planning	Low - unquantifiable reduction in emissions.	Information available on NLC website. To also include within North Lincs New email bulletin	Periodic review of information on website and additional campaigns as appropriate.	None
74	Investigate development of a Smoke Control Area Enforcement Policy.	Policy Guidance and Development Control	Other policy	2024	2024	NLC	NLC	No	Not funded	<£10k	Not yet started	Low - unquantifiable reduction in emissions.	Create a Smoke Control Area Policy to enable the issue of FPN's	No progress yet.	Political interest and Cllr approval
75	Develop a Supplementary Planning Document (SPD), which identifies the constraints and mitigation to development within the Air Quality Management Area	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2024	2024/2025	NLC	NLC	No	Not funded	<£30k (if external consultants required)	Planning	Low-Medium. Low in short term - unquantifiable reduction in emissions. In the long-term capacity for medium - reduction in emissions through securing effective mitigation actions.	Develop an SPD specifically for development within the AQMA	No progress yet. SPD cannot be adopted until Local Plan is adopted.	The Place Planning team is currently under pressure to adopt numerous SPD's on local plan is adopted.
76	Continue operation of the air quality network and website, with associated data analysis and ratification	Other	Other	2002	2025	NLC	NLC, British Steel	No	Not funded	£10-£50k	Implementation	Low - unquantifiable reduction in emissions.	Continue to operate targeted network of air quality monitors and website	Ongoing	None

Note: N/A – Not available

6 Appendix A: Response to Consultation

Table A.1 – Summary of Responses to Consultation and Stakeholder Engagement on the AQAP

Consultee	Category	Response
Development Management	Council Department	Requested the adoption date for the Local Plan be amended to 2024
Highways	Council Department	We are required to produce an updated Local Transport Plan within the next year (or so). We are currently waiting for DfT to publish the revised guidance to provide an accurate steer.
Environment Agency	Government Department	We are pleased that the AQAP has been updated with new measures and we are supportive of these. With reference to the measures relevant to the Environment Agency: • Reinstating the Local Industry Forum, and holding regular meetings to review air quality data, investigate occurrences of very high exceedances, and feed back on measures to improve local air quality.

		• Continue regulatory functions in respect of emissions to air through the Environmental Permitting Regulations (2016). • To continue to provide planning consultation responses which takes into consideration local air quality. • To continually review site permits to ensure that they are updated as necessary to reflect new and updated guidance or legislation and changes in operation or site infrastructure. We shall deliver these and we shall keep you updated with our progress. Please note that my job title is not Senior Regulated Industries Officer, it is Senior Regulated Industry Officer.

7 Appendix B: Reasons for Not Pursuing Action Plan Measures

Table B.1 – Action Plan Measures Not Pursued and the Reasons for that Decision

Action category	Action description	Reason action is not being pursued (including Stakeholder views)
Other	Procurement of a contract for the purchase, installation and commissioning of new air quality monitoring equipment which is to be installed during the Summer of 2022.	Measure completed, so not taken forward to shortlist.[(a)]
Environmental Permits	Environmental Permit Improvement Programme.	Measure completed, so not taken forward to shortlist. [(a)]
Public Information	Conduct a publicity campaign advising commercial organisations about their legal obligations in relation to their waste, with particular reference to burning of trade waste.	Measure completed, so not taken forward to shortlist. [(a)]
Transport Planning and Infrastructure	Identify current road sweeping schedules within the Scunthorpe AQMA and realign schedules as appropriate to minimise re suspended dust emissions from areas such as Brigg Road.	Measure completed, so not taken forward to shortlist. [(a)]

Other	Council to investigate vegetation i.e. hedgerows for mitigation of emissions.	Measure not carried forward on advice by Defra concerning the success of this type of measure. However, measure is going to be taken forward by British Steel regarding investigating the greening of areas with grass where operations have stopped. British Steel would bring in an arboriculturist and consultants with appropriate experience to advise on vegetation design, to avoid any negatives impact to concentrations.
Transport Planning and Infrastructure	Establishing and maintaining communication between highway maintenance road cleaning team and air quality monitoring team to notify road cleaning team of forecast high pollution days and arrange rescheduling of road cleaning.	Measure taken forward but wording amended, as only routine cyclical (fortnightly) sweeping schedules could be amended at short notice upon receipt of a 5-day forecast. Other works are planned up to 12 weeks in advance and would not be possible to reschedule at short notice.

Note: (a) - The success of the previously implemented measures in the last AQAP have not been quantified, however it is apparent that they would have contributed to the improvement in air quality within the AQMA as air quality has improved significantly over the years.

8 Appendix C: Minutes from First Steering Group Workshop 17th April 2023

Date:	Monday 17th April 2023
Time:	10:00-12:00
Location:	Online (Teams)
Attendees	
Ricardo Team:	Angela Goodhand (Senior Consultant) Mark Attree (Principal Consultant) Abigail Pepler (Senior Consultant) Sam Gorji (Senior Consultant) Robin Bruce (Analyst Consultant)
Steering Group Members:	Annie Ward (North Lincolnshire Council, Environmental Protection Team Leader) Liz Hamer (North Lincolnshire Council, Assistant Group Manager) Lea Chapple (North Lincolnshire Council, Trainee EHO) Miguel Duran (North Lincolnshire Council, Public Health) Rebecca Leggott (North Lincolnshire Council, Interim Development Management Lead) Chris Barwell (North Lincolnshire Council, Investment and Delivery Lead) Robert Vickers (Environment Agency, Senior Regulated Industry Officer) Cathal O'Leary (Environment Agency, Senior Technical Leader) Luke Jeffcott (British Steel Ltd, Scunthorpe Environment Manager)

	Tom Ellerton (British Steel Ltd, Senior Environment Specialist – Air Quality) Steve Turgoose (Civil and Marine Ltd, Works Manager) Paul John Richards (Cemex UK operations, Sustainability Manager) Greg Reeder (Tarmac Trading Ltd, Supervisor) Cameron Murdoch (Ellgia Ltd, Technical Director) Paul Wilson (LKAB Minerals Ltd, Works Manager)

1. Introductions

2. Project Background

2a. Health impacts of air pollution *(presented by Angela Goodhand):*

Air pollution is harmful to everyone and affects our health. It can cause headaches, cardiovascular diseases, irritation to eyes, nose, throat and impact on respiratory system and reproductive system. One of the key pollutants that contributes to these health effects is PM – particulate matter.

The most vulnerable groups like children, older people and those with heart and respiratory conditions are most affected.

It's been in the news as well that the health effects are worse than we thought. Research has shown that air pollution has been linked to teen blood pressure. And another research has shown that cutting air pollution improves children's lung development.

2b. Air Quality in North Lincolnshire *(presented by Angela Goodhand):*

North Lincolnshire (NL) declared an Air Quality Management Area (AQMA) covering an area to the east of Scunthorpe including the site of the steelworks due to high levels of Particulate matter, PM_{10}. The daily mean objective of 50 µg/m^3 not to be exceeded more than 35 times a year, was exceeded due to industrial sources around the works site. NL prepared an Air Quality Action Plan in 2012 which set out sets out what action or measures the Council will take to improve air quality within a set timescale.

Ricardo have undertaken a source apportionment study across the AQMA to derive the contributions of different sources to pollutant concentrations. When we exclude secondary PM and residual and salt some of which are natural sources that we cannot control, we can see that the industrial sources contribute 76% of the PM, then followed by domestic sources with 10% and other 6%, Brake and tyre 4%, road abrasion 2% and road transport exhaust 1%.

2c. Air quality action plan process *(presented by Abigail Pepler):*

- An AQAP is a statutory document which sets out what action or measures the Council will take to improve air quality within a set timescale.
- Shows how you are **working with partners** to deliver measures
- Considering and **influencing other policies** and authorities to influence actions
- Entails an element of reporting on the success of the plan – **indicators of performance**
- **Focus on emission reduction**, but also can include exposure reduction options and opportunities
- **SMART measures:** specific, measurable, achievable, relevant, and time bound
- LAs should "as a minimum, revise their AQAP every 5 years" – The current AQAP for NL was released in 2012, so an update is overdue
- They should be maintained as a live document, with regular Steering Group meetings to report and assess progress against measures.

3. Measures to reduce emissions

3a. Ongoing measures tackling stack emissions (*presented by Mark Attree*):

Air Pollution forecasting:

- **Annie Ward** (North Lincs Council) highlighted that the Council doesn't produce air pollution forecasting, this is produced by British Steel. The Council do circulate exceedance reporting which is shared with operators the following day.
- The AQAP will need to highlight which actions are to be taken by the council, and which are taken by sites.

Permit Regime:

- $PM_{2.5}$ is not yet incorporated into the EPO regime, but measures for PM_{10} will also decrease $PM_{2.5}$
- The council carries out a risk assessment of each site every 12 months, which reviews the sites compliance with their Environmental Permit at the end of the financial year in March. This will determine the risk rating for the next 12 months, and therefore the regulatory efforts of the council. (i.e. low risk means less inspections, high risk means more).

EA ongoing measures:

- **Cathal O'Leary** (EA, Senior Technical Leader) highlights changes already occurring in large industrial plants
    - Switch from oil to natural gas for combustion plants to drive down emissions
    - Work has been ongoing on improving coke oven emissions (prior to the decision to close them)

British Steel Coke ovens closing:

- **Annie Ward** asked whether the closing of the coke ovens will lead to more material transported into the site
- **Luke Jeffcott (through Tom Ellerton's teams)** (British Steel Ltd, Scunthorpe Environment Manager) says there will be no increase in amount of material transported as the coke will replace the transport of coke coal.
    - The coke will be transported by road initially until the rail equipment has been modified to take in coke

3b. Suggested measures tackling stack emissions (*presented by Mark Attree*):

Stakeholder relationships:

- **Annie Ward** suggests reinstating the Local Industry Forum
- Goals of the Forum were as follows:
    - Council presents a review of AQ data for the past 12 months.
    - Industry that is present updates with any recent measures they have implemented.
    - The council will then meet with regulatory bodies and public health for their perspective in terms of compliance etc.

British Steel Monitoring:

- **Luke Jeffcott**: British Steel would like to install monitors within the site perimeter similar to Tata steel in Port Talbot
- They are getting a plan together for a pilot area in the next few months, though recent/ planned operational changes have changed the scope
    - This will most likely be around the sinter plants due to the significant stack source and material movement
- The Network will give forecasts of exceedance risk for particular areas of the site, and also attempt to pinpoint where sources are for exceedances

Reactive measures:

- **Miguel Duran** (NL Council, Public Health) raised the issue of occasional very high exceedances.

  - E.g. 864 µg/m^3 measured on the 10th of December (though this was most likely an error as the monitor appeared to have issues on that day)
  - Suggests monitoring what was happening at these points at all sites and implementing actions to prevent such occurrences
- **Angela Goodhand** (Ricardo) suggests using Osiris monitors as is done in construction sites, these can be set up to send automated email alerts once hourly PM_{10} levels exceed a threshold.
- **Annie Ward**: The council has an Osiris monitor operational at East Common Lane, she will investigate this option.

3c. Ongoing measures tackling fugitive emissions (*presented by Sam Gorji):*

Civil and Marine, Tarmac, Ellgia:

- **Stephen Turgoose** (Civil and Marine, Works Manager)
  - Confirmed that measures shown cover the fugitive emissions
  - There are also ongoing actions for transfer points, conveyor belts
- **Greg Reeder** (Tarmac Trading Ltd, Supervisor on site)
  - Confirmed the measures shown, all are standard practices
  - Also highlighted reduced drop heights from conveyors
  - Reduced wind blown movement using drapes
  - A focus for Tarmac is ensuring all employees are aware of the AQ warnings and what measures to implement
- **Cameron Murdoch** (Ellgia Ltd)
  - Confirmed the measures shown
  - Also highlighted that Ellgia are looking at increasing concrete coverage and moving operations inside where possible

LKAB and Cemex:

- Both have similar measures to Civil and Marine etc.
- Standard procedures as set out in permits

EA measures:

- **Robert Vickers**: EA measures have largely been omitted
- We will need to look into the inclusion of these for the Action Plan

3d. Suggested measures tackling fugitive emissions (*presented by Sam Gorji)*:

Haul Roads:

- **Greg Reeder**: Suggests looking into redesigning haul roads to reduce length and distance travelled

Vegetation:

- Some discussion around value of vegetation, i.e., hedgerows for mitigation emissions
- Council have been advised by DEFRA that it shouldn't be included as a measure
    - Issues include eddy effects and changed wind conditions
    - Anything taller than large shrubs may cause these issues
- **Luke Jeffcott**: British Steel has been looking at greening areas with grass where operations have stopped
    - Concrete pads and bare earth can produce dust in dry conditions
    - British Steel would bring in an arboriculturalist/ consultant to ensure the correct vegetation is used
    - They are seeking funding for this
- **Robert Vickers** highlights that EA audit involves rationalising what areas are used, and what is not necessary. They encourage greening of these

3e. Ongoing measures tackling other emissions *(presented by Angela Goodhand)*:

Monitoring network:

- **Annie Ward**: The council network was updated last summer, these monitors are now live
- The air quality network and website contracts run until 2025

Public information:

- There are no publicity campaigns being run by the council currently
    - There may be opportunities in the form of Direct magazines to target log burners etc.

Air quality SPD:

- Not currently in place, the final version of the Local Plan is being submitted for examination

Highways:

- The North Lincs Road safety partnership no longer exists, the council is now a member of Safer Roads Humber
    - Regional partnership to reduce deaths and serious injuries, so includes speed reduction and safe driving.

EV charging:

- **Annie Ward:** Council has provided EV charging across North Lincs
- The council no longer recommends EV charging points through planning, as these are now covered in the Building Regulations approved document S
- **Angela Goodhand:** AQAP to take note of this

Active Travel:

- **Miguel Duran**: the council implemented the active travel plan last year for public health
    - Workplace health scheme
    - Walking, cycling to work
    - There is an opportunity to highlight reducing emissions in next scheme/ campaign
- **Rebecca Leggott** (NL Council): Council requests details of cycle parking for new developments to ensure these are included

3f. Suggested measures tackling other emissions *(presented by Angela Goodhand):*

Consultation on planning applications:

- EA also act as consultees on planning applications, and would voice objective if an application posed a risk to air quality. EA are happy to have an action in plan confirming that role.

Highway cleaning:

- **Liz Hamer**: The council cleans the highways
    - Schedules for highway maintenance and cleaning could be made available, contact highways for information
- **Abigail Pepler** suggests communication between the road cleaners and the air quality monitoring to avoid resuspension of dust on high pollution days, e.g. communication of alerts to highways maintenance team, amending schedule in accordance.
- **Annie Ward** and **Liz Hamer** confirmed that this measure should be feasible

Domestic fuels:

- **Annie Ward**: This would fall under trading standards as it is point of sale
- Recent changes to smoke control area penalty charges. Council to look at developing a policy/statement in relation to updates.

4. Next Steps: *(presented by Abigail Pepler):*

- Distribute minutes and a copy of the slides
    - Further feedback on and suggestions for measures can be provided by email, deadline 1st May 2023
- Follow up with British Steel to go over their measures in more detail, including the possibility of monitoring and coke oven closures

- Review existing measures, and decide which will be carried forward to the AQAP longlist (this meeting forms part of this process)
    - Are some measures no longer relevant?
    - Are there potential issues with implementation?
    - Are there measures planned or in place which we've not identified in our review of current plans and policies?
- Identify additional measures, based on source apportionment outcomes, Steering Group suggestions, and best practice examples
- Refine longlist of measures to produce a shortlist (a second Steering Group workshop will form part of this process)
    - Provisional date for second workshop – 15th May 2023, 10:00-12:00
- Prepare roadmaps for AQ actions
- Present draft action plan to Steering Group
- Consultation on draft action plan
- Finalisation of action plan following consultation.

Notes:

Underline – Further actions by stakeholders or for consideration in AQAP

9 Appendix D: Minutes from Second Steering Group Workshop 15th May 2023

Date:	Monday 15th May 2023
Time:	10:00-12:00
Location:	Online (Teams)
Attendees	
Ricardo Team:	Angela Goodhand (Senior Consultant) Abigail Pepler (Senior Consultant) Robin Bruce (Analyst Consultant)
Steering Group Members:	Annie Ward (North Lincolnshire Council, Environmental Protection Team Leader) Liz Hamer (North Lincolnshire Council, Assistant Group Manager) Miguel Duran (North Lincolnshire Council, Public Health) James Todd, (North Lincolnshire Council, Fleet Transport & Cleansing Manager) Chris Barwell (North Lincolnshire Council, Investment and Delivery Lead) Louisa Simpson (North Lincolnshire Council, Highways Development Control Team Leader) Robert Vickers (Environment Agency, Senior Regulated Industry Officer) Cathal O'Leary (Environment Agency, Senior Technical Leader) Luke Jeffcott (British Steel Ltd, Scunthorpe Environment Manager) Tom Ellerton (British Steel Ltd, Senior Environment Specialist – Air Quality)

	Paul John Richards (Cemex UK operations, Sustainability Manager) Greg Reeder (Tarmac Trading Ltd, Supervisor) Cameron Murdoch (Ellgia Ltd, Technical Director)
Apologies from	Steve Turgoose (Civil and Marine Ltd, Works Manager) Paul Wilson (LKAB Minerals Ltd, Works Manager)

1. **Welcome and agenda (*by Angela Goodhand*)**
    - **Angela Goodhand** explained that the aim of meeting is to fill in any gaps in the long list of measures and for stakeholders to choose priority measures and the main priority of the AQAP. Emphasizing that the priority measures should be chosen based on expertise of the site operators who would have knowledge on say the pattern of dust exceedances and which sources have been usually the culprit to help identify the top 3 measures that if fully implemented would result in the maximum improvement in emissions**.**
2. **AQAP measures longlist discussion and feedback (*presented by Abigail Pepler*)**

2a. General feedback on measures longlist

- **Annie Ward** has circulated the longlist relevant to NLC to different departments in the local authority and is awaiting responses from these. She will send this over when available.

2b. Sub-group review of measures

- **British Steel**
    - **Abigail Pepler** highlighted the difficulty of finding introduction and completion years for ongoing measures, and explained that for these measures we will mark these as 'ongoing' in the measures longlist. She asked if there are any barriers to implementing the measures listed.
    - **Tom Ellerton/ Luke Jeffcott**
        - Measure 6, 5-day PM_{10} forecasts: No problems have arisen with weather station downtime. British Steel are scoping for improvements to the forecasting tool.
        - Measure 7, Monitoring of NLC AQ monitoring data: Monitors going down and dry weather with wind blowing into town could prevent this measure from being effective, but this is not a common occurrence.
            - **Annie Ward** adds that downtime with monitors is rare but can happen.
        - Measure 8, Previous daily mean checked: No issues with this, not affected by issues with monitoring networks.
        - Measure 9, Coke oven closure: There is uncertainty over whether to put this as fully funded, though as funding is unlikely to be a barrier it was agreed to put it as fully funded.

        - Measure 10, Pilot monitoring network: The pilot study is not confirmed yet, British Steel had a meeting with the supplier last week and the scope has changed due to the coke oven closures.
            - **Tom Ellerton/ Luke Jeffcott** will follow up over email when more information on costings are available
        - Measure 11, Investigating greening areas: There will be a meeting in June to progress this. One potential barrier is that planting must be done over winter, before March. They are unsure whether this will be done by March 2024, or if it will be pushed back a year.
            - **Abigail Pepler** suggested putting 2023 as the start date as planning has started, and setting the end date as 2024 for the time being as it can be updated later. Queried funding sources for this measure.
            - **Tom Ellerton/ Luke Jeffcott** – the June meeting will also investigate external funding sources.
        - Measure 12, Road sweeping: Alternate wording was sent over by email.
            - **Abigail Pepler** will check the wording received and copy this across
        - Measure 14, Site-specific dust management plans: Intention is to complete these for all high impact dust areas this year. Confirmed that this is internally funded.
        - Measure 15, Binding agent trial: Trial will be completed this year and reviewed by next year.
            - **Abigail Pepler** the AQAP can be updated if the measure progresses beyond the trial
    - **Abigail Pepler** asked if British Steel are happy overall with the measures listed, is there anything that's been missed?
    - **Tom Ellerton/ Luke Jeffcott** confirmed they are happy with the measures
    - **Abigail Pepler** asked if there are two or three key priority measures that stand out?
    - **Tom Ellerton/ Luke Jeffcott** will discuss offline and get back on this.
- **Cemex**
    - **Paul John Richards** confirmed funding for all measures is from Cemex, and that there are no major barriers to implementation.
    - **Abigail Pepler** requested that all stakeholders send over estimated costs of measures if possible, or if they are available.
    - **Paul John Richards** highlighted another possible measure
        - Auto shut off of delivery to cement silos in the event of high level or high pressure.
    - **Paul John Richards** will get back with priority measures for Cemex.
- **Civil and Marine**
    - No representative present on call
    - **Ricardo** will follow up on this over email
- **Ellgia**
    - **Cameron Murdoch** Confirmed all measures are funded by Ellgia and are ongoing.

- There is another measure he would like to highlight: a biannual part B permit for small biomass boiler
- **Abigail Pepler** there is a measure confirming NLC and EA's regulatory duties in managing permitting which would cover this. So we will leave it out of the individual site measures.
- **Cameron Murdoch** will send more specifics on funding and dates over email and will send priority measures for Ellgia

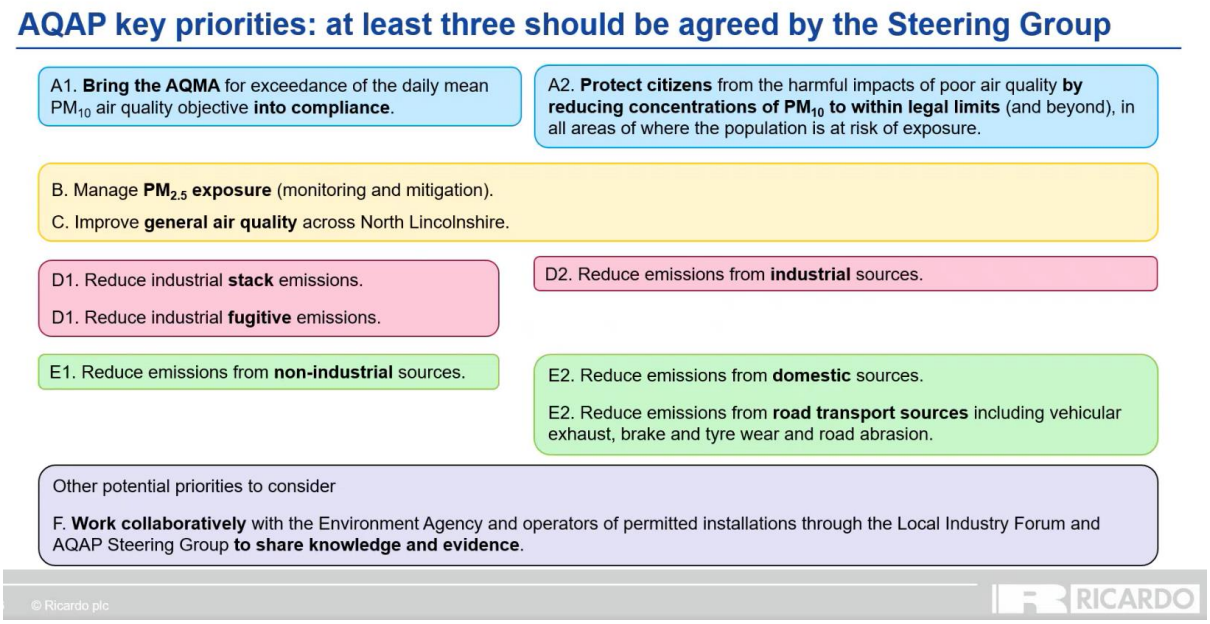
- **Tarmac**
  - **Greg Reeder**
    - Measure 26, Actions on receipt of British Steel warning email: Confirmed that this is ongoing. Changes to management/ staffing may affect continued implementation.
    - Measure 27, Reduced drop height from conveyors: Confirmed this is still in implementation phase as there are a few more conveyors to look at, estimated completion 2024.
    - Measure 28 and 29: These are ongoing.
  - **Greg Reeder** is happy that the list is complete. Requested that **Tom Ellerton** send over details of binding agents as this could be implemented at Tarmac
  - **Greg Reeder** will send over priority measures for Tarmac
- **LKAB**
  - No representative present on call
  - **Ricardo** will follow up on this over email
- **Environment Agency**
  - **Robert Vickers** and **Cathal O'Leary** have discussed the measures internally. He mentioned that they have contributed previously to a very similar report and they have some more expansive text on their regulations.
  - **Robert Vickers** will follow up over email with these more fleshed out measures
- **North Lincolnshire Council**
  - **Annie Ward**
    - Measure 1, Local Industry Forum: Confirmed that the forum would review air quality data, added that the measure should include feedback on measures to improve local air quality.
  - **Miguel Duran**
    - Measure 40, Active Travel Programme: Put forward actions to implement recently. Expanding active travel measures beyond just NLC staff is still in the planning stage.
  - **Louisa Simpson**
    - Measure 40, Active Travel Programme: Cycle training is offered to primary schools in North Lincs, this can be included here or added as another measure.
    - **Ricardo** will follow up on this measure over email
    - Measure 41, cycling improvements: This measure may not be related to North Lincs, as specifics seem like they may be related to North East Lincs. This may need amending

    - Measure 42, LCWIP: This is a good measure for NLC to investigate, there has been previous work but it isn't yet fully developed.
    - **Louisa Simpson** will check with colleagues on this and get back over email
    - Measure 43, Walking and cycling routes via website: This is a good measure to include as NLC have much of the maps ready to be uploaded and this should be simple to implement. Leisure routes are well mapped out but more work is needed on urban routes for commuting.
    - **Louisa Simpson** will check with colleagues on this and get back over email
- **James Todd**
    - Measure 46, Council fleet improvement: James is responsible for fleet compliance and road cleaning. Target completion date for this measure is 2030. This also links to the council's green futures plan.
    - Measure 47, Anti-Idling campaign: The council also produces monthly reports on number of hours idling. They have also rewritten the training materials and policies for council drivers and this includes anti-idling.
    - **Abigail Pepler** suggests this could be included as a separate measure and will follow up with James over email
    - Measure 49, Road cleaning: Funding varies between the council and National Highways.
    - Measure 50, Road cleaning schedules based on air quality data: A potential barrier to this is that some areas (Motlash Hill) require deep cleaning and road closures. This is done quarterly and requires a 12 week notice so it isn't feasible to change these dates at short notice. Routine cleaning, which is done every two weeks can be more flexible.
    - Possible new measure is the procurement of a new road sweeper fleet which avoid particulate matter resuspension. A barrier to this is the cost of the compliant machines, the evaluation may conclude that cheaper machines would be more cost-effective.
    - **Annie Ward** suggests adding James to the British Steel air quality forecast emails
    - **Tom Ellerton/ Luke Jeffcott** can add James Todd to the 5 day forecast email (or **Annie Ward** can forward this)
    - **Abigail Pepler** suggests Ricardo can follow up on this to see if this has been implemented. Suggests wording this as a trial measure.
- **Abigail Pepler** will remove measure 53 as this is covered in measures 51 and 52. **Annie Ward** is happy with this.
- **Chris Barwell**
    - Measure 54, Developing an SPD: This will usually be funded solely by the council, though they may look at external funding if necessary. The SPD also cannot be delivered until the Local Plan is formally adopted
- **Annie Ward**

- Measure 55, Air quality network and website: Confirmed that the existing contract runs until 2025. British Steel part funds the network so should be added to organisations involved in funding.
- **Annie Ward** will get back over email on priority measures.

3. **Further feedback/ discussion (*presented by Abigail Pepler*)**
   - **Greg Reeder** – Tarmac has also been measuring idle times on mobile plant with the aim of reducing excess fuel burn. Could this be included as a measure?
     - **Greg Reeder** will email over more details on this
     - **Angela Goodhand** asked what the idling data is used for, and if there have been actions taken to reduce the idling time.
     - **Greg Reeder –** Tarmac has a national target to reduce idling times, high idling times are flagged and operators are informed of this to encourage improvement.

4. **AQAP priorities selection (*presented by Abigail Pepler*)**
   - These are a list of 3 or more aims or key areas that the AQAP is focused on
   - They are informed by the steering group feedback
   - This should be guided by source apportionment data, which shows that 76% of PM_{10} emissions are attributable to industry, 10% to domestic and approximately 11% to road and transport
   - Ricardo have prepared suggested priorities for the steering group to agree upon.



- **Annie Ward** suggests using the most clear and direct messaging possible, using the following priorities:
  - A1- this is the most specific and direct
  - C – as most of the measures should have far reaching benefits touching on $PM_{2.5}$, NOx, SOx etc. as well as PM_{10}

  - D2 and E1 – more simplistic, no need to split into each source but no strong preferences either way
  - F – very valid depending on how many we want to include
- **Liz Hamer** raises the council priorities – for example keeping people safe and well
  - Suggests that **Annie Ward** provides the link to these
  - **Abigail Pepler** suggests that we can refer to the council priorities when expanding on the priorities in the AQAP
  - The Local Industry Forum terms of reference are quite old (2014) so may need reviewing to be brought up to date
  - **Annie Ward** will look into this, and suggests adding this as a comment on the measure
- **Luke Ellerton** – are we happy with the wording on A1 and A2 as there hasn't been an exceedance recently?
  - **Annie Ward** raises that there was an exceedance in 2022, and in 2018 before then
  - **Abigail Pepler** clarified that to revoke an AQMA there must be 3 years of sustained compliance from automatic monitoring data (or 5 years for diffusion tube data, detailed assessment may also be required in either case). As 2020 and 2021 were covid years DEFRA held off on revoking any AQMAs in this period.
- Preferences indicated in the chatbox were as follows:
  - **Cameron Murdoch**
    - A1, C, D2, E1, F
  - **Paul John Richards**
    - C, D2, F
  - **Greg Reeder**
    - A1, D2, A2

5. **Closing remarks and next steps (presented by Abigail Pepler)**
   - Meeting minutes and slides will be distributed
   - Further comments and feedback on key priorities can be sent over by email
   - Follow up emails will be sent on suggested measures and priority measures
   - Ricardo will complete the draft action plan and Annie Ward will circulate to the steering group
   - The council will undertake a consultation on the action plan
   - Finalisation of the action plan will follow the consultation
   - The action plan will then be sent to DEFRA for feedback, and there may be further consultation based on this

Notes:

Underline – Further actions for Ricardo or stakeholders

10 Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
AQS	Air Quality Strategy
ASR	Air quality Annual Status Report
BAM	Beta Attenuation Mass automatic PM Monitor
Defra	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EHO	Environmental Health Officer
EU	European Union
FDMS	Filter Dynamics Measurement System PM monitor
LAQM	Local Air Quality Management
NLC	North Lincolnshire Council
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides

PM	Particulate Matter
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
TEOM	Tapered Element Oscillating Microbalance automatic PM monitor