

Name of meeting: Council (Reference from Cabinet)

Date: 13 November 2019

Title of report: Kirklees Climate Emergency Declaration and the Kirklees Air Quality Strategy and Five Year Air Quality Action Plan

This report will be considered by Cabinet on 12 November 2019. The resolution of Cabinet will then be circulated prior to the Council meeting and Council will be asked to receive and consider the resolutions of Cabinet.

Purpose of report to Cabinet:

- To present the findings of the Climate Emergency Working Party
- To set out the proposed response to the Climate Emergency for approval
- To present the Kirklees Council Five Year Air Quality Action Plan and Strategy for approval

Purpose of report to Council:

- To receive and note (i) the resolution of Cabinet, following its meeting of 12 November and (ii) the report of the Climate Emergency Working Party.

Key Decision - Is it likely to result in spending or saving £250k or more, or to have a significant effect on two or more electoral wards?	Yes
Key Decision - Is it in the Council's Forward Plan (key decisions and private reports?)	Yes
The Decision - Is it eligible for call in by Scrutiny?	Yes
Date signed off by <u>Strategic Director</u> & name	Karl Battersby – 4 November 2019
Is it also signed off by the Service Director (Finance)?	Eamonn Croston – 4 November 2019
Is it also signed off by the Service Director for Legal Governance and Commissioning?	Julie Muscroft – 4 November 2019
Cabinet member portfolio	Cllr Naheed Mather (Greener Kirklees)

Electoral wards affected: All

Ward councillors consulted: N/A

Public or private: Public

(Have you considered GDPR?) Yes

1. SUMMARY

- 1.1 The United Nations have warned that urgent action is needed to address climate change and prevent irreversible damage to the environment. In January 2019, Kirklees Council declared a Climate Emergency and has proposed an ambitious programme of activity to address the emergency. This will require significant societal changes to how we all live and work, with an urgent need to dramatically reduce our emissions and to adapt locally to a changing climate.
- 1.2 Kirklees Council wishes to rise to this challenge and be a leader to achieve this change with our local partner organisations, businesses and residents with the help and support of the national government and regional partners and aligned to our corporate ambitions for People, Places and Partners. This will be a challenging ambition but it is also a great opportunity to improve our quality of life and create a borough that is healthier, more sustainable and fairer for everyone. This report describes the work undertaken to date and sets out proposals for how the Council can achieve its ambitions for approval moving forwards.
- 1.3 The Council passed a motion declaring a climate emergency in January 2019. The Council's progress in relation to the motion is included at section 3.11.
- 1.4 Kirklees Council's ambition for Air Quality is that everyone breathes clean air and we protect the most vulnerable in our society. The Council has prioritised improving air quality for the people who live, work and visit Kirklees. Through our strategy and action plan we demonstrate our commitment to improving air quality and will outline the specific areas where we can all affect change for the benefit of Kirklees.
- 1.5 This report sets out the proposed response to the Climate Emergency and next steps for addressing Air Quality challenges, outlining our ambitious plans and next steps in order to provide local leadership and to empower our partners and residents to take their own action. It includes the Council's ambitious proposed plans for tackling its own contribution towards transport related emissions, include a programme of accelerated electric vehicle procurement, an electric vehicle strategy for the Borough and an ambitious Air Quality action plan. This coupled with the work outlined in the Climate Emergency Working Party programme will see a step change in the Climate Emergency actions of the Council.
- 1.6 In our immediate response to the Climate Emergency and Air Quality challenges it is proposed that we invest in low emission transport focussing on electric vehicles. We propose to double the size of the Council's electric fleet and aim to have one of the highest densities of electric charge points for public use outside of London.
- 1.7 The Council has already made a number of significant achievements in relation to address these challenges, such as through the roll-out of next generation street lighting, an innovative approach to school catering and in the extensive insulation improvements to council and private sector homes, directly benefitting our residents.
- 1.8 In line with the Corporate Plan, our commitment to people, partners and place runs throughout the response to the climate emergency and air quality action plan and strategy. How we engage, educate, support and challenge to bring people along with us, especially young people, is critical to success – as human activity is a significant contributor to emissions – and more importantly it is people who suffer the harmful effects of emissions. We propose to work with our partners, as we recognise that tackling emissions cannot be done by the local authority alone. Places and placed based working will be integral to our activity, as we need to shape our places in a way which reduces emissions and supports our businesses and residents to be clean and green.

2. INFORMATION REQUIRED TO TAKE A DECISION

The Challenge

- 2.1 According to the Committee on Climate Change (CCC) the UK emits about 7.65 tonnes of greenhouse gases per person, per year, which cause and worsen climate change. The emissions we are responsible for are made up from heating our homes, how we travel, the food we eat, the things we buy and consume, the amount of waste we produce, how much we recycle and the way we treat our environment.
- 2.2 It is possible to reduce our carbon footprint and make a difference to the effects on the climate by making simple changes to the way we do things, but across the country, we all need to make these changes. Kirklees Council is starting to make significant changes and more will be considered. We will be leading and supporting organisations and residents to make the significant changes with us. By working together, it is possible to make a massive difference.
- 2.3 The UN's Intergovernmental Panel on Climate change (IPCC) special report of 2018 shows the likely impacts of dangerous climate change and sets out the impacts of holding global warming to 1.5°C or less compared with 2°C or more warming. The difference is likely to be stark, with the risk of negative consequences increasing dramatically. As the World Wildlife Fund (WWF) notes, this is likely to be the difference between a world with surviving coral reefs and summer Arctic Sea Ice to one without. Currently, the world has warmed by around 1°C since the early industrial age.
- 2.4 To limit the impacts of warming, this means that we all need to act now to emit less greenhouse gases and in particular carbon dioxide, as it persists for so long in the atmosphere. To have a good chance of preventing dangerous climate change the world needs to dramatically reduce the amount of carbon dioxide that is emitted. For Kirklees, following independent analysis by the Tyndall Centre, we know we can emit no more than 11.9 million tonnes carbon dioxide by 2100 (our 'carbon budget') in order to align with the "well below 2°C and pursuing 1.5°C" global goals of the 2015 Paris Agreement and reflected in the 2018 IPCC report. At 2017 emissions levels, Kirklees would use this entire budget within 7 years from 2020. This means that Kirklees, as a district, needs to reduce its emissions as an urgent priority in order to reach a 'Paris-aligned' carbon budget. The Tyndall Centre has identified 2041 as the 'science-based' year for Kirklees to achieve 'net zero' carbon emissions, or rather an equivalent 100% reduction from 1990 levels. This will require local and national action, along with working closely with our regional partners and local authorities.
- 2.5 Closely linked to the Climate Emergency are the challenges of poor Air Quality and the urgent need to reduce harmful emissions across the district, to protect against the immediate damaging effects of emissions on health. Public Health England have identified air pollution as the biggest environmental threat to health in the UK, with between 28,000 and 36,000 deaths a year attributed to long-term exposure¹.
- 2.6 The impact of climate emissions on the world we live in and the impact of air quality on our health are a significant concern. That is why the Council is aligning Air Quality measures with carbon emissions reduction as part of its proposed response to addressing the climate emergency. The causes of climate change and air pollution have much in common, mainly

¹ Public Health England, March 2019 - <https://www.gov.uk/government/organisations/public-health-england>

the burning of fossil fuels for transport, energy and heating etc. Reduction in fossil fuel use in all aspects of society will benefit both Air Quality and Climate Change. It is important that Kirklees Council avoid and learn from the mistakes of the past, such as the diesel car crisis, when the effects of one national policy to reduce carbon dioxide emissions did not consider the effects on air pollution - diesel emits less CO₂ but causes more air pollution than other vehicle fuels.

- 2.7 According to Public Health England poor air quality is the largest environmental risk to public health in the UK, as long-term exposure to air pollution can cause chronic conditions such as cardiovascular and respiratory diseases as well as lung cancer, leading to reduced life expectancy. In 2010, the Environment Audit Committee² considered that the cost of health impacts of air pollution was likely to exceed estimates of £8 to 20 billion for the UK.
- 2.8 Kirklees Council has identified 10 areas within our district where air pollution breaches internationally recognised health related objectives. 9 of these are for Nitrogen Dioxide and 1 for fine particulates. Kirklees Council are legally obliged to produce an Action Plan detailing the measures to reduce pollution.
- 2.9 A Public Health England Call to Action stated: “Improving air quality is crucial to reduce the health impacts and, in turn, help people live longer, healthier lives. A study in 2006 found that reducing PM by 10µg/m³ would extend lifespan in the UK by 5 times more than eliminating casualties on the roads, or 3 times more than eliminating passive smoking. Councils can: invest in infrastructure and public transport, and promote active travel and cycle routes; implement measures to reduce air pollution caused by road traffic and other sources; design healthy environments, bringing in spatial planning, urban design, road and building layouts, and green spaces”
- 2.10 It is also important to ensure that the Council is taking action to adapt to the impacts of existing climate change. Whilst the overall global impact is around 1°c of warming since the dawn of the industrial revolution, the impacts of this warming vary in different parts of the world. For Northern England, existing climate change is thought to contribute to increased temperatures, and an increase in extreme weather events. For example, the uplands of Western Kirklees experienced wildfires in late winter and early spring 2019. Parts of neighbouring Calderdale experienced catastrophic flooding in December 2015. It is important that we also take action to minimise this through adaptation. For example, woodland creation (afforestation), green infrastructure creation and habitat restoration can all help our natural resilience and help provide natural flood management, reducing the impacts of future events similar to those above.
- 2.11 Kirklees has a good track record in delivering carbon reductions but it is recognised that a step-change is required in order to meet increased ambition across the country and the district. The Council has the following current targets (to align with the then national target of an 80% reduction from 1990 levels under the Climate Change Act 2008),:
- A 40% reduction in Council carbon dioxide emissions by 2020-21 based upon a 2005/06 baseline
 - A 40% reduction in District carbon dioxide emissions by 2020-21 based upon a 2005/06 baseline
 - In July 2019, the Council also signed up to the West Yorkshire Combined Authority’s pledge for the Leeds City Region to achieve net zero carbon emissions by 2038, with significant improvements by 2030.

² Environmental Audit Committee *Air Quality Fifth Report of Session 2009–10*
<https://publications.parliament.uk/pa/cm200910/cmselect/cmenvaud/229/229i.pdf>

The Opportunity

- 2.12 Analysis from the Place-Based Carbon Action Network (<http://www.candocities.org/>) has shown that Kirklees can save over £137 million annually or £312 a year for everyone in the Borough if it exploited all of the profitable measures for energy efficiency and low carbon development.
- The region spent a total of £708 million last year on all of its energy and fuel bills, meaning that 8.5% of everything that is earned leaves the area to pay the energy bill;
 - Households in the area would save £45 million a year from their energy bill.
 - Schools, hospitals, offices, shops and restaurants in the area would save £19 million a year from their energy bill.
 - The area's industry could cut its fuel costs by £10 million a year.
 - Doing this would lead to the creation of an extra 1,936 years of employment in the area.
 - This would mean the area's carbon emissions would fall by 24.0% over and above what is already expected.
- 2.13 The data above shows that there are actions that are cost effective and would deliver significant benefits to Kirklees.
- 2.14 The Committee on Climate Change has identified significant benefits from aiming for net zero and addressing the climate emergency, which, it is estimated, could offset the resource costs (1-2% GDP) identified by the CCC to achieve net zero emissions:
- Improved quality of life through benefits to human health (and NHS savings) resulting from improved air quality, less noise, more active travel and a shift to healthier diets.
 - Improved air and water quality along with enhanced biodiversity and increased resilience and improved recreational benefits
 - Lower risks to businesses, organisations and citizens from climate change, both direct (e.g. flooding) and indirect (e.g. reduced exposure to food price rises)
 - Opportunities for businesses and industry through developing low carbon technologies and resources and the potential for stimulating new economic activity.
- 2.15 The Government has estimated that the low carbon economy could grow by 11% per annum through to 2030 (relative to around 2% for the wider economy). The performance of the UK economy over the last decade has also shown that economic growth has continued whilst also increasing reduction in emissions, demonstrating that economic growth does not have to result in increased emissions. Furthermore, the UK is considered to be in a good position to be at the forefront of the development of a range of low carbon industries, which will help maximise the economic and social benefits of addressing climate change³.
- 2.16 This ambition has also been picked up regionally. Kirklees is part of the Leeds City Region (LCR) and the West Yorkshire Combined Authority (WYCA). Kirklees supports the aims of the LCR Energy Strategy and Delivery Plan⁴ which sets out a range of strategic interventions with the aim of supporting the development of a resilient, zero carbon economy underpinned by high quality green infrastructure. Kirklees will continue to work closely with WYCA and regional and local partners in order to maximise the benefits to Kirklees and its businesses and residents in making the transition to a 'zero carbon' future.

³ HM Government Clean Growth Strategy and Delivering Clean Growth progress report (<https://www.gov.uk/government/publications/clean-growth-strategy>)

⁴ WYCA *Towards a zero-carbon Leeds City Region – Energy Delivery Plan* (<https://www.westyorks-ca.gov.uk/media/2424/leeds-city-region-energy-strategy.pdf>)

3. Background and Current Activity

- 3.1 In the past, Kirklees has been nationally recognised for its expertise in environmental management and carbon reduction. We recognise that through reducing budgets, we have, along with other partners and organisations, not given this agenda the attention it needs. We now commit to getting back on track and going even further to make Kirklees a 'zero carbon' district and responding to the climate emergency and air quality challenges.
- 3.2 We can do this by building on our existing reputation for innovative environmental, renewables and energy efficiency schemes. For example, over 50,000 private householders across Kirklees still benefit from insulation measures installed by the Council's Warm Zone scheme, which provided measures free of charge, where technically suitable. The council also blazed a trail in the installation of Solar PV into social housing schemes, trialling technologies at scale that we all now take for granted.
- 3.3 It is recognised we need to do better and make better use of our own investment, innovation and resources to tackle the climate emergency.
- 3.4 Kirklees Council declared a 'climate emergency' in January 2019, noting the recent evidence from the UN International Panel on Climate Change (IPCC) Special Report of 2018 and the Paris Agreement of 2015, aiming to limit global temperature increase to no more than 1.5 degrees.
- 3.5 Historically, Kirklees has had 2 Air Quality Management Areas (AQMA), through actions already taken, outlined below – we have dramatically improved pollution levels in these areas.

National and Regional Activity

- 3.6 Following independent advice from the Committee on Climate Change (the CCC), the UK Government legislated for 'net zero' emissions by 2050 in June 2019 (requiring an effective 100% reduction in carbon emissions by 2050 from 1990 levels as opposed to the previously legislated for 80% reduction). The CCC has noted⁵ that thanks to technological progress, this enhanced ambition can be achieved at the same cost as the previously legislated target (for an 80% reduction from 1990 levels, as per the 2008 Climate Change Act).
- 3.7 The West Yorkshire Combined Authority has declared its own climate emergency for the Leeds City Region and has set 2038 as its 'net zero' target, based on work commissioned from the Tyndall Centre for Climate Change Research. Alongside the other WY authorities, Kirklees has signed up to the LCR pledge to work to achieving 'net zero' emissions by 2038.
- 3.8 Related work by the Tyndall Centre has identified 2041 as the 'science based' date by which Kirklees should achieve 'net zero' carbon emissions in order to make a fair and equitable contribution to the above national and international targets and obligations. It is proposed that Kirklees increase its ambition to make 2038 the year by which Kirklees achieves 'net zero'. This means that Kirklees will align with our partner authorities in the LCR through the City Region's science-based net zero target of 2038.
- 3.9 Due to the close links between the climate change emergency and the need to improve air quality, this report is being submitted to Cabinet for consideration in conjunction with the

⁵ *Net Zero – The UK's contribution to stopping global warming*, The Committee on Climate Change, May 2019 (<https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/>)

Five-year Air Quality Action Plan (Appendix 3). The Air Quality Strategy is included for reference at Appendix 4.

- 3.10 There are a number of nationally important strategies on clean air, recognising the scale of the problem. Kirklees was identified as a Tier 3 Authority under the Governments Nitrogen Dioxide Plan. Regionally West Yorkshire authorities developed a Low Emission Strategy (WYLES). Kirklees Council was the recipient of a Government Grant to host a delivery officer to support the region on projects and initiatives to reduce emissions and improve air quality.

The Climate Emergency Motion and the Working Party

- 3.11 The Council passed a motion declaring a climate emergency in January 2019. The Council’s progress against each section of the motion is detailed in the table below:

Table 1

Motion measure	What the Council Has done
1. Declare a Climate Emergency and publicise this to the people of Kirklees to raise awareness, and support the public to take effective action.	The Council has declared a climate emergency. A follow-up press release was issued in July 2019. Internal and external communications campaigns have been developed and are being implemented.
2. Request Cabinet initiate a full Environmental Audit of Kirklees Council to measure its carbon footprint, identify hotspots and work toward being carbon neutral in line with the latest targets set and agreed by the United Nations Intergovernmental Panel on Climate Change; with Cabinet to report to the first meeting of the working party, referred to at 4 below on the scope of the environmental audit	The Council has undertaken an environmental audit of all services. Key areas and recommendations are included in the CEWP report which is set out in Appendix 1. A ‘net zero’ target year of 2038 and associated carbon budget is proposed following consideration of evidence from the Tyndall Centre.
3. Significantly improve our recycling rate to reach the target of 55% by 2025, and ask that the Cabinet implement a range of short term measures to improve recycling rates, in advance of a full review of the waste collection and disposal service.	The Council has undertaken the following short-term measures: <ul style="list-style-type: none"> • A monitoring and education campaign to support and enable residents to recycle and identify what can and cannot be placed inside the green bin • Introduction of a borough-wide garden waste collection service • Delivery of ‘Love Food Save More’ cooking workshops available to Kirklees residents helping them cook healthily on a small budget The Council is currently developing a new resources and waste strategy.
4. To set up a Councillor Working Party including the appropriate Cabinet Lead with a remit to: <ol style="list-style-type: none"> a) Commission and oversee the Environmental Audit b) Consult expert opinion in the field, as appropriate 	The Climate Emergency Working Party (CEWP) has concluded its work. The final report and recommendations are set out in the accompanying report at Appendix 1.

<p>c) Identify practical measures to reduce emissions and the Council's carbon footprint</p> <p>d) encourage action in the wider community, businesses and other key organisations e.g. NHS and Educational Institutions</p> <p>e) Report to Full Council within six months with an action plan to address the Emergency and incorporating proposals on the investment implications of this proposed activity</p>	
<p>5. The Council to consider Environmental Impact as part of any new policy</p>	<p>The Council has developed the Integrated Impact Assessment. This has taken the Council's established approach to Equality Impact Assessment (EIA) and added to this in order to also consider environmental impacts, which includes clean air and climate-change, when agreeing new policies. This new Integrated Impact Assessment was agreed by Cabinet on 8th October 2019.</p>
<p>6. The Council to seek to collaborate with other Local and Regional Authorities on emission reduction projects as appropriate. The Leader of the Council to write to the Minister of State for Climate Change and Industry requesting that national policy is urgently developed to reflect the seriousness of the current emergency and to release funds to local authorities that would allow them to take the necessary measures at local level.</p>	<p>Kirklees is a signatory to the West Yorkshire Combined Authority's pledge for a 'climate coalition' for the Leeds City Region to reach net zero carbon emissions by 2038. Kirklees representatives and Officers will continue to work with the WYCA and partner local authorities to identify opportunities for collaboration in order to reduce emissions.</p> <p>The Leader of the Council has written to the Secretary of State Business, Energy and Industrial Strategy and a response has been received from the Minister of State for Energy and Clean Growth.</p>

3.12 Following the declaration of a climate emergency in Kirklees, the council set up the cross-party Climate Emergency Working Party (CEWP) to identify practical measures to reduce emissions across the district in line with the following terms of reference:

- Commission and oversee the Environmental Audit
- Consult expert opinion in the field, as appropriate
- Identify practical measures to reduce emissions and the Council's carbon footprint
- Encourage action in the wider community, businesses and other key organisations e.g. NHS and educational institutions
- Report to Full Council within six months with an action plan to address the Emergency and incorporating proposals on the investment implications of the proposed activity.

3.13 The CEWP held a series of meetings between March and September 2019. These have now concluded and the CEWP final report is included at Appendix 1.

3.14 The work of the CEWP has shown areas of significant progress across the council in terms of addressing climate change (this is included in Section 5 of the attached CEWP report and summarised at section 3.15 below), but notes that in common with other authorities, significantly more work is required. It is proposed that the Council immediately commits to an ambitious long-term programme to address the challenges of the climate emergency, working closely with partners, businesses and residents. This will require a centralised co-ordination function and will also require services to develop and take forward their own proposals with capital investment implications.

Current Achievements

3.15 The Council welcomes the work undertaken by the Climate Emergency Working Party, in particular the Environmental Audit. This has identified a number of examples of good practice, several of which are summarised below:

- Current Carbon emissions targets: The Council is broadly on target to achieve its 2020-21 carbon emissions reductions target of a 40% reduction from a 2005/06 baseline, for Council and district emissions respectively. Current 2017/18 progress for the Council is a 32% reduction and a 35% reduction for the district as a whole (the latter based on 2016 data, the most recent available).
- 60% of street lighting in Kirklees (over 6,300 lights) has been converted to environmentally friendly LEDs. This has reduced electricity use by 3,025,378 kWh – the equivalent of running 18,116 televisions for four hours every day for a year.
- The Council's Catering Service provides Schools catering works with suppliers and schools on an ongoing basis to reduce waste. All schools operated by the Catering service have been accredited with the food4life "Silver Catermark" accreditation. This is independently audited by the Soil Association and ensures that food serves is healthy, seasonal, organic and/or free range, local and traceable.
- In the last six years, over 1,000 council properties have had wall insulation and almost 2,000 have received loft insulation. This has saved 1,543 and 241 tonnes of carbon respectively. Over 600 council houses have been fitted with solar panels in the same period.
- Bradley junction – An award winning project by Kirklees Urban Traffic Control to add technology called Virtual Emissions Monitoring to existing traffic lights to improve the efficiency of the system and reduce pollution. The traffic management system can calculate pollution levels at junctions and make intelligent decisions to improve traffic flow and reduce emissions. This action has led to a significant reduction in the size of the AQMA.
- Through a deep clean of the Ravensthorpe area we have dramatically reduced fine particulate pollution in the area to the point where DEFRA are satisfied we can remove the air quality management area – this will have significant improvement on health outcomes for the public.
- The Council has completed a successful feasibility study into the potential for a Huddersfield Heat Network, establishing the basis for a Town Centre heat network. This could bring significantly lower carbon emissions, increased future resilience and lower cost heat and power to premises in the town centre and potentially utilise waste heat from the town's energy-from-waste plant.
- The Council has successfully accessed £500K of external funding in order to deliver 17 rapid charge points for public use in Kirklees, these will be installed by March 2020 and include free electricity for EV users until October 2021.

- 3.16 In parallel with the work of the CEWP, the Council has also developed the Integrated Impact Assessment. This has taken the Council's established approach to Equality Impact Assessment (EIA) and added to this in order to also consider environmental impacts, which includes clean air and climate-changing gases, when agreeing new policies. This new Integrated Impact Assessment was agreed by Cabinet on 8th October 2019.
- 3.17 The Council recognises that significantly more work is required in addition to the above in order to reduce carbon emissions and address the climate emergency. This is set out in the proposed response below.

4 Proposed ambition

- 4.1 As a forward-thinking authority, Kirklees Council proposes ambitious action to tackle the climate emergency and improving air quality and will work with key partners nationally, regionally and locally to lead and influence everyone from individuals to large organisations to reduce their own footprint. There is an ambition to become a national leader in tackling climate change by providing local leadership, investment and developing innovative approaches to being net zero carbon by 2038. This will require commitment at a significant scale. This report sets out initial ambitious plans and highlights key areas where it is proposed the initial activity/investment should be concentrated.
- 4.2 The ambition is for Kirklees Council to be recognised as a leader in the Environment, Climate Change and Air Quality for our ambition and pace of change to address the Climate Emergency. This will align with our People, Partners and Places Corporate Ambitions and Corporate Plan. The proposals include working with partners and residents to encourage them to make more climate conscious decisions and continue to demonstrate best practise in this area.
- 4.3 It is recognised that any programme of change to tackle the climate emergency and resolve air quality issues will be over the long term. There will be many changes needed throughout this time and we will need to engage with people and partners about how these changes will affect Place – we will use the Place Standard Tool and principles to facilitate this engagement where appropriate.
- 4.4 Key to this is the establishment of a robust carbon budget for the district with an ambitious, realistic date for the district to reach net zero carbon emissions. The Council welcomes the evidence from the Tyndall Centre setting this out for Kirklees (included at Appendix 2), and recognises that there is an urgent need to increase the rate of carbon emissions reduction to achieve the biggest reductions over the next decade. Following the recommendation from the CEWP the Council proposes that we increase our ambition from reaching 'net zero' in 2041 (the Kirklees 'science-based' date) to 2038. This aligns with the WYCA Leeds City Region net zero target and means that we will play our part in supporting the region's ambitions. The carbon budget will align with the 5-year budgeting periods set out in the 2008 Climate Change Act.
- 4.5 The role of young people in developing and influencing this is recognised and the intention is to use their inspiration and enthusiasm to be as bold and ambitious as possible to deal with this emergency. The Climate Emergency Working Group have recommended a Youth Summit on Climate Emergency, we will commit resources to this and work with other anchor organisations to make this ground-breaking in the history of Kirklees.

- 4.6 As set out throughout this report, it is recognised that there is a need for the council to lead and work in partnership with our partner organisations, businesses and residents. The CEWP identified the need for a 'Climate Commission' of partners and organisations across the district. It is proposed that the Council commits to initiating and resourcing the set-up of this body and will work with partners to ensure its long term viability.
- 4.7 The proposals and phased approach are detailed at section 5 below.
- 4.8 The Climate emergency will affect us all in different ways. One key area that is fundamental to how we live and work is how we travel. The Committee on Climate Change has noted that transport is now the largest source of UK greenhouse gas emissions at 23% of the total, and emissions actually rose between 2013-17⁶. The Council recognises that many potential interventions relating to the transport sector are beyond its control. However, it is important the Council undertakes to lead and influence where it can to drive down transport emissions.
- 4.9 The Council will continue to develop and promote sustainable and active travel and ensure that Kirklees is recognised as a great place to walk and cycle, inspiring more people to walk and cycle more often as a mode of transport, for work, leisure or for sport.
- 4.10 The Council will also continue to use our influence to help improve public transport provision, working regionally with partners to improve our infrastructure and encourage the use of public transport.
- 4.11 Where private vehicle use is still essential, we will continue to identify and develop initiatives to facilitate the transition to Electric Vehicles and other alternative fuels and associated infrastructure.
- 4.12 The following council schemes also offer significant benefits to both addressing air quality issues and the climate emergency:
- a) The Kirklees 'Grey to Green' scheme:
 - The A62 Smart Corridor transport scheme includes a series of highway improvements in order to increase the vehicular capacity of the A62 resulting in improved journey times for this heavily congested corridor. By improving the traffic flow, this scheme will reduce 'stop-start' traffic congestion and reduce harmful emissions associated with poor air quality and the climate emergency. This transport scheme is funded by the West Yorkshire 'Plus' Transport Fund (WY+TF).
 - A key part of this scheme is the 'Grey to Green' project which will substantially transform, enhance, enlarge and upscale the green infrastructure and landscaping on the A62 Smart Corridor transport scheme in line with White Rose Forest 'Green Streets' principles. An 'eco-corridor' will be created by reallocating existing highway space. Lanes will be reduced in width or even eliminated in order to accommodate large areas of new green infrastructure.
 - This will provide an enhancement to the natural habitat networks in this area, increasing their ability to alleviate air pollution and also reduce flood risk and dramatically improve the visual quality of this gateway into Huddersfield.
 - This scheme is expected to be delivered in 2022.

⁶ CCC – Net Zero report (2019), page 48

- b) Active Travel and the Kirklees Walking and Cycling Strategic Framework⁷
- Kirklees and its partners has an ambition to increase the numbers of people walking and cycling, both as a mode of transport and for sport and leisure and the Department for Transport (2014) have noted many co-benefits that derive from active travel – for business, health, carbon reduction, education, pollution reduction and social cohesion
 - Short journeys also play a significant part in pollution from motor vehicles. 20% of all car related carbon dioxide emissions are from journeys of less than five miles (WYLES, 2016)
 - For these reasons, the Council has developed and is implementing the Kirklees Walking and Cycling Strategic Framework to increase active travel in the district. This will help make walking and cycling of all types more attractive for all sectors of the Kirklees Community and will contribute to the WY Transport Plan targets for a 300% increase in trips made by bicycle by 2027.

5. Our Proposals

Climate Emergency Phase 1 Priority Actions

- 5.1 It is proposed that we immediately take forward the Priority Actions identified by the Climate Emergency Working Party, as Phase 1 of an ambitious programme of activity to address the Climate Emergency. These measures are summarised in the table below and are detailed at section 6 of the CEWP Final Report at Appendix 1.

Table 2

Phase 1 Priority Proposals
1. To adopt an ambitious target for Kirklees to achieve district-wide 'net zero' carbon emissions no later than 2038 and implement the accompanying carbon budget derived from independent analysis for Kirklees and the Leeds City Region by the Tyndall Centre for Climate Change Research (included at Appendix 2).
2. To publically disclose Council and District Carbon Emissions via CDP (aka the Carbon Disclosure Project)
3. Boost woodland and green infrastructure creation via the existing White Rose Forest partnership
4. To implement an extensive communications and engagement campaign to encourage council staff and Kirklees residents to make a positive difference to the environment
5. To work with partners to develop, initiate and establish a 'Kirklees Climate Commission' and Kirklees 'Green Charter'
6. To develop a Kirklees Youth Summit and campaign for engaging with young people around the climate emergency
7. Support the West Yorkshire Combined Authority pledge for the Leeds City Region to reach net zero carbon emissions by 2038 (NB. The Council signed up to this pledge in July 2019)

Phase 2: Ongoing Programme and Development

- 5.2 It is recognised that to tackle the climate emergency requires an ongoing, long-term transformational commitment reducing our emissions and improving environmental outcomes. It is therefore proposed that the Council will follow up the Phase 1 priority actions above, by committing to and developing a Phase 2 programme action plan in order to set out

⁷ Kirklees Walking and Cycling Strategic Framework 2018-2030 (https://www.kirklees.gov.uk/beta/food-exercise-and-sport/pdf/walking_and_cycling_framework.pdf)

and develop ongoing service-level proposals with accompanying budget and resourcing considerations to address the climate emergency.

- 5.3 This will be an ambitious programme in scope and linked to the proposed Council's Carbon Budget and net zero target of 2038 and will include the consideration of the other recommendations made by the CEWP to address the emergency.
- 5.4 It is proposed that this transformational programme is delegated to officers in order to develop an ambitious work programme in which a balance will be achieved between being as ambitious as possible in order to reach our carbon reduction targets, whilst also fully considering the corporate implications for the Council. This programme will also need to be fully resourced, in line with the key recommendations of the CEWP. The budgetary implications and proposals of the Phase 2 Programme will be presented for Council consideration in February 2020 as part of the Council's budget-setting process.

Climate Emergency Monitoring Progress

- 5.5 To demonstrate progress and ensure continued accountability, the Council accepts the recommendation from the CEWP that a process of annual reporting is established in order to ensure continued accountability and monitor progress for this area of work against the carbon budget and that this should align with the annual CDP disclosure submission (by July 31st each year). This will be complemented with a further six-monthly progress check. The annual monitoring will also align with the five-yearly carbon budget periods as set out by the Climate Change Act (2008)

Air Quality Proposals

- 5.6 To comply with the Council's legal duties and to show our ambition to tackle the Air Quality Challenges in Kirklees it is proposed that Cabinet will accept and send our Air Quality Action Plan to Department of Environment, Food and Rural Affairs for assessment and approval. The Air Quality Action Plan contains over 100 separate actions to reduce emissions, looking at all aspects of Council activity.
- 5.7 It is also proposed that Cabinet publish the Air Quality Strategy set out in Appendix 4 to outline the council's approach and direction of travel in relation to Air Quality enshrining it, along with Climate Emergency at the centre of decision making and activity moving forward.
- 5.8 The highlights of the Air Quality Action Plan and Strategy are actions to reduce emissions from transportation, such as:
- To tackle emissions from Heavy Good Vehicles and large fleet operators we continue to run the EcoStars scheme, working with businesses to make large scale transportation fuel efficient and reduce pollution.
 - To increase electric vehicle use, commit to an Electric Vehicle and Infrastructure Strategy, along with more electric vehicles in our fleet and more public charge points, work with partners to be a national leader in EV
 - Major Transportation Schemes, redesigning and making new roads to move vehicles more efficiently, improve active travel and reduce emissions
 - Reduce emissions at existing junctions by improve technology on our traffic signals to prioritise certain vehicles and move vehicles through junctions in an efficient way
 - Work with Schools and the public to look at AQ outside schools, sustainable travel to schools and measures to tackle anti-idling
 - Specific projects, subject to budget setting, to elevate Air Pollution such as improvement projects at Birkenshaw Roundabout and Eastborough Junior School, testing our innovative technology to improve Air Quality

5.9 As part of the Council's legal duties under the Local Air Quality Management framework (Environment Act 1995 and associated guidance) the Council is required to report performance of measures to tackle air quality within its Action Plan, report the result of its air quality monitoring and review of air quality in the district to the Department of Environment, Food and Rural Affairs through its 'Annual Status Report' (ASR). It is recommended that the Council monitor its own progress by submitting the ASR to the scrutiny process on annual basis.

How this will fit with other Strategies and Policies

- 5.10 The proposals detailed above in section 5 will help achieve the 'Clean and Green' outcome of our Corporate Plan and help underpin the following strategies and plans:
- Town Centre Master-planning through the Huddersfield Blueprint and Dewsbury Strategic Development Framework.
 - The Kirklees Local Plan and emerging Supplementary Planning Documents and opportunities available through the planning system
 - Kirklees Economic Strategy and the development of a Sustainable Economy for Kirklees
 - Projects identified through the West Yorkshire Transport Plan for Kirklees
 - The Kirklees Big Build plan, aiming to deliver 10,000 new homes by 2023
 - Through the Council's Place-based agenda, understanding the climate emergency from a local perspective and help to foster a community response to it
 - The developing new Recycling and Waste Strategy for the Council.
 - Working with the White Rose Forest Partnership to increase tree cover and green infrastructure in Kirklees.
- 5.11 The Council will also consider the climate emergency programme and opportunities in relation to
- The Council's own estate and also partner School estates
 - Partnership with local anchor institutes
 - Partnership with local businesses
 - The Borough's existing private sector housing stock
 - Strategic direction and support available from the West Yorkshire Combined Authority, such as the Energy Accelerator scheme.
- 5.12 Mitigation is key, and we recognise we must reduce emissions urgently over the coming years in order to address the climate emergency. However, we accept too we cannot make all the changes overnight, and in some areas will need to start with incremental changes leading to a wholesale cultural approach.

6. IMPLICATIONS FOR THE COUNCIL

Working with People

- 6.1 Addressing climate change and air pollution are both areas that need to be addressed by working with members of the public, for example in influencing vehicle, travel and lifestyle choices. Whilst many actions will be taken at national and local authority level, people also need to be assisted in making the right decisions. The Council is considered to have a key role in influencing and changing the behaviour of residents. Furthermore, residents and communities need to know they have a say in how the council addresses this agenda in order to promote positive action (e.g. through the proposed Kirklees Commission). Transparency will be demonstrated by the Council annually disclosing its emissions to the CDP.

- 6.2 We will support residents and visitors to Kirklees to reduce emissions in our Phase 1 actions and Air Quality action plan by
- Communicating with people to inform what the problem is, give a reason for change and what we are doing and can do together to address the climate and air pollution problem.
 - Giving people a voice, especially young people through the climate commission and youth summits.
- 6.3 We propose to challenge people by communicating with people about what they can do to make a difference as we know the climate emergency and air pollution crisis cannot be tackled alone or in isolation.

Working with Partners

- 6.4 A key theme of tackling the Climate Emergency is collaborating with other partners, regionally and on the national stage. Addressing climate change and air quality is not something that the Council can achieve alone for the borough of Kirklees. Instead, a strong working relationship with partners is essential in order to develop real action in Kirklees. It is proposed that this will be achieved through:
- The proposed Kirklees 'Climate Commission' and 'Green Charter'
 - Through an expansive and ongoing communications campaign led by the Council.
 - Continue to engage and work with regional partners (WYCA and partner local authorities) to work towards regional targets and share best practice and project efficiencies through shared working.
 - Supporting the move to low emission travel, especially with regard to electric vehicles, we will produce an electric vehicle strategy with a focus on partnership so we can not doing anything in isolation.

Place Based Working

- 6.5 Climate change is an issue that will impact across the district. However, these impacts vary by geography and it is also noted that areas of increased deprivation are likely to have less resilience to these challenges, which will require a considered response from the council to create a local-based approach. Proposals will be carefully designed in order to provide an equitable provision for different communities in Kirklees.
- 6.6 We recognise that how we build and shape our places of the future will have to take into account greenhouse gas and pollution emissions, we will support our communities by shaping places which enable people and partners to be low emission. Key considerations in phase one and two work, subject to budgets, will revolve around:
- Low emission travel, we have already started to shape our places to support low emission travel by successfully accessing £500K grant funding for rapid electric vehicle charge points. Through our new and developing electric vehicle strategy we will consider carefully how we can support our communities further by applying place based working principles to the expansion of any electric charging network.
 - Through the White Rose Forest Partnership we will increase our tree cover, will transform our place to a more resilient environment as well as more visually attractive and improving biodiversity.
 - We will improve technology on our traffic management to improve flow of vehicles, make intelligent decisions relating to pollution to reduce emissions and save fuel.

Improving outcomes for children

6.7 As is noted above, children and young people are a key group of stakeholders for the district in terms of taking action on climate change and the Council has committed to developing and hosting a youth summit on this theme. The Council recognises that by addressing the climate emergency we will help secure our children's future.

6.8 Health effect caused by poor air quality are more acutely experienced by children. Therefore it is imperative that we improve air quality to protect the health of Children.

Other (e.g. Legal/Financial or Human Resources)

6.9 This proposed course of action would set the council on a transformational, ambitious journey to address the climate and air quality emergencies. It would require significant change to how the council operates, and also how the Council works with, leads and influences its partners. The proposals laid out above will result in additional resourcing requirements, both in terms of capital and revenue.

6.10 The package of measures outlined here will have a range of significant resourcing implications for the council:

- i. Phase 1 Priority Proposals – These are measures that can largely be undertaken now without significant revenue resources in the short term. There will be an additional revenue requirement in order to support the initiation of a Kirklees 'climate commission' and the comprehensive communications campaign. However, it should be also noted that in relation to the carbon budget, this will have significant and long-term revenue and capital implications as council services increase carbon reduction activities.
- ii. Phase 2 Programme: The further measures and proposals identified by the CEWP will need to be assessed by the council in order to prioritise taking these forward. It is considered that this will need to be a multi-year programme aligned to the council's carbon budget. Service level resources will be required to develop and implement schemes and interventions. Funding and resourcing requirements will be considered through the Council's budget setting process in February 2020.
- iii. The development and resourcing of a centralised officer function for monitoring and reporting the council's progress against its carbon budget is considered essential, together with service level resources to develop and implement schemes. Resourcing requirements will be considered through the Council's budget setting process in February 2020.

6.11 The development of an effective and ongoing communications campaign is considered crucial to the above and an area where the council is considered to wield considerable influence in the district. As a result this is prioritised as a Phase 1 measure.

6.12 It is proposed that Cabinet prioritise these budget asks into updated budget proposals for budget council consideration in February 2020.

6.13 When Local Authorities declare Air Quality Management Areas they are obliged by law to submit a local action plan. As Kirklees Council has declared 7 new Air Quality Management Areas since 2017 we are legally obliged to submit an action plan.

6.14 The introduction of Council's new Integrated Impact Assessment has been agreed by Cabinet separately on 8th October 2019. Whilst this was considered separately, the introduction does form part of the package of measures aimed at addressing the Climate Emergency and air pollution by requiring decisions to consider environmental implications. The implications of this are likely to be improved policy outcomes in relation to the climate,

and also potentially resourcing considerations for the Council in terms of achieving these outcomes.

7. Consultees and their opinions

7.1 The Air Quality Action Plan was developed in a collaborative way and local ward councillors with Air Quality Management Areas in their wards were engaged with during development. The Action Plan was then consulted on in Public during July and August 2019, the Action Plan outlines the outcome of the consultation and engagement process in Section 4 document in appendix 3.

7.2 Cllr Andrew Cooper (a member of the CEWP) has declined to sign off the final report of the CEWP for the following reasons:

- Concerns over the lack of a specific reference to the WYCA-led Leeds Bradford Airport expansion scheme and its potential for increasing emissions
- Lack of ambition over Passivhaus aspirations and new build housing standards
- Concerns over the phasing of the report recommendations leading to a perception that some are more important than others.

7.3 The remaining five members of the Working Party have all signed-off the final report of the CEWP (at Appendix 1).

8. Next steps and timelines

Climate Emergency

8.1 Should the above approach agreed, the Council will immediately commence the implementation of the proposals outlined in Phase 1.

8.2 Preparation of the Phase 2 proposals will take place as part of the budget planning process in autumn 2019, in preparation for the Council's budget setting in February 2020.

8.3 A report will be taken to Full Council by the CEWP and the Lead Cabinet member to report back on the conclusions of the CEWP on their work and recommendations and any decisions taken by Cabinet at its meeting on 12th November.

Air Quality

8.4 Following Cabinet approval and following the review and acceptance from National Government– the Air Quality Action Plan will be signed off by Portfolio Holder and Strategic Director. No timeline can be given for return from DEFRA.

8.5 If National Government does not recommend the Action Plan can be adopted – it will issue recommendations of what improvement should be made. Officers will take account of these recommendations and make revisions to the Action Plan. This will then be submitted for authorisation for re-submission to Government.

9. Officer recommendations and reasons

Climate Emergency Recommendations

1. Cabinet notes the content of this report and progress made to date regarding the Council's Climate Emergency Declaration in accordance with the full council resolution dated 16 January 2019, including progress on:
 - a. Publicising the Climate Emergency declaration
 - b. The work undertaken regarding the environmental audit of Kirklees Council
 - c. The reporting on progress on improving our recycling rate
 - d. The setting up of a Councillor Working Party
 - e. The reporting of agreement on protocols regarding Environmental Impact of new Council policy
 - f. The reporting of progress on collaboration with other Local and Regional authorities on emission reduction projects as appropriate
2. Cabinet to agree with the actions set out at section 5 of the report, which will form 'Phase 1' of the climate emergency work programme, and to agree that this work will commence immediately.
3. Pursuant to (2) above, Cabinet delegates the development and resourcing of further phases of the climate change emergency work programme to the Strategic Director - Economy and Infrastructure in conjunction with the Portfolio Holder for Greener Kirklees and the Portfolio Holder for Culture and Environment.
4. Cabinet agrees to prioritise the budget setting requirements deriving from both the Climate Emergency and Air Quality proposals in this report as part of the budget setting process for Council to consider in February 2020.

Reasons

1. For Cabinet to recognise the progress made to date in relation to the Climate Emergency declaration in the Council motion of January 2019 and to recognise the good work of the Climate Emergency Working Party and the Council's current achievements.
2. To allow Cabinet to recognise the work of the Climate Emergency Working Party and to immediately take forward the Phase 1 priority proposals identified by the working party.
3. To allow officers to progress the proposals and to develop and implement the follow up Phase 2 programme of work.
4. To recognise that all budget considerations not already agreed are to be part of the Council's budget setting process for February 2020.

Air Quality Recommendations

1. Cabinet notes the content of the report and recommends that cabinet approves the Kirklees Council Air Quality Action Plan and resolves for Portfolio Holder for Greener Kirklees and Strategic Director for Economy and Infrastructure to jointly sign Kirklees Council Air Quality Action Plan.
2. Cabinet delegates authority to Service Director (Environment) to make arrangements for the signed and approved 'Kirklees Council Air Quality Action Plan' to be sent to the Department for Environment, Food and Rural Affairs (DEFRA) for assessment.
3. Cabinet delegates authority to Service Director (Environment) in consultation with Portfolio Holder for Greener Kirklees to amend the 'Kirklees Council Air Quality Action Plan' if upon assessment by Department for Environment, Food and Rural Affairs the assessment requires the action plan to be amended.

4. Cabinet delegates authority to Head of Public Protection in consultation with Portfolio Holder for Greener Kirklees to make future amendments or updates to the Action Plan as part of on-going review of air quality and the actions Kirklees Council is taking. Updates to the Action Plan will be reported to DEFRA through Annual Status Reporting.
5. Cabinet delegates authority to Head of Public Protection to make arrangements for the approved action plan and any future amendments to the approved action plan to be published on the Council's Website
6. Cabinet notes the content of the report and recommends that cabinet approve the Kirklees Council Air Quality Strategy
7. Cabinet delegates authority to Service Director (Environment) to publish the aforementioned strategy on the Council's Website.
8. Cabinet delegates authority to Service Director (Environment) in consultation with Portfolio Member for Greener Kirklees to make future changes to the Air Quality Strategy and decisions in respect of the strategy
9. Cabinet notes the contents of the report and that the progress on the commitments within the Air Quality Action Plan will be reported each year to the Department of Environment and Rural Affairs through the publication of the Annual Status Report.

Reasons:

1. The discharge of functions relating to the management of air quality is a "local choice" function and the Kirklees Constitution has allocated this responsibility to Cabinet.
2. Section 82 of the Environment Act 1995 (EA 1995) requires local authorities to review air quality in their areas and assess whether the air quality standards specified in the National Air quality Standards are being met . Where they are not being achieved or are not likely to be achieved, the local authority is required to designate air quality management areas ("AQMA's") under section 83 EA 1995. 10 AQMA's have been designated within Kirklees Council's area.
3. Local authorities must prepare a local air quality Action plan seeking to achieve the relevant air quality standards in an AQMA (section 84 (2)).
4. The air quality objectives applicable to local AQMA's are set out in the Air Quality (England) Regulations 2000 (as amended) ;
5. Statutory guidance on local air quality management areas is contained in "Defra : Technical guidance LAQM.TG(16) (April 2016) ; and Defra : Technical and Supporting guidance: Local air Quality Management Support .

10. Cabinet portfolio holder's recommendations **Climate Emergency Recommendations**

1. Cabinet notes the content of this report and progress made to date regarding the Council's Climate Emergency Declaration in accordance with the full council resolution dated 16 January 2019, including progress on:
 - b. Publicising the Climate Emergency declaration
 - c. The work undertaken regarding the environmental audit of Kirklees Council
 - d. The reporting on progress on improving our recycling rate
 - e. The setting up of a Councillor Working Party
 - f. The reporting of agreement on protocols regarding Environmental Impact of new Council policy

- g. The reporting of progress on collaboration with other Local and Regional authorities on emission reduction projects as appropriate
2. Cabinet to agree with the actions set out at section 5 of the report, which will form 'Phase 1' of the climate emergency work programme, and to agree that this work will commence immediately.
3. Pursuant to (2) above, Cabinet delegates the development and resourcing of further phases of the climate change emergency work programme to the Strategic Director - Economy and Infrastructure in conjunction with the Portfolio Holder for Greener Kirklees and the Portfolio Holder for Culture and Environment.
4. Cabinet agrees to prioritise the budget setting requirements deriving from both the Climate Emergency and Air Quality proposals in this report as part of the budget setting process for Council to consider in February 2020.

Reasons

1. For Cabinet to recognise the progress made to date in relation to the Climate Emergency declaration in the Council motion of January 2019 and to recognise the good work of the Climate Emergency Working Party and the Council's current achievements.
2. To allow Cabinet to recognise the work of the Climate Emergency Working Party and to immediately take forward the Phase 1 priority proposals identified by the working party.
3. To allow officers to progress the proposals and to develop and implement the follow up Phase 2 programme of work.
4. To recognise that all budget considerations not already agreed are to be part of the Council's budget setting process for February 2020.

Air Quality Recommendations

1. Cabinet notes the content of the report and recommends that cabinet approves the Kirklees Council Air Quality Action Plan and resolves for Portfolio Holder for Greener Kirklees and Strategic Director for Economy and Infrastructure to jointly sign Kirklees Council Air Quality Action Plan.
2. Cabinet delegates authority to Service Director (Environment) to make arrangements for the signed and approved 'Kirklees Council Air Quality Action Plan' to be sent to the Department for Environment, Food and Rural Affairs (DEFRA) for assessment.
3. Cabinet delegates authority to Service Director (Environment) in consultation with Portfolio Holder for Greener Kirklees to amend the 'Kirklees Council Air Quality Action Plan' if upon assessment by Department for Environment, Food and Rural Affairs the assessment requires the action plan to be amended.
4. Cabinet delegates authority to Head of Public Protection in consultation with Portfolio Holder for Greener Kirklees to make future amendments or updates to the Action Plan as part of on-going review of air quality and the actions Kirklees Council is taking. Updates to the Action Plan will be reported to DEFRA through Annual Status Reporting.
5. Cabinet delegates authority to Head of Public Protection to make arrangements for the approved action plan and any future amendments to the approved action plan to be published on the Council's Website

6. Cabinet notes the content of the report and recommends that cabinet approve the Kirklees Council Air Quality Strategy
7. Cabinet delegates authority to Service Director (Environment) to publish the aforementioned strategy on the Council's Website.
8. Cabinet delegates authority to Service Director (Environment) in consultation with Portfolio Member for Greener Kirklees to make future changes to the Air Quality Strategy and decisions in respect of the strategy
9. Cabinet notes the contents of the report and that the progress on the commitments within the Air Quality Action Plan will be reported each year to the Department of Environment and Rural Affairs through the publication of the Annual Status Report.

Reasons:

1. The discharge of functions relating to the management of air quality is a "local choice" function and the Kirklees Constitution has allocated this responsibility to Cabinet.
2. Section 82 of the Environment Act 1995 (EA 1995) requires local authorities to review air quality in their areas and assess whether the air quality standards specified in the National Air quality Standards are being met . Where they are not being achieved or are not likely to be achieved, the local authority is required to designate air quality management areas ("AQMA's") under section 83 EA 1995. 10 AQMA's have been designated within Kirklees Council's area.
3. Local authorities must prepare a local air quality Action plan seeking to achieve the relevant air quality standards in an AQMA (section 84 (2)).
4. The air quality objectives applicable to local AQMA's are set out in the Air Quality (England) Regulations 2000 (as amended) ;
5. Statutory guidance on local air quality management areas is contained in "Defra : Technical guidance LAQM.TG(16) (April 2016) ; and Defra : Technical and Supporting guidance: Local air Quality Management Support .

11. Contact officer(s)

John Atkinson, Project Manager, Major Projects Service (Climate Emergency)

Martin Wood, Operational Manager, Public Protection (Air Quality)

12. Background Papers and History of Decisions

Link to the 'Climate Emergency' Council Motion

<https://democracy.kirklees.gov.uk/mgAi.aspx?ID=10123>

Link to the Integrated Impact Assessment Cabinet Report (Item 9):

<https://democracy.kirklees.gov.uk/ieListDocuments.aspx?CId=139&MId=5955&Ver=4>

Link to the West Yorkshire Combined Authority Board 'Tackling the Climate Emergency' Update, 10th October 2019

<https://westyorkshire.moderngov.co.uk/documents/s13597/Item%208%20-%20Tackling%20the%20climate%20emergency.pdf>

Link to the Council Motion requiring the preparation of an Air Quality Strategy (21st March 2018)

Link: <https://democracy.kirklees.gov.uk/ieListDocuments.aspx?CId=138&MId=5423>

Appendices

Appendix 1: Kirklees Climate Emergency Working Party Final Report

Appendix 2: Tyndall Centre Carbon Budget for Kirklees

Appendix 3: Kirklees Council Air Quality Action Plan

Appendix 4: Kirklees Council Air Quality Strategy

Appendix 5: Integrated Impact Assessment for the Climate Emergency and Air Quality Proposals

13. Service Director responsible

Angela Blake, Service Director Economy & Skills (Climate Emergency)

Sue Procter, Service Director Environment (Air Quality)

**Kirklees Council Climate Emergency Working Party
Final Report
September 2019**

1. Summary

- The Council passed a motion declaring a ‘Climate emergency’ in January 2019 and has established the Councillor-led Climate Emergency Working Party (CEWP) to identify actions to address the challenges posed by the climate emergency and reducing emissions associated with council and district activity, in line with the Terms of Reference below.
- This report provides an overview of the national and regional context for the climate emergency and presents the results of the CEWP work in Kirklees. This includes proposing 2038 as the target year for Kirklees to achieve ‘net zero’ emissions along with an associated carbon budget.
- Recommendations are proposed for consideration by the Council at Section 6.

CEWP Terms of Reference	What the CEWP has done
a) Commission and oversee the Environmental Audit	The CEWP has undertaken a dynamic audit of council services areas in order to gather evidence from within the council to identify areas where significant carbon savings could be made. This is detailed at section 4.3, with a summary of the audit findings at Section 5.
b) Consult expert opinion in the field, as appropriate	External advice has been sought from the University of Leeds School of Earth and Environment, Leeds Climate Commission, the Tyndall Centre and the CDP (formerly the Carbon Disclosure Project). This is detailed at section 4.8 and 4.14.
c) Identify practical measures to reduce emissions and the Council’s carbon footprint	The methodology for identifying a Kirklees Carbon Budget and associated footprint is identified at 4.13. Practical measures are identified in the recommendations at section 5 and 6..
d) Encourage action in the wider community, businesses and other key organisations e.g. NHS and Educational Institutions	A communications campaign has commenced covering both internal and external engagement. The CEWP proposes that the Council works with partners to develop a ‘climate commission’ type body for the district (see 4.7 and 4.26)
e) Report to Full Council within six months with an action plan to address the Emergency and incorporating proposals on the investment implications of this proposed activity	This report presents the findings of the CEWP and identifies priority actions at Section 6, along with next steps which it is proposing that the council progresses.

2. Context and Background

2.1 Kirklees Council declared a ‘climate emergency’ in January 2019, noting the recent evidence from the UN International Panel on Climate Change (IPCC) Special Report of 2018 and the Paris Agreement of 2015, which established the principle of addressing

global emissions in a fair and equitable way and set out the importance of limiting global temperature increases to no more than 1.5 degrees.

2.2 This evidence has also been recognised by the UK Government, which following advice from the independent Committee on Climate Change (CCC)¹ has legislated for achieving 'net zero' carbon dioxide emissions by 2050 via the Climate Change Act 2008 (2050 Target Amendment) Order 2019, which came into force on 27 June 2019. This has introduced a target for at least a 100% reduction of greenhouse gas emissions (compared to 1990 levels) in the UK by 2050. This is otherwise known as a 'net zero' target. The Climate Change Act (2008) previously legislated for an 80% reduction by 2050.

2.3 Regionally, the West Yorkshire Combined Authority (WCYA) has also declared a Leeds City Region (LCR) climate emergency, along with the other West Yorkshire local authorities. The LCR Strategic Economic Plan (2016) sets out the ambition to be a "resilient, zero carbon energy economy" Subsequently the Energy Strategy and Delivery Plan and associated work commissioned from the Tyndall Centre for Climate Change Research has identified 2038 as a 'science-based' target for when the LCR should become a 'net zero' emission city region. Kirklees, alongside other partner authorities has signed up to the Leeds City Region Climate Coalition to work to achieving 'net zero' emissions by 2038.

2.4 Related work by the Tyndall Centre has identified 2041 as the 'science based' date by which Kirklees should achieve 'net zero' in order to make a 'fair and equitable' contribution to the above national and international targets and obligations.

2.5 The Council has existing carbon emission reduction targets which run through to 2020/21 and are as follows:

- Council: To achieve a 40% reduction in carbon emissions by 2020-21, based upon a 2005-06 baseline. Current 2017/18 progress: 32% reduction.
- District-wide: To achieve a 40% reduction in district carbon emissions by 2020-21 based upon a 2005-06 baseline. Progress in 2016: 35% reduction (NB. This is based on Government data and is the most recent figure currently available)

2.6 Following the declaration of a climate emergency in Kirklees, the council set up the cross-party Climate Emergency Working Party (CEWP).

3. Terms of Reference and Working Party Members

3.1 The terms of reference for the Working Party are as follows:

- a) Commission and oversee the Environmental Audit*
- b) Consult expert opinion in the field, as appropriate*
- c) Identify practical measures to reduce emissions and the Council's carbon footprint*
- d) Encourage action in the wider community, businesses and other key organisations e.g. NHS and Educational Institutions*

¹ Committee on Climate Change 'Net Zero – The UK's contribution to stopping global warming' Report - www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/

- e) *Report to Full Council within six months with an action plan to address the Emergency and incorporating proposals on the investment implications of this proposed activity*

3.2 The Working Party is comprised of the following elected Members:

Cllr Richard Murgatroyd (Chair)
Cllr Andrew Cooper
Cllr Naheed Mather (Cabinet Portfolio Holder)
Cllr Andrew Pinnock
Cllr Harpreet Uppal
Cllr Rob Walker

3.3 At the first meeting of the Working Party it was agreed that a representative from the Kirklees Youth Council would be invited to attend meetings. Two representatives from the Kirklees Climate Emergency Group (KCEG), Chris Herring (also Director of the Green Building Store) and Gideon Richards (also CEO of Consulting with Purpose Ltd), have been invited to attend the Working Party as invited observers and also contributed to Working Party deliberations.

3.4 There has been eight CEWP meetings, including a separate special session with a presentation and discussion with Professor Andy Gouldson, Professor of Environmental Policy at the University of Leeds and Co-chair of the Leeds Climate Commission.

3.5 The Working Party wish to thank the following individuals and organisations for their input supporting the CEWP: Professor Andy Gouldson at the University of Leeds/Leeds Climate Commission, the Tyndall Centre, CDP, and the invited observers from the Kirklees Youth Council and the external Kirklees Climate Emergency Group

4 Key Information and Considerations

4.1 The CEWP has agreed that the approach to addressing the climate emergency should follow over-arching principles:

- Ensuring resilience to climate change through mitigation (i.e. reducing emissions) and adaptation (i.e. ensuring that Kirklees is able to adapt to a changing climate).
- That the Council's approach to the climate is district-wide and not just relating to the council's own operations and footprint
- That the work to address the climate emergency aligns to and complements other Kirklees environmental priorities, in particular air quality management. The climate emergency falls under the council's 'Clean and Green' corporate priority.
- That the Council pursues an evidence-based approach to addressing the climate emergency that aligns to relevant international, national and regional targets and ambitions.

4.2 In order to comply with the mandate for the Working Party the following approach has been devised to establish our approach to addressing the climate emergency:

- a) To undertake a **Council-wide Environmental Audit** to help measure our climate impact, to identify 'hotspots' and measures to help reduce the council's emissions
- b) Recognising that the climate emergency requires a district wide response (not just the Council) to seek external advice and **develop a forum for achieving a district-wide response**

- c) To identify a **carbon emissions budget** for the district along with a target date to reach 'net zero' emissions.
 - d) To **raise awareness, encourage action and demonstrate leadership**, the council has developed a programme of internal communications engagement (underway) with the intention of rolling out this approach externally to support Kirklees residents and communities (including children and young people) to take effective action.
 - e) To report back to Full Council detailing progress of the above and setting out proposals and recommendations for next steps for the Council (this report).
- These steps are considered in more detail below.

4.3 Environmental Audit and Action Plan

To achieve the environmental audit, the CEWP has undertaken a dynamic audit of council service areas in order to gather evidence from within the council to identify areas where significant carbon savings could be made, including:

- Identifying existing initiatives underway
- Outlining the current policy and statutory framework that applies
- Identifying opportunities available to tackle the climate emergency with current resources
- Identifying future opportunities outside current resourcing constraints that could be pursued in future.

4.4 Prior to the Audit being undertaken, the CEWP considered progress against the council's current internal carbon emissions targets (for 2017/18), which run to 2020/21. These targets and progress are summarised above at 2.5.

4.5 This Audit has been undertaken in two ways:

- i. Priority areas of Council activity relating to the climate emergency were identified by CEWP members, and relevant officers were invited to CEWP meetings to provide submissions outlining current work and discuss potential opportunities with the CEWP.
- ii. An information gathering exercise from all Council Services

4.6 The results from the priority areas are provided at section 5 of this report and include recommendations where appropriate from the CEWP. Priority areas are identified, along with follow-up actions resulting from the Environmental Audit. These areas are as follows:

1. Built Environment
2. Natural Environment, Greenspace and Flood Risk
3. Sustainable Economy
4. Travel & Transport
5. Waste & Resources

4.7 Consulting Expert Opinion and developing a district wide response

The CEWP quickly established that action to tackle the climate emergency should be a district-wide approach as opposed to merely covering the operations of the council. It is also recognised that whilst the council has limits to its direct power, it possesses considerable local influence and can advocate for action. An approach that works in partnership with local organisations and stakeholders is therefore considered essential.

4.8 To help inform how the council develops a district-wide response, a special session of the CEWP was convened with Andy Gouldson, Professor of Environmental Policy at the University of Leeds and co-Chair of the Leeds Climate Commission, who outlined the approach taken in Leeds.

4.9 Key learning from this discussion was considered to be:

- A district-wide body needs an independent voice and not just be a mouthpiece for the council (for example, the Leeds Climate Commission has two Co-Chairs: Professor Gouldson from the University of Leeds, and the senior portfolio holder from the Council)
- A balanced structure is likely to achieve the most comprehensive and representative results. The Leeds Commission is equally split between public sector, private sector and third sector/community organisation representatives
- Comprehensive representation can also make the group unwieldy. The Leeds Commission has adopted a structure of an over-arching strategy group, with working sub-groups operating beneath this, considering resilience, emissions reduction, engagement and project finance respectively.
- Facilitating 'city conversations' with residents can be a key way of ensuring the district responds to the climate emergency in a 'just' way.

4.10 A recommendation is therefore made that Kirklees proceeds to work with partners to develop an appropriate 'Kirklees Commission' type body, and that this will involve considering other examples in addition to the Leeds model. The CEWP proposes that the council should initiate and resource the set-up of this body and that this should be followed by a commitment to working with partners to ensure its long-term viability. A further consideration is the developing regional picture at WYCA and the Leeds City Region and it is also noted that there will be benefits to designing an approach that is compatible with Kirklees' regional partners.

4.11 It is also recognised that to ensure joined-up working, any Kirklees Commission-type body should also work in conjunction with or complement other partner engagement bodies that already exist or that the council is developing.

4.12 The CEWP has also sought expert guidance from the Tyndall Centre and CDP with regard to identifying a carbon budget and setting out a proposed course of action for achieving this. This is detailed below.

4.13 **The Kirklees 'Net Zero' target, Carbon Budget and Footprint**

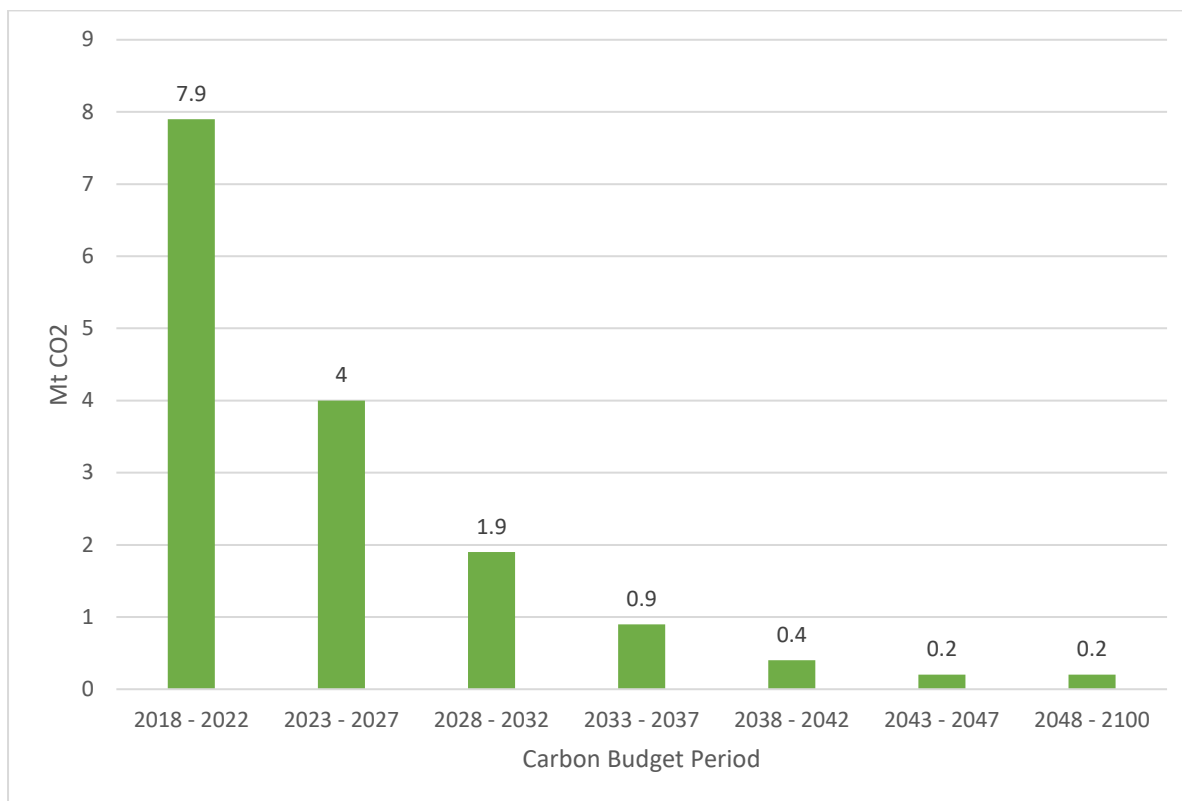
The Council's current carbon reduction targets expire in 2020-21 and it is recommended that a step-change is required in identifying new targets that align with national 'net zero' legislation, regional goals, and the council's own aspirations.

4.14 To achieve this, an evidence-based approach has been taken, utilising current best practice and available data. The Council has sought advice and independent analysis from the Tyndall Centre (a partnership of UK Universities working together to provide evidence to inform society's transition to a sustainable low-carbon and climate resilient future) in order to set a 'carbon budget' for Kirklees and identify an advisory climate change target. This puts a value on what Kirklees will need to do as a district in order to

make its 'fair' contribution to the Paris Agreement goals. This is also referred to as a 'science-based' target.

- 4.15 The Tyndall Centre carbon budget utilises an approach pioneered for Greater Manchester and also adopted for the Leeds City Region 2038 target. The Kirklees analysis and methodology is included at Appendix 2. In summary, Kirklees should:
- Stay within a cumulative carbon dioxide emissions budget of **11.9 million tonnes CO₂** (MtCO₂) for the period 2020 to 2100. **At 2017 emission levels, Kirklees would use this entire budget within 7 years from 2020.**
 - Initiate an immediate programme of CO₂ mitigation to deliver cuts in emissions averaging a minimum of **-13.5%** per year in order to deliver a Paris-aligned Carbon budget.
 - Reach zero or near zero carbon no later than **2041**.
- 4.16 The approach to the carbon budget for Kirklees is summarised as follows by the Tyndall Centre, with further detail available at Appendix 2.
- “The most recent annual CO₂ emissions for Kirklees up to the Paris Agreement (2011-2016) is averaged and compared to averaged data for the whole UK [13] over the same period. The carbon budget (2020-2100) for Kirklees is then apportioned based on Kirklees’s average proportion of UK CO₂ emissions for the 2011-2016 period. CO₂ emissions in the carbon budget include emissions from fossil combustion within the region and a share of the emissions from national electricity generation (relative to the Kirklees area's end-use electricity demand).”*
- 4.17 Setting a carbon budget gives the authority a clear understanding of the Kirklees-wide, local-level 'fair' contribution to the Paris Climate Change Agreement, and the zero carbon/neutral target year to achieve this.
- 4.18 It is also important to note that whilst the target year for achieving 'net zero' represents a clear indication of the scale of ambition needed, it is the ongoing carbon budget and cumulative CO₂ emitted over the course of this budget that is key to achieving the council's climate ambitions. It is recommended that the authority aligns to the five-year carbon budget periods established with the Climate Change Act 2008, which ensures Kirklees action will be compatible with UK Government Action and regional Leeds City Region ambitions. The Kirklees carbon budget aligned to the five-year carbon budget periods is illustrated in the chart below at Figure 1.

Figure 1 Cumulative CO2 Emissions for the budget period in Kirklees (Tyndall Centre analysis)



- 4.19 This is a district-wide carbon budget for Kirklees and is considered to align with the scope of the council motion (as opposed to relating only to council activity). Whilst the council does not have direct data relating to district-wide emissions, the Department for Business, Energy and Industrial Strategy (BEIS) produce a publically available, annually-updated dataset detailing local authority-area level carbon dioxide emissions
- 4.20 As above, 2041 is considered the ‘science-based’ target for Kirklees to meet its Paris-related obligations. However, given that the equivalent LCR regional target is 2038 (which the Council has endorsed via a regional pledge), the CEWP proposes that 2038 will be an appropriate target to adopt for Kirklees and demonstrates ambition and the council’s commitment to working to achieve regional targets.
- 4.21 To be able to accurately measure the council’s local-level emissions, model scenarios and set reduction targets, the Council can use the ‘SCATTER’ (*“Setting City Area Targets and Trajectories for Emissions Reduction”*) created by Greater Manchester and Nottingham Authorities and their consultants and funded by BEIS) tool to establish the local district-wide carbon footprint. In future, it will also allow the council to model pathway scenarios and test different potential interventions. A summary of the current Kirklees footprint is included at Appendix 3.
- 4.22 As a means of ensuring openness, the CEWP has also noted that the council can ‘disclose’ its emissions via CDP² to ensure transparency and demonstrate intent. CDP is a UK-based international not-for-profit organisation that encourages companies and cities/municipalities to disclose their emissions on an annual basis. Disclosing to CDP in

² For further information about CDP, please see their website at www.cdp.net/en/cities

encouraged as a means of demonstrating intent, benchmarking and sharing good practice with other municipalities and organisations across the world.

4.23 Taken together, the CEWP considers that the above three resources greatly facilitate the council being able to establish a robust carbon emissions reduction pathway for future years.

4.24 It is also considered that adopting a 'net zero' target now, will also allow the Council to be proactive ahead of compliance mandated by central government, which is considered likely to be imposed by Government as a logical consequence of the recent 'net zero' national legislation.

4.25 It is recommended that as a priority follow up action, in the development of the proposed carbon budget programme process, the measures outlined in the supporting Action Plan and wider Council programme will each need a carbon saving value allocating to them. This will help to prioritise resources to reduce emissions, which should form a prioritised 'phase 2' action plan going forwards as part of a transformational plan for how the council approaches the carbon budget.

4.26 Encourage action in the wider community, businesses and other key organisations

As detailed at section 4.10, the CEWP proposes that the Council work with district partners to develop the concept and implementation of a 'Kirklees Climate Commission' body for the district. It is considered that this will be the key forum for encouraging action in the wider community and organisations and driving longer term climate action. A proposal is also made for an annual Kirklees 'climate summit' as part of the Commission, in order to demonstrate and reflect on progress made and identify priorities for future work.

4.27 In addition to the above, the CEWP has considered the development of a Kirklees-wide 'Green Charter' designed as a complementary initiative for the Commission body. The group considers that this should be developed as a desirable 'hallmark' to serve as a bold statement of intent for the signatory organisation and demonstrate that the council and partners are committed to taking action and adhering to principles to reduce their carbon impacts and address the climate emergency.

4.28 The CEWP has also initiated a communications plan in order to raise awareness, promote action and gather ideas for addressing the climate emergency. Recognising that the Council needs to 'get its own house in order' first, this plan has commenced first internally, for council colleagues. It is proposed to evaluate the approach prior to it being followed up with an ongoing external campaign for Kirklees residents. A key sub-group for the external engagement will be children and young people. The communications approach will be tailored to take into account the proposed Youth Summit (see below) and also the development of the Kirklees Commission and Charter. As this work becomes grows and becomes embedded, it is proposed that the council's (and partners') communications will need to develop, expand and operate in a more externally-facing role for the council to influence the local population. This expanded plan should be in place and followed by summer 2020.

4.29 As part of engaging with the wider district, the Working Party recognises that the Council must also help empower the children and young people of Kirklees to become an essential part of the solution. The CEWP has developed a Youth Summit proposal and proposes that the Council develop and progress this through adopting a place based approach to engaging primary, secondary schools and colleges with developing measures for addressing the emergency. This will also include working with apprentices and young people involved in industry and will take in the seven place partnership areas, after which representatives from each would be invited to a resulting Youth Summit to share and expand upon their findings and recommendations.

4.30 Financial Implications

As an immediate follow up to the Environmental Audit and consideration by Full Council, it is proposed that Cabinet give further consideration to progressing a detailed, fully costed plan, particularly where there are budgetary/resourcing or risk implications over 'business as usual', in order to meet the ongoing challenges of reducing emissions.

4.31 As noted at 4.5, the Environmental Audit exercise has also gathered information from across the Council's service structure, in addition to the priority service areas identified at 4.6. These are summarised in the table below:

Table 1

Strategic Directorate	Service Director Area
Adults & Health	Adults Social Care Operation
	Integration
	Quality Assurance, Standards & Safeguarding
Children & Families	Child Protection & Family Support
	Learning & Early Support
Economy & Infrastructure	Growth & Housing
	Environment
	Economy & Skills
	Kirklees Neighbourhood Housing
Corporate Strategy, Commissioning & Public Health	Finance
	Governance & Commissioning
	Strategy & Innovation
	People Service
	Communities

4.32 The CEWP proposes that this information is taken into account and helps inform the council's budget setting process in order to prioritise the allocation of resources in relation to addressing the climate emergency.

4.33 The CEWP welcomes the Council's development of an integrated approach to expanded equalities characteristics and environment and the resulting Integrated Impact Assessment. The group notes that this will be a useful framework to help guide budget setting.

5 Summary of the Environmental Audit for Priority Areas and Working party P

Sector	Project/Work Area	Current Progress	CEWP Proposals
5.1. Council Emissions	Kirklees Internal Carbon Emissions Reporting for 2017/18	<p>At the first CEWP, the group considered the latest annual carbon emissions reporting for the Council's emissions, with the following headline results:</p> <ul style="list-style-type: none"> • Council: To achieve a 40% reduction in carbon emissions by 2020-21, based upon a 2005-06 baseline. Current 2017/18 progress: 32% reduction. • District-wide: To achieve a 40% reduction in district carbon emissions by 2020-21 based upon a 2005-06 baseline. Progress in 2016: 35% reduction (NB. This is based on Government data and is the most recent figure currently available) 	<p>The CEWP noted positive progress against the current targets but noted that the climate emergency motion has a district-wide focus and should focus on the council taking a leadership role.</p> <p>Key recommendations noted included:</p> <ul style="list-style-type: none"> • The need to identify a route to addressing energy efficiency in non-standard building stock across the district • For the council to recognise the climate emergency when undertaking asset transfers of older buildings to third parties and recognise that this still remains a problem for the district as a whole. • The potential of the Huddersfield Heat Network in reducing carbon emissions was noted with further information requested on the scheme (see 5.6)(. • The need to establish a meaningful district-wide carbon budget and targets in order to address the climate emergency and benchmark against others. • The council should link measures to improve air quality to the climate emergency where appropriate • The council should work with partners to reduce single use plastics in the borough

Sector	Project/Work Area	Current Progress	CEWP Proposals
--------	-------------------	------------------	----------------

<p>5.2. Built Environment</p>	<p>Planning Policy</p>	<p>The Kirklees Local Plan was adopted on 27 February 2019 and is the statutory development plan for Kirklees.</p> <p>The Local Plan includes a suite of policies that development proposals are considered against and which cover a wide range of issues that seek to ensure development can be resilient to and reduce the causes of climate change.</p> <p>The Local Plan has a series of monitoring indicators that will evaluate how successful the plan is in delivering sustainable development to reduce causes / effects of climate change.</p>	<p>The CEWP therefore proposes:</p> <ul style="list-style-type: none"> a) Work is initiated to ensure that Huddersfield and Dewsbury Area Action Plans develop town centre responses to climate change for residential and non-residential premises. b) That the highest environmental standards and the principles of ‘reduce, reuse and recycle’ are built into any new town centre Blueprint development c) That consideration be urgently given to how a Quality Places (Design) supplementary planning document can develop local policy along with National planning guidance d) That in recognition of the potential importance of Neighbourhood Plans, as they will become statutory parts of the development plan once adopted, there is potential for the Council to support Parish and Town Councils and community groups to develop climate change related policies. In particular, given the limited resources and powers enjoyed by these groups, it would make sense for the Council to help facilitate networking and good practice across the District, as well as provide good advice and model policies
	<p>Building Regulations, Housing – new build and private retrofit/energy efficiency and Council Housing</p>	<p>NB. This item also included a written submission from the Kirklees Climate Emergency Group (KCEG) Observers to the CEWP.</p> <p>The Council’s target for building 10,000 new homes over the next five years was detailed, to be delivered via sites identified in the Local Plan. Around 1,000 of these properties will be built on council-owned land with the majority of others being delivered through working with the Council market.</p> <p>The working party also noted the significant progress in improving the energy efficiency and condition of</p>	<p>The CEWP extends its thanks to the KCEG invited observers for providing their submission.</p> <p>The CEWP recognises that this is an important area of work as the use and Construction of the Built Environment generates about 40% of all carbon emissions in the UK. It believes that this report offers an opportunity to place Kirklees as an exemplar authority and proposes:</p> <ul style="list-style-type: none"> a) The aspiration will be that residential developments on council owned land will be

		<p>the Council's own housing stock. Progress with the private sector stock was also discussed and it is recognised that a different approach is needed due to the challenges of improving older, traditional housing, addressing fuel poverty and also dealing with an increasing private rented sector.</p>	<p>designed to Passivhaus standard (i.e. be zero carbon homes), unless there is compelling evidence that this will render the development unviable. This policy should be developed as soon as possible, including work with colleges and developers</p> <ul style="list-style-type: none"> b) That all other new build housing will achieve at a minimum of Code 4 energy standards, plus delivers a 19% improvement in energy efficiency. c) That the Council recognises that research has shown that in reality there is a 'performance gap' of around 40% between an average new build's energy performance specification according to Part L regulations and its real world performance. The CEWG therefore proposes that an officer led working group, involving external actors and through consultation with developers and other stakeholders, produces a report on how this performance gap can be bridged. d) That the Council's Building Control function be strengthened with improved resources in order to better provide an enforcement role, through engaging with the planning system, in addition to their statutory role. e) That this issue be raised at a Combined Authority level to ensure that building and planning regulations for new build and housing are aligned across partner authorities as far as practicable. This will discourage 'under-cutting' of standards in competition for development investments and a consequent 'race-to-the-bottom' in environmental standards.
	<p>Non-domestic buildings – new build and retrofit</p>	<p>Officers outlined the council's approach to high standards for all new (including for the recent 'nearly</p>	<p>With regard to new build, the CEWP noted that improvements in energy performance needed to balance against the practicalities of how buildings are</p>

	and Corporate Energy Efficiency	<p>zero' public buildings regulation changes) and refurbishment projects.</p> <p>A range of initiatives exist to improve the management of the council's non-domestic buildings, including intelligent metering of energy, performance benchmarking and awareness training.</p> <p>The Huddersfield Heat Network project (detailed elsewhere) was also highlighted as a strategic-scale project that, if implemented, will deliver significant emissions reductions and energy savings for council buildings in Huddersfield Town Centre.</p>	<p>used. An example was given in relation to new-build schools, which it was agreed had to be practical for their intended use, e.g. in terms of ventilation. However, the WP recommended that this balance would need to be carefully considered in the context of recent 'nearly zero' regulations. Therefore consideration must also be given to other authorities' approaches and the potential for sharing innovative and best practice to ensure we meet 'nearly zero' regulations.</p> <p>In terms of non-domestic energy efficiency and management, the CEWP noted that whilst there had been significant improvements in the quality of data available to the council, significant staff reductions had resulted in it being challenging to address and respond to issues. The CEWP proposes that prompt consideration is given to how this function can be resourced as part of the council's ongoing climate emergency response. It was recommended that previously successful schemes and initiatives could be revisited as a means of driving energy efficiency.</p>
--	---------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Sector	Project/Work Area	Current Achievements	CEWP Proposals
5.3. Natural Environment, Greenspace and Flood Risk	Green Infrastructure, Woodland and the White Rose Forest and Kirklees Greenspace management	<p>The role of the WRF is to increase woodland and green infrastructure cover and increase climate change resilience across the LCR, with Kirklees as the accountable body. Two key programmes are underway:</p> <ul style="list-style-type: none"> • "Green streets" – linking priority communities to key employment sites with an urban forest including ensuring green infrastructure is incorporated in the design process for urban infrastructure; and • "Landscapes for Water" – Working with landowners to develop a strategic approach to natural flood management across the Leeds City region river catchments 	<p>The CEWP welcomed the initiatives underway and noted the evidence linking green infrastructure and woodland to a range of positive outcomes, including climate change mitigation and adaptation.</p> <p>The CEWP notes that measures to increase suitable woodland cover and green infrastructure will deliver a range of benefits. The Working Party recommends that these initiatives continue to be explored and prioritised, including the 're-wilding' of land in council control where appropriate. The CEWP particularly recommends the following:</p> <ul style="list-style-type: none"> • Initiatives aimed at small/individual scale woodland creation

		<p>The schemes are supported by the Greenspace management function in Kirklees. The Playable spaces programme is currently underway, which will help inform people as to the benefits of greenspaces, so allowing an easier transition to a different landscape management and character that delivers greater eco system service benefits and carbon sequestration opportunities.</p>	<ul style="list-style-type: none"> • Exploring accessing volunteers from the Council, its partners and schools and colleges to support green infrastructure and woodland creation. • Modification of council land management regimes to maximise green infrastructure value and the ability to adapt to a changing climate.
	Flood Risk & Surface Water Drainage	<p>Key areas of work in the Flood Management and drainage team involve identifying areas at risk of future flooding, developing initiatives to manage the risk and identifying locations where drainage capacity improvement is desirable</p> <p>Climate projections are already factored into design criteria when assessing future flood risk. Funding from the national flood programmes has to include for climate change allowances.</p>	<p>The CEWP recommends that the Council continue use its powers, both statutory and non-statutory in order to ensure climate projections are appropriately planned for with regard to flooding and drainage.</p>

Sector	Project/Work Area	Current Achievements	CEWP Proposals
5.4. Sustainable Economy	Kirklees Economic Strategy and Business Engagement & Support	<p>The refreshed Kirklees Economic Strategy was approved by Full Council in March 2019 and covers the period 2019-2025. Key to the KES is ensuring actions that deliver the twin pillars of Inclusivity and Productivity by developing the work areas around the five identified priorities of:</p> <ol style="list-style-type: none"> 1. Modern Innovative Businesses 2. Skilled and Ambitious People 3. Active Partnerships 4. Advanced Connectivity and Infrastructure 5. Revitalised Centres <p>The Council's Business Engagement and Support programme is directed by Corporate outcomes and the</p>	<p>The CEWP noted that the KES covers a number of areas in the action programme where climate emergency can be addressed including Business and Skills (Priorities 1 and 2) for which a separate report has been produced (as below) and through Priority 4 and delivery of green and low carbon infrastructure and other infrastructure including transport improvements, Huddersfield Heat Network, digital infrastructure and Big Build.</p> <p>The CEWP recommends</p> <ul style="list-style-type: none"> • To support a focus on readying for green jobs across the skills strategy.

		<p>KES and provides a range of support, for local businesses.</p>	<ul style="list-style-type: none"> • In encouraging modern innovative business, try to support “good growth”, with local people able to benefit from it. <p>The working party recognised the need to ensure continued complementary linkage with the Leeds City Region ambitions.</p> <p>The working party welcomed the work and supported the opportunities identified. In relation to actions to support the addressing the climate emergency, the CEWP made the following Proposals:</p> <ul style="list-style-type: none"> • The need to link up business support and growth /open4 business with the planning process for new business development in the Kirklees area • To use partnerships incl. large businesses to draw in funding in the area and disseminate best practice and work cohesively to share benefits, such as centralised procurement. • Communication is key to engaging local businesses, and could align with the proposed Kirklees Charter, which could be a condition of accessing public grant funding and being awarded Council contracts.
--	--	-------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Sector	Project/Work Area	Current Achievements	CEWP Proposals
5.5. Travel & Transport	Transport – Major Infrastructure	This includes the delivery of major transport projects including the West Yorkshire Transport Fund. Via the WY Transport Strategy 2040 - Policy 7, the Council works with partners to deliver the West Yorkshire Low Emission Strategy to reduce as far as possible to zero, emissions of CO2 NO2 particulates and noise from transport.	The CEWP recognises that funding for major infrastructure schemes is normally determined by criteria beyond the authority’s direct control and also that there are significant regional disparities when comparing per capita investment in London in comparison with the North.

		<p>Each scheme has an associated business case which seeks to quantify its realised benefits. In terms of environment the following is considered in an appraisal.</p> <ul style="list-style-type: none"> • Noise • Air Quality • Greenhouse gases • Landscape • Townscape • Historic Environment • Biodiversity • Water Environment <p>All schemes aim to reduce levels of particulate matter (PM10) and Nitrous Oxide (NO2). Reductions in levels of pollutants within 5 years of opening are sought</p>	<p>The CEWP recommends that the council seek to take a holistic view when developing schemes in order to deliver a range of benefits, in particular mitigating climate change. It was also recommended that other examples should be considered from outside the WY region, where municipalities had developed innovative public transport models, such as Nottingham and Manchester. The group proposes that the climate emergency implications of current pipeline projects should be considered in more detail, given the long life-spans of these schemes. This should be completed by October 2020.</p>
	Walking & Cycling	<p>Kirklees via the Combined Authority is developing of Local Cycling and Walking Infrastructure Plans (LCWIPs)</p> <p>An LCWIP is a long-term approach to developing local cycling and walking networks over a ten-year period and forms a vital part of the Government's strategy to double the number of cycling journeys made and increase walking activity substantially by 2025. These plans are administered by local authorities, receiving technical and strategic support from the DfT and partners such as Sustrans, Living Streets and Cycling UK. With this assistance, LCWIPs will assist local authorities in:</p> <ul style="list-style-type: none"> • Identifying cycling and walking infrastructure improvements for future investment in the short, medium and long term; • Ensuring that consideration is given to cycling and walking within local planning and transport policies and strategies; 	<p>The CEWP proposes that a district-wide map be produced and made publicly available showing all the interconnected cycle and walking infrastructure, together with proposed developments already agreed, to be completed by October 2020.</p>

		<ul style="list-style-type: none"> • Making the case for future funding for walking and cycling infrastructure. <p>Led by Public Health, the Walking and Cycling Strategic Framework and Delivery Group has been established and will support walking and cycling activities directly or as a vehicle within key populations and settings to support people lead healthy lives and reduce inequalities.</p>	
	<p>Low Emission Vehicles & Air Quality</p>	<p>Current progress includes:</p> <ul style="list-style-type: none"> • ECOSTars – aims to cut emission from HGVs • WY Strategic electric taxi charge point project – a funded project that aims to deliver up to 88 dual taxis and public electric vehicles charge points across West Yorkshire, including 17 in Kirklees. • WY clean bus project – using clean bus technology fund to improve emissions • Bradley traffic light rationalisation project • Kirklees walking and cycling strategic framework • Kirklees Walking and Cycling Infrastructure Plan • Investment confirmed for Electric and hybrid vehicles for the Council fleet <p>Current planned interventions include</p> <ul style="list-style-type: none"> • Air quality to be embedded in all relevant council decision making and policy development • Complete the Air Quality Action Plan to be ambitious for the district • Increase the number of Air Quality Officer resources. • Develop an Electric Vehicle Policy – a strategy for the update of electric vehicles. • Continue traffic management projects to improve technology to reduce emissions at junctions etc. 	<p>The CEWP noted further opportunities subject to additional capital funding and market capacity include the following.</p> <ul style="list-style-type: none"> • Further Electric Vehicle Charging Infrastructure • Use of technically enhanced urban traffic management to facilitate emissions reduction. • Further increase in the number of Electric and Hybrid Vehicles in the council fleet. <p>The CEWP recommended that a watching brief is kept in relation to ‘next generation’ solutions for the more specialist vehicles in the council fleet and reducing their emissions (e.g. refuse lorries). It also noted that electricity grid capacity is also likely to be an increasing factor in planning the location of further EV infrastructure. The Working Party also recommended that opportunities to reduce the cost of procurement are considered, e.g. through regional collaboration.</p> <p>The CEWP proposes that a report be produced by October 2020 setting out a provisional timetable for the transition to a largely electric vehicle fleet, including likely budgetary implications.</p>

		<ul style="list-style-type: none"> • Implement the West Yorkshire Low Emissions Strategy (WYLES) improving regional coordination to deliver the project. • Develop Supplementary Planning Guidance, as part of the Local Plan to protect the public from air pollution. • Deliver a communication plan (local or regional) to communicate emissions and air quality messages with residents and businesses. 	
	<p>School Travel – Home to school policy and transport</p>	<p>Ongoing initiatives include:</p> <ul style="list-style-type: none"> • Sustainable Home to School Policy, initiatives were in place to increase the number of children who actively travelled to school. • Home to school transport – to encourage use of bus passes where allocated, training initiatives for SEN children to travel independently, and fleet review to reduce the number of taxis and replacing with coaches. • Changing behaviours and building skills - to encourage parents and children to walk/cycle to school and provide them with the skills to do this safely. 	<p>The CEWP recognises that different circumstances apply to each school and the journeys that pupils make.</p> <p>The CEWG recognises that there are pressing barriers to be overcome in encouraging walking and cycling to school and that Council staff have been undertaking some first rate work. However, given the urgency of climate change and the well-known mental and physical health benefits of sustainable school transport it is clear that increased efforts are required. The CEWG therefore proposes:</p> <ol style="list-style-type: none"> a) The issue be considered by students and teachers as part of the Place Based Youth Engagement events strategy and then at the Youth Summit 2020 b) In the meantime every school/college is asked to identify 'climate champions' among students and staff with a view to promoting environmentally sustainable measures, including travel to school c) Over the coming year the Council develops a conversation with all schools and colleges to discuss and identify solutions to help mitigate the climate impacts associated with school travel including no-idling zones and sustainable travel.

Sector	Project/Work Area	Current Achievements	CEWP Proposals
5.6. Waste & Resources	Waste Strategy	<p>The new Waste Strategy for the Council is currently in development.</p> <p>Three shorter term projects have taken place this year to improve the Council's recycling rate and reduce the Council's carbon footprint in its waste management operations.</p> <ul style="list-style-type: none"> • A monitoring and education campaign to support and enable residents to recycle and identify what can and cannot be placed inside the green bin • Introduction of a borough-wide garden waste collection service • 'Love Food Save More' cooking workshops available to Kirklees residents helping them cook healthily on a small budget 	<p>The CEWP welcomes the development of the new waste strategy for the council and proposes that by the end of 2020:</p> <ul style="list-style-type: none"> • The Council investigates the feasibility of a district anaerobic digestion facility to process the district's food waste. • Consideration should be given to innovative alternative options, such as promoting the establishment of repair cafes
	School Meals and Catering	<p>The service working with suppliers and schools on an ongoing basis to reduce waste. All schools operated by Kirklees Catering Service have been accredited with the food4life "Silver Catermark" accreditation, this is an independently accredited scheme audited by the Soil Association, which certifies that the food served is: Healthy, Seasonal, Organic, Free range, Local, Traceable, 75% of the food we serve is made from scratch and sustainable.</p> <p>The catering service where possible adopts the Government Buying Standards (GBS) these standards endorse good sustainable procurement, save costs, reduce carbon and deliver other environmental benefits such as cutting waste to landfill.</p>	<p>The CEWP welcomes the achievements of the catering service in reducing waste whilst ensuring a quality service. The CEWP proposes that increased efforts should be made to eliminate single use plastic bottles and minimise packaging. Consideration should also be given to innovative ways to process food and food waste locally (e.g. via school wormeries and school food gardens).</p>
	Huddersfield Heat Network	<p>A feasibility study into the potential for a heat network in Huddersfield has been successfully completed, establishing the basis for an economically viable town centre heat network.</p>	<p>The CEWP welcomes the ongoing development of this large-scale scheme and notes that long-term cross-party commitment is required to ensure that complex projects such as this come to fruition.</p>

		<p>This strategic scheme would bring significantly lower carbon and lower cost heat and power to premises in the town centre and potentially utilise waste heat from the town's energy-from-waste plant. The council has received further funding from the Department of Business, Energy and Industrial Strategy in order to progress this scheme to an outline business case.</p>	
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

6 Final CEWP Proposals

6.1 The CEWP has made a series of Proposals for addressing the climate emergency. This section brings together these recommendations and sets out a proposed order for the Council to take these forward.

Recommendation 1: To progress the requirements of the climate emergency motion, the CEWP proposes that the Council immediately takes forward the following ‘phase 1’ priority actions:

Table 2 Recommended Priority Projects and Opportunities identified by the Working Party

Project/Opportunity	Sector	Proposed Opportunities and Benefits
1. Adoption of a target for Kirklees to achieve district-wide ‘net zero’ carbon emissions no later than 2038 with an accompanying carbon budget	Corporate	<p>A revised target to demonstrate alignment with international, national and regional targets and is considered necessary in order to comply with the council’s climate emergency declaration. Adopting this target will allow the council to state that it is taking action to align to the ambitions of the 2015 Paris Agreement at a local level.</p> <p>A ‘science-based’ target of 2038 is proposed and it is considered that this balances ambition and alignment with regional partners (WYCA).</p> <p>Fundamental to this is that Kirklees district stays within a maximum cumulative carbon dioxide emissions budget of 11.9 million tonnes for the period of 2020 to 2100. The proposed target will require annual internal reporting and align with the 5-year carbon budget periods established by the Climate Change Act (2008). This will require action at central and service level to ensure that the council aligns with the budget. This scaling-up of ambition will ensure Kirklees is aligned with the WYCA/LCR and the ambitions of partner LAs</p> <p>The CEWP proposes that a district wide ‘net zero’ target of 2038 is adopted along with the accompanying ‘science-based’ carbon budget for the district as proposed by the Tyndall Centre. Progress against this target and budget should be reported annually and align with the five-year carbon budget periods set out in the Climate Change Act 2008.</p>
2. Disclosure of Council and District Carbon	Corporate	The CEWP proposes publically disclosing the council and district carbon emissions to the CDP as both an important statement of intent and also of transparency. CDP is a multi-national not for profit

Emissions via CDP		<p>organisation that encourages companies and municipalities to publically 'disclose' their emissions. Disclosing in this way offers the following benefits:</p> <ul style="list-style-type: none"> • Annual Disclosure is a public statement of intent by the Council and demonstrates ambition. • The council will be able to compare and contrast with other authorities across the world. • CDP provides a confidential score and has LA-specific resource to provide support and sign-posting to help improve over the following year. CDP also works with central Government and disclosure feeds into national datasets and strategies <p>Target Date: Commence reporting from the next CDP reporting round (2020), then annual submission.</p>
3. Encourage woodland and green infrastructure creation via the existing White Rose Forest partnership	Greenspace and climate change adaptation	<p>The CEWP welcomes the significant work already being undertaken in woodland creation and restoration of semi-natural habitats, led by the Kirklees White Rose Forest Group (WRF) and Holme and Colne Valley Natural Flood Management Group (HCVNFMG). The Working Party believes they are best placed to continue to lead this work going forward. However, there is a consensus that pace must be improved. The CEWP therefore proposes:</p> <ol style="list-style-type: none"> a) a survey of all council owned land be undertaken to identify areas that could be suitable for reforestation and rewilding. Report back by July 2020. b) modification of council land management regimes to maximise green infrastructure value and the ability to adapt to a changing climate. c) that the next/future rounds of Place-based funding should be allocated to climate emergency-related proposals d) a letter is sent to all public and private partner organisations, such as schools, hospitals and businesses, asking them whether there are opportunities to undertake tree planting and related measures, with an offer to assist and advise. All school children in Kirklees should have the opportunity to plant a tree.

		<ul style="list-style-type: none"> e) the council continues to encourage initiatives aimed at small/individual scale woodland creation. f) continue to work with the Woodland Trust, other national environmental organisations and existing voluntary and community groups to promote tree planting. Encourage voluntary support from Kirklees staff through volunteer days. g) that a comprehensive Kirklees Tree Planting plan and integrated management strategy and associated policies be produced and rolled out as soon as practicable. This should ensure the wider maintenance and management of any planted woodland h) to investigate a community co-operative to undertake woodland management in the district, aligned with the inclusive economy and local wealth building strategy
<p>4. Communications – commence an engagement campaign to encourage council staff and Kirklees residents to make a positive difference to the environment</p>	<p>Corporate, District & Partnership Working</p>	<p>Throughout the CEWP process, the council’s corporate communications has been involved in developing an engagement campaign to raise awareness and to generate good ideas for helping to address the climate emergency.</p> <p>This is planned as a two-stage process:</p> <ul style="list-style-type: none"> 1) To undertake an internal campaign for staff (underway) 2) To then roll this out to Kirklees residents, including a specific approach for children and young people. <p>The CEWP proposes that this continues and that external communications are considered an important part of the ongoing work to address the climate emergency. A plan for this future communications activity should be in place and operational by Summer 2020.</p>
<p>5. To work with partners to develop and establish a ‘Kirklees Climate Commission’ and Kirklees ‘Green Charter’</p>	<p>District & Partnership Working</p>	<p>The CEWP has sought external advice on how to engage with partners and proposes that a vehicle for engaging with partners and communities across Kirklees is created, with the Council initiating and resources the initial set-up of this body. The Council’s role should be as a leading partner as opposed to the owner, with partners able to lead in proposing action on the climate emergency. The</p>

		<p>forum should also complement and work with other Kirklees external bodies. This should be established with group roles and responsibilities agreed by Summer 2020.</p> <p>A proposal is also made for an annual Kirklees 'climate summit' as part of the Commission, in order to demonstrate and reflect on progress made and identify priorities for future work.</p> <p>The CEWP believes that the Charter should:</p> <ul style="list-style-type: none"> • serve as a bold statement of intent that publicises the issues and encourages people to act • be developed in collaboration with key community partners as part of the work of a new Kirklees Climate Commission • help publicise targets for cutting carbon emissions set by the Council and encourage others to do the same • be a means to begin a conversation with partner organisations and the wider community that will lead to meaningful behaviour change • set out some minimum standards of behaviour and encourage cultural change within organisations and the wider community. <p>The CEWP further proposes that as part of the design of the Charter consideration be given to making grant and Council procurement dependent upon meeting environmental criteria. The Charter should also reflect the 2038 net zero target. It should be implemented alongside the commission body by Summer 2020.</p>
<p>6. To develop a Kirklees Youth Summit and campaign for engaging with young people around the climate emergency</p>	<p>District & Partnership Working</p>	<p>The CEWP recognises the role that young people have played in helping to shift the national terms of debate on the climate emergency. It is considered that there is a moral obligation to consult and engage young people, who will also be an important source of good ideas.</p> <p>The CEWP proposes that the council develop a process of YP engagement for all ages and that this should culminate in a Youth Summit specific to the CE to take place in 2020</p>
<p>7. Support the West Yorkshire</p>	<p>Regional working</p>	<p>In common with the WY LAs, the LCR/WYCA has also declared its own climate emergency and is</p>

<p>Combined Authority pledge for the Leeds City Region to reach net zero carbon emissions by 2038</p>		<p>committed to working towards a ‘science based’ zero carbon future. Kirklees Council has signed up to a regional pledge to work towards achieving ‘net zero’ by 2038 (the LCR’s Tyndall Centre-determined date for achieving net zero). The CEWP proposes that Kirklees continues to prioritise working with regional partners to address the climate emergency and that the Council should request WYCA support the introduction of a suitable mechanism by which new scheme developed by WYCA are tested against the requirement to meet the challenges of the Climate Emergency, including transport and infrastructure schemes. Through collaborative procurement there is also the opportunity to work across the region to achieve economies of scale and efficiencies, which should be pursued where possible.</p> <p>The CEWP considers that working together regionally will also help LAs and WYCA, share best practice and achieve efficiencies in achieving a ‘zero carbon’ future.</p>
-------------------------------------------------------------------------------------------------------	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Recommendation 2: Following the above priority recommendations, the CEWP proposes that the environmental audit findings are considered as a priority, to inform a detailed concurrent ‘part 2’ action plan to set out and develop detailed ongoing service-level proposals with accompanying budget and resourcing considerations to address the climate emergency. The CEWP considers that this should be an ambitious programme in scope and transformational for the Council. The CEWP recognises that while the bulk of policy changes will be developed by departments in the normal way there is a substantial strategic and cross-cutting element to the work. A proposal is therefore made for centralised strategic oversight of this area of work, and that this is appropriately resourced.

Recommendation 3: The CEWP recognises that funding and resourcing remain very challenging in the local authority context. As a cross-cutting recommendation it is recommended that the Council (and partners) consider options for funding and financing mechanisms which might be developed as a means to bring forward future climate interventions. This should be undertaken by an ongoing officer-led group that draws upon external expertise and consults partners as appropriate, tasked with identifying possible structures and ways of working.

Recommendation 4: The Working Party proposes a process of annual reporting is established in order to ensure continued accountability and monitor progress for this area of work, including progress against the proposals made in section 5 (the Environmental Audit). This should also align with the annual CDP disclosure requirement and should be complemented with a further six-monthly progress check.

7 Background Information and Appendices

Appendices

1. *Setting Climate Commitments for Kirklees* - Tyndall Centre Carbon Budget for Kirklees
2. Summary of the Kirklees Greenhouse Gas Footprint for 2017 (Derived from BEIS Sub-regional data and outputted from the SCATTER ("*Setting City Area Targets and Trajectories for Emissions Reduction*") Tool.

Links

Full Kirklees Council Climate Emergency Motion

<https://democracy.kirklees.gov.uk/mgAi.aspx?ID=10123>

Committee on Climate Change – ‘Net Zero’ report, 2 May 2019:

www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/

Setting Climate Commitments for Kirklees

Quantifying the implications of the United
Nations Paris Agreement for Kirklees

Date:	August 2019
Prepared By:	Dr Jaise Kuriakose, Dr Chris Jones, Prof Kevin Anderson, Dr John Broderick & Prof Carly McLachlan

Key Messages

This report presents climate change targets for Kirklees that are derived from the commitments enshrined in the Paris Agreement [1], informed by the latest science on climate change [2] and defined in terms of science based carbon setting [3]. The report provides Kirklees with budgets for carbon dioxide (CO₂) emissions and from the energy system for 2020 to 2100.

The carbon budgets in this report are based on translating the “well below 2°C and pursuing 1.5°C” global temperature target and equity principles in the United Nations Paris Agreement to a national UK carbon budget [1]. The UK budget is then split between sub-national areas using different allocation regimes [4]. Aviation and shipping emissions remain within the national UK carbon budget and are not scaled down to sub-national budgets. Land Use, Land Use Change and Forestry (LULUCF) and non-CO₂ emissions are considered separately to the energy CO₂ budget in this report.

Based on our analysis, for Kirklees to make its ‘fair’ contribution towards the Paris Climate Change Agreement, the following recommendations should be adopted:

1. Stay within a maximum cumulative carbon dioxide emissions budget of 11.9 million tonnes (MtCO₂) for the period of 2020 to 2100. At 2017 CO₂ emission levels, Kirklees would use this entire budget within 7 years from 2020.
2. Initiate an immediate programme of CO₂ mitigation to deliver cuts in emissions averaging a minimum of -13.5% per year to deliver a Paris aligned carbon budget. These annual reductions in emissions require national and local action, and could be part of a wider collaboration with other local authorities.
3. Reach zero or near zero carbon no later than 2041. This report provides an indicative CO₂ reduction pathway that stays within the recommended maximum carbon budget of 11.9 MtCO₂. At 2041 5% of the budget remains. This represents very low levels of residual CO₂ emissions by this time, or the Authority may opt to forgo these residual emissions and cut emissions to zero at this point. Earlier years for reaching zero CO₂ emissions are also within the recommended budget, provided that interim budgets with lower cumulative CO₂ emissions are also adopted.

1. Introduction

This report presents advisory climate change targets for Kirklees to make its fair contribution to meeting the objectives of the United Nations Paris Agreement on Climate Change. The latest scientific consensus on climate change in the Intergovernmental Panel on Climate Change (IPCC) Special Report on 1.5°C [2] is used as the starting point for setting sub-national carbon budgets [3, 4] that quantify the maximum carbon dioxide (CO₂) associated with energy use in Kirklees that can be emitted to meet this commitment. This report translates this commitment into;

1. a long-term carbon budget for Kirklees;
2. a sequence of recommended five-year carbon budgets;
3. a date of 'near zero'/zero carbon for the area.

The United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement commits the global community to take action to "hold the increase in global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C" [1]. Cumulative emissions of CO₂ from human activity are the principle driver of long-term global warming. It is the relationship between CO₂ and global temperatures which means that staying within a given temperature threshold requires that only a certain total quantity of CO₂ is released to the atmosphere. This is the global carbon budget.

In addition to setting global average temperature targets, the UNFCCC process also includes foundational principles of common but differentiated responsibility [1]. This informs the fair (equitable) distribution of global emissions between nations at different stages of economic development. Industrialised nations are expected to show leadership towards a low carbon future, while it is acknowledged that a greater total share of future emissions will be associated with other countries as they develop (though their emissions per capita will remain low). Any sub-division of the global carbon budget must therefore account for the development needs of what the Paris Agreement refers to as "developing country Parties" in setting a fair/equitable national or sub-national carbon budget.

The carbon budgets presented here apply to CO₂ emissions from the energy system only. Although all greenhouse gas (GHG) emissions, such as methane and other forcing agents, such as aircraft contrails, affect the rate of climate change, long term warming is mainly driven by CO₂ emissions [5]. Furthermore the physical or chemical properties of each GHG vary, with different life-times causing warming in different ways, and with subsequent, and often large, uncertainties in their accounting [6]. As such the global carbon budgets in the Intergovernmental Panel on Climate Change (IPCC) Special Report on 1.5°C (SR1.5) [2], relate to CO₂-only emissions. In this report we have discussed non-CO₂ emissions and CO₂ emissions associated with land use, land use change and forestry separately.

Ultimately staying within a global temperature threshold (e.g. "well below 2°C") requires limiting cumulative CO₂ emissions over the coming decades. Carbon budgets can be an effective way to understand the amount of CO₂ emissions that can be released into the atmosphere in order to do this. End point targets such as 'net zero' by 2050, with very clear assumptions, can be useful indicators of ambition, but it is ultimately the cumulative CO₂ released on the way to that target that is of primary significance to achieving climate change goals. Whereas end point focused targets can be met with varying levels of CO₂ emissions (and therefore varying global temperature with consequent climate impacts) depending on their reduction pathways, carbon budgets specify the limits to CO₂ emissions within the period of the commitment. This is a reason why the UK Climate Change Act has legislated 5-year carbon budget periods, as well as a long term target, to keep CO₂ emissions consistent with the framing goal of the climate change commitment. It is also the reason why we recommend a carbon budget based approach.

1.2 Wider UK Policy Context

The UK Climate Change Act now legislates for a commitment to net zero greenhouse gas emissions by 2050, with five yearly carbon budgets to set actions and review progress [7]. The carbon budgets for this target were not available at the time of our analysis for direct comparison, however the

recommended budget in this report will most likely be more stringent. This is primarily due to two key differences between our approach and the current recommendations of the UK Government's advisory body the Committee on Climate Change (CCC) that inform the revised UK net zero target:

1. The equity principles of the Paris Agreement and wider UNFCCC process are explicitly and quantitatively applied. Our approach allocates a smaller share of the global carbon budget to the 'developed country Parties', such as the UK, relative to 'developing country Parties'. Moreover the approach is also distinct in including global 'overheads' for land use, land use change and forests (LULUCF) and cement process emissions related to development.
2. Carbon dioxide removals via negative emissions technologies (NETs) and carbon offsets are not included. The UK Climate Change Act's 'net zero' framing means that the commitment is met when greenhouse gas emissions (debits) and removals (credits) from the UK's carbon 'account' balance at zero. Hence the 2050 target can be met using carbon dioxide removal technologies, including land use sequestrations, and potentially carbon offsetting. The CCC include a significant role for NETs such as bioenergy carbon capture and storage and direct air capture in their analysis supporting the net zero target. Doing so theoretically increases the size of a carbon budget, but increases the risk of failing to deliver on the Paris global temperature target. The UK Government has also rejected the CCC's advice to explicitly exclude international carbon offsetting as an approach to meeting the net zero target. Allowing for future carbon dioxide removal technologies and international carbon offsetting ostensibly increase the size of the UK's carbon budget. However carbon removal technologies are at a very early stage of development and whether they can be successfully deployed at sufficient scale is highly uncertain. While they are an important technology to develop, it is a major risk to prematurely adopt a carbon budget that allows for additional CO₂ on the basis that future generations will be in a position to deploy planetary-scale NETs. Similarly, as the CCC note in their advice, the efficacy of carbon offsetting as a contribution to meeting global climate change commitments is not robust enough to incorporate into recommended carbon budgets.

We regard our UK carbon budget to be at the upper end of the range that is aligned with the Paris Agreement's objectives. Early results from the latest Earth system models suggest that the climate may be more sensitive to greenhouse gases than previously thought implying a smaller global carbon budget is required [8]. In addition, assuming that developing countries will, on aggregate, implement rapid emissions reduction measures in line with a 2025 peak year is far from certain. Therefore, we recommend that these budgets are taken as reflective of the minimum commitment required to deliver on the Paris Agreement.

2. Method

The Setting City Area Targets and Trajectories for Emissions Reduction (SCATTER) project [4] funded by the Department for Business Energy and Industrial Strategy (BEIS) developed a methodology for Local Authorities to set carbon emissions targets that are consistent with United Nations Paris Climate Agreement. This report uses the SCATTER methodology with revised global carbon budgets, based on the latest IPCC Special Report on 1.5°C and updated CO₂ emissions datasets, to downscale global carbon budgets to Kirklees. This methodology has been successfully piloted with Greater Manchester Combined Authority and is being made available nationally to support all local authorities and groupings of local authorities.

Step 1: A global carbon budget of 900 GtCO₂ is taken from the Intergovernmental Panel on Climate Change (IPCC) Special Report on 1.5°C [2]. This global carbon budget represents the latest IPCC estimate of the quantity of CO₂ that can be emitted and still be consistent with keeping global temperatures well below 2°C with an outside chance of stabilising at 1.5 °C. This budget assumes no reliance on carbon removal technologies.

Step 2: A 'global overhead' deduction is made for process emissions arising from cement production (60 GtCO₂) [9]. Cement is assumed to be a necessity for development [5]. We also assume that there is no net deforestation at a global level (2020 to 2100) so none of the global carbon budget is allocated to this sector. This will require a significant global effort to rapidly reduce deforestation and significantly improve forestry management as well as increase rates of reforestation and potentially afforestation.

Step 3: A share of the global carbon budget is allocated to "developing country parties" assuming a trajectory for those countries from current emissions to a peak in 2025 then increasing mitigation towards zero emissions by around 2050. The remaining budget is allocated to "developed country parties" which includes the UK [10]. This approach of considering developing countries first, is guided by the stipulation of equity within the Paris Agreement (and its earlier forebears, from Kyoto onwards) [10].

Step 4: The UK is apportioned a share of the 'developed country Parties' budget after Step 3 to provide a UK national carbon budget. The apportionment is made according to "grandfathering" of emissions for the most recent period up to the Paris Agreement (2011 to 2016).

Step 5: Aviation and shipping emissions are deducted. Assumptions and estimates are made about the level of future emissions from aviation, shipping and military transport for the UK. These emissions are then deducted from the national budgets as a 'national overhead' to derive final UK energy only carbon budgets. Emissions from aviation including military aircraft are assumed to be static out to 2030, followed by a linear reduction to complete decarbonisation by 2075. The total CO₂ emissions of this path are >25% lower than Department for Transport central forecast followed by reduction to zero by 2075. Shipping emissions are based on Walsh et al [11] 'big world' scenario out to 2050 followed by full decarbonisation from this sector by 2075. These aviation and shipping emissions (1,518 MtCO₂) are then deducted as a 'national overhead' from the UK budget to derive the final carbon budgets for the UK, from which local authority budgets are subsequently derived [4]. The budgets provided are therefore aligned with "well below 2°C and pursuing 1.5°C" provided that aviation and shipping emissions do not exceed the pathway assumed in our analysis [4]. Failure to hold aviation and shipping emissions within the outlined allocation will reduce the carbon budget for UK regions, including for Kirklees.

Step 6: Kirklees is apportioned a part of the remaining UK carbon budget. Our recommended budget is based on sub-national allocation through 'grandfathering'. A grandfathering approach allocates carbon budgets on the basis of recent emissions data. The most recent annual CO₂ emissions for Kirklees up to the Paris Agreement [12] (2011-2016) is averaged and compared to averaged data for the whole UK [13] over the same period. The carbon budget (2020-2100) for Kirklees is then apportioned based on Kirklees's average proportion of UK CO₂ emissions for the 2011-2016 period. CO₂ emissions in the carbon budget include emissions from fossil combustion within the region and a share of the emissions from national electricity generation (relative to the Kirklees area's end-use electricity demand).

Step 7: Carbon emission pathways. The carbon budgets for Kirklees are related to a set of illustrative emission pathways. These pathways show projected annual CO₂ emissions from energy use in Kirklees and how these emissions reduce over time to stay within the budget. The energy-only CO₂ emissions for 5-yearly interim carbon budget periods are calculated in line with the framework set out in the UK Climate Change Act. It is the cumulative carbon budget and the 5 year interim budgets that are of primary importance as opposed to a long term target date. The combination of a Paris-compliant carbon budget and the projected emissions pathways can however be used to derive an indicative near zero carbon target year for Kirklees. The near zero carbon year of 2041 is defined here as the point at which, on the consistent reduction rate curve, less than 5% of Kirklees's recommended budget remains. Annual CO₂ emissions at this point fall below 0.08 MtCO₂ (CO₂ levels >96% lower than in 2015 – a Paris Agreement reference year).

3. Results

3.1 Energy Only Budgets for Kirklees

Following the Method the recommended energy only CO₂ carbon budget for the Kirklees area for the period of 2020 to 2100 is 11.9 MtCO₂. To translate this into near to long term commitments a CO₂ reduction pathway within the 11.9 MtCO₂ is proposed here. A consistent emissions reduction rate of -13.5% out to the end of the century is applied. In 2041 95% of the recommended carbon budget is emitted and low level CO₂ emissions continue at a diminishing level to 2100.

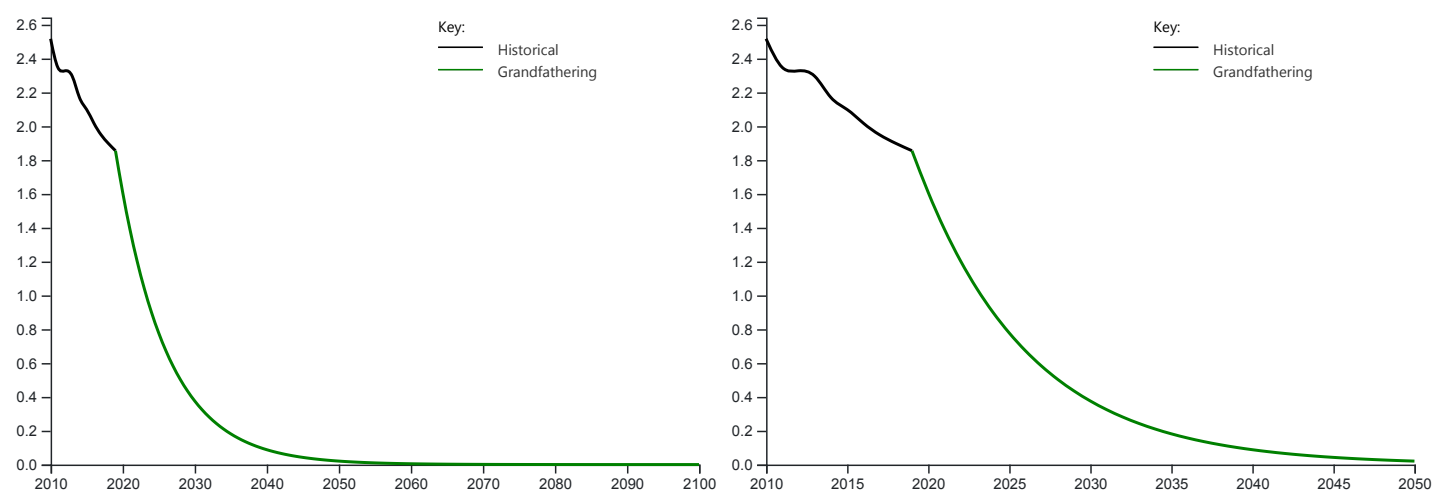


Figure 1a (left): Energy related CO₂ only emissions pathways (2010-2100) for Kirklees premised on the recommended carbon budget. **Figure 1b (right):** Energy CO₂ only emissions pathways (2010-2050) for Kirklees premised on the recommended carbon budget. **y-axis shows emissions in MtCO₂**

Table 1 presents the Kirklees energy CO₂ only budget in the format of the 5-year carbon budget periods in the UK Climate Change Act. To align the 2020 to 2100 carbon budget with the budget periods in the Climate Change Act we have included estimated CO₂ emissions for Kirklees for 2018 and 2019, based on BEIS provisional national emissions data for 2018 [14] and assuming the same year on year reduction rate applied to 2019. The combined carbon budget for 2018 to 2100 is therefore 15.6 MtCO₂.

Table 1: Periodic Carbon Budgets for 2018 for Kirklees.

Carbon Budget Period	Recommended Carbon Budget (Mt CO ₂)
2018 - 2022	7.9
2023 - 2027	4.0
2028 - 2032	1.9
2033 - 2037	0.9
2038 - 2042	0.4
2043 - 2047	0.2
2048 - 2100	0.2

The recommended budget is the maximum cumulative CO₂ amount we consider consistent with Kirklees’s fair contribution to the Paris Agreement. A smaller carbon budget, with accelerated reduction rates and an earlier zero carbon year, is compatible with this approach. It is however important that for an alternative zero carbon year the proposed 5 year budget periods are the same or lower that those specified in Figure 2. Furthermore meeting the budget must not rely on carbon offsets.

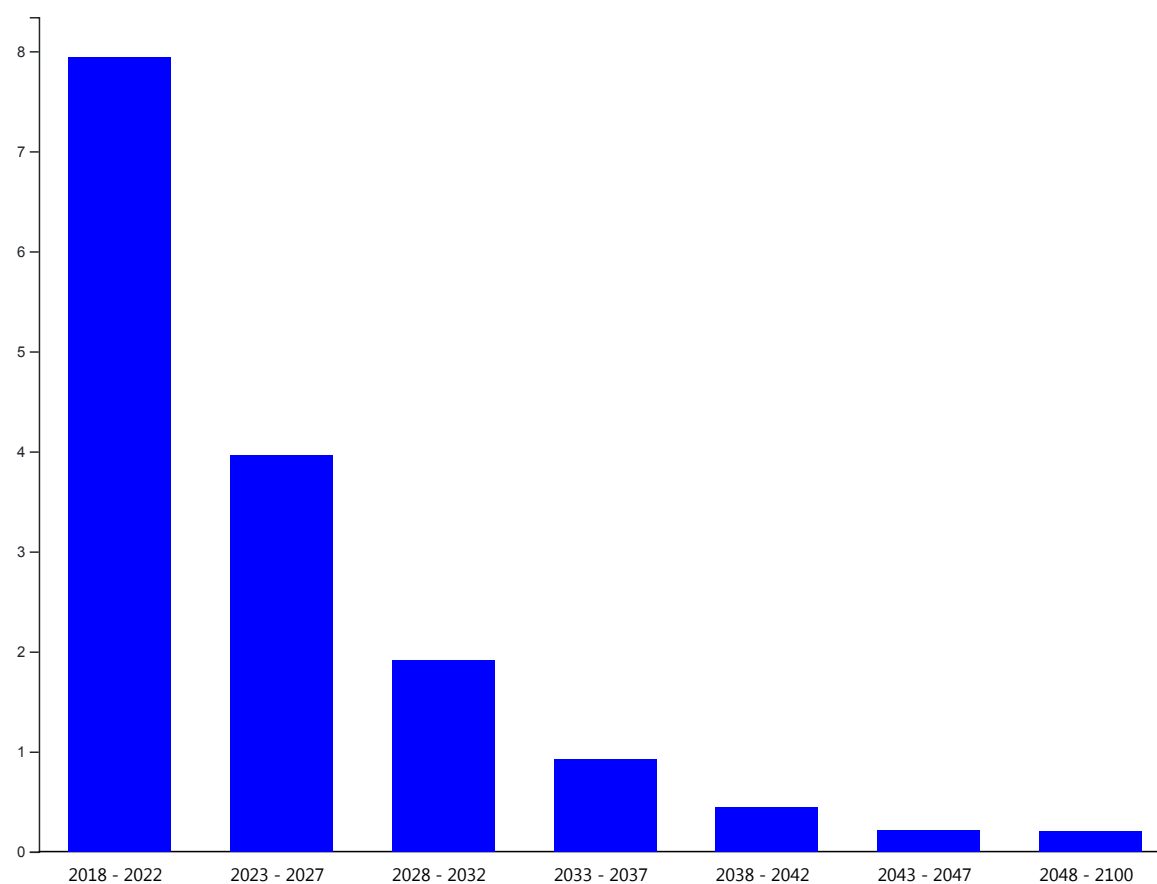


Figure 2: Cumulative CO₂ emissions for budget period (based on Table 1) from 2018 to 2100 for Kirklees

3.2 Recommended Allocation Regime for Carbon Budget

The recommended carbon budget is based on a grandfathering allocation regime for sub-dividing the UK sub-national energy only carbon budget. There are three distinct allocation regimes that can be applied to determine sub-national budgets. We have opted to recommend one common approach for allocating carbon budgets that can be applied to all Local Authority areas. This enables straightforward compatibility between carbon budgets set at different administrative scales. For example this makes it easier for individual Local Authorities to calculate their own carbon budgets that are compatible with a budget set at Combined Authority scale. It also means that under the recommended carbon budgets, all Authorities are contributing to a common total UK carbon budget. If for example all Authorities selected the allocation regime that offered them largest carbon budget the combined UK budget would not comply with the objectives of the Paris Agreement. The common approach to allocation we recommend therefore further assures that the carbon budget adopted is Paris Agreement compatible.

We have chosen a grandfathering as our common allocation approach because, based on our analysis, it is the most appropriate and widely applicable regime within the UK.

Population and Gross Value Added (GVA) are alternative allocation regimes. Population shares the carbon budget equally across the UK on a per capita basis. In this allocation regime the UK population [15] is compared to that of Kirklees [16] from 2011 to 2016. The carbon budget (2020-2100) for Kirklees is then apportioned based on its average proportion of the UK population for the period 2011-2016. For regions where per capita energy demand deviates significantly from the average (e.g. a large energy intensive industry is currently located there) the budget allocated may not be equitable for all regions, therefore it is not recommended as the preferred allocation. GVA is used as an economic metric to apportion carbon budgets. For example, the UK total GVA [17] is compared to that of Kirklees [17] from 2011 to 2016. The carbon budget (2020-2100) for Kirklees is then apportioned based on Kirklees's average proportion of UK GVA for the period 2011-2016. GVA can be useful as a proxy for allocation on economic value, however without an adjustment for the type of economic activity undertaken, areas with high economic 'value' relative to energy use can get a relatively large budget, while the inverse is true for areas with energy intensive industries, and/or lower relative economic productivity. We would therefore not recommend GVA as an appropriate allocation regime for all regions.

Table 2 presents the result outcomes for alternative allocation regimes – population and gross value added (GVA).

Table 2: Energy only CO₂ budgets and annual mitigation rates for Kirklees (2020-2100) by allocation regime

Allocation regime (% of UK Budget allocated to Kirklees)	UK Budget (MtCO ₂)	Kirklees Budget (MtCO ₂)	Average Annual Mitigation Rate (%)
Grandfathering to Kirklees from UK (0.5%)	2,239	11.9	-13.5%
Population split to Kirklees from UK (0.7%)	2,239	14.9	-11.0%
GVA split to Kirklees from UK (0.4%)	2,239	9.6	-16.3%

Pathway projections for the change in annual energy-only CO₂ emissions pathways for Kirklees based on the carbon budgets in Table 2 are illustrated in Figure 3a & 3b.

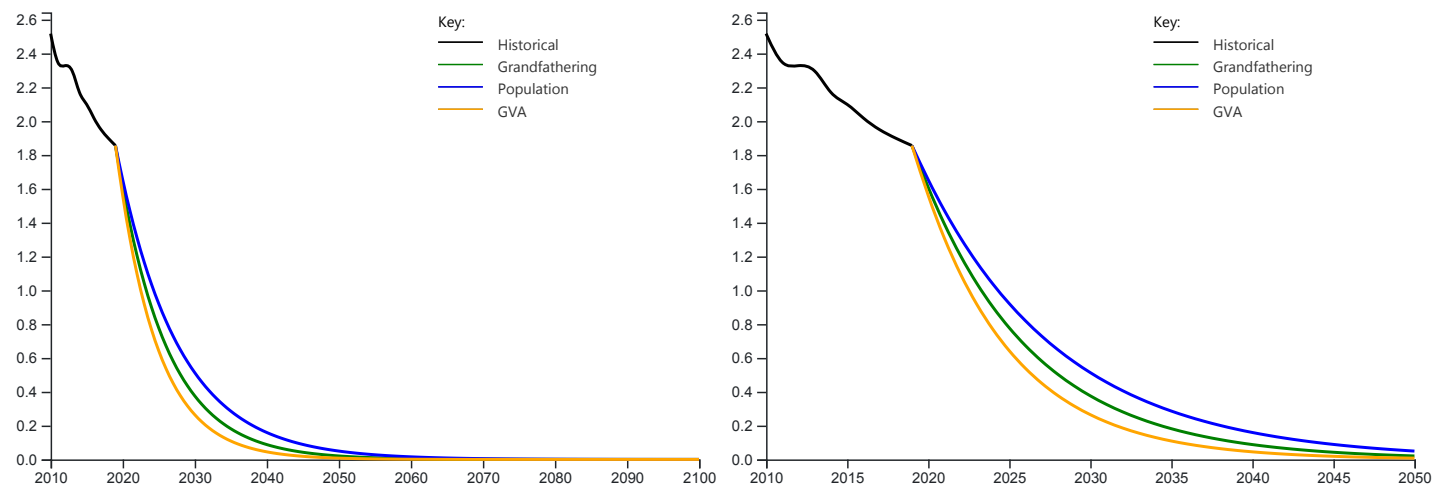


Figure 3a (left): Energy related CO₂ only emissions pathways (2010-2100) for Kirklees premised on carbon budgets shown in Table 2. **Figure 3b (right):** Energy related CO₂ only emissions pathways (2010-2050) for Kirklees premised on carbon budgets shown in Table 2. **y-axis shows emissions in MtCO₂**

3.3 Land Use, Land Use Change and Forestry emissions for Kirklees

Land Use, Land Use Change and Forestry (LULUCF) consist of both emissions and removals of CO₂ from land and forests. We recommend that CO₂ emissions and sequestration from LULUCF are monitored separately from the energy-only carbon budgets provided in this report. Kirklees should increase sequestration of CO₂ through LULUCF in the future, aligned with Committee on Climate Change's high level ambition of tree planting, forestry yield improvements and forestry management [18]. Where LULUCF is considered, we recommend it compensate for the effects of non-CO₂ greenhouse gas emissions (within the geographical area) that cannot be reduced to zero, such as non-CO₂ emissions from agriculture.

3.4 Non-CO₂ Emissions

The IPCC SR1.5 report identifies the importance of non-CO₂ climate forcers (for instance methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), sulphur dioxide (SO₂) and black carbon) in influencing the rate of climate change. However, a cumulative emission budget approach is not appropriate for all non-CO₂ greenhouse gases, as the physical and chemical properties of each leads to differing atmospheric lifetimes and warming effects [19]. There are also substantial relative uncertainties in the scale, timing and location of their effects.

We do not provide further analysis or a non-CO₂ emissions reduction pathway in this report. However the global carbon budget in the IPCC Special Report on 1.5°C, that our analysis is based on, assumes a significant reduction in rate of methane and other non-CO₂ emissions over time. Therefore to be consistent with carbon budgets Kirklees should continue to take action to reduce these emissions.

The Department of Business Energy and Industrial Strategy's Local Authority emissions statistics do not at this time provide non-CO₂ emissions data at the regional level. Given the absence of robust non-CO₂ emissions data, any non-CO₂ emissions inventory by other organisations at scope 1 and 2 for Kirklees may form the basis of monitoring and planning for these emissions. We recommend considering the adoption of a LULUCF pathway that includes CO₂ sequestration sufficient to help compensate for non-CO₂ emissions within Kirklees's administrative area.

4. Conclusions

The results in this report show that for Kirklees to make its fair contribution to delivering the Paris Agreement's commitment to staying “well below 2°C and pursuing 1.5°C” global temperature rise, then an immediate and rapid programme of decarbonisation is needed. At 2017 CO₂ emission levels, Kirklees will exceed the recommended budget available within 7 years from 2020. **To stay within the recommended carbon budget Kirklees will, from 2020 onwards, need to achieve average mitigation rates of CO₂ from energy of around -13.5% per year.** This will require that Kirklees rapidly transitions away from unabated fossil fuel use. For context the relative change in CO₂ emissions from energy compared to a 2015 Paris Agreement reference year are shown in Table 3.

Table 3: Percentage reduction of annual emissions for the recommended CO₂-only pathway out to 2050 in relation to 2015

Year	Reduction in Annual Emissions (based on recommended pathway)
2020	23.9%
2030	82.2%
2035	91.4%
2040	95.8%
2045	98.0%
2050	99.0%

The carbon budgets recommended should be reviewed on a five yearly basis to reflect the most up-to-date science, any changes in global agreements on climate mitigation and progress on the successful deployment at scale of negative emissions technologies.

These budgets do not downscale aviation and shipping emissions from the UK national level. However if these emissions continue to increase as currently envisaged by Government, aviation and shipping will take an increasing share of the UK carbon budget, reducing the available budgets for combined and local authorities. **We recommend therefore that Kirklees seriously consider strategies for significantly limiting emissions growth from aviation and shipping.** This could include interactions with the UK Government or other local authority and local enterprise partnership discussions on aviation that reflect the need of the carbon budget to limit aviation and shipping emissions growth.

CO₂ emissions in the carbon budget related to electricity use from the National Grid in Kirklees are largely dependent upon national government policy and changes to power generation across the country. **It is recommended however that Kirklees promote the deployment of low carbon electricity generation within the region and where possible influence national policy on this issue.**

We also recommend that the LULUCF sector should be managed to ensure CO₂ sequestration where possible. The management of LULUCF could also include action to increase wider social and environmental benefits..

5. Reference List

1. United Nations, Paris Agreement, U. Nations, Editor. 2015, United Nations:
<https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.
2. Masson-Delmotte, V., et al., Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change,. 2018, IPCC: <https://www.ipcc.ch/sr15/>.
3. Anderson, K. and A. Bows, Beyond 'dangerous' climate change: emission scenarios for a new world. *Philos Trans A Math Phys Eng Sci*, 2011. 369(1934): p. 20-44.
4. Kuriakose, J., et al., Quantifying the implications of the Paris Agreement for Greater Manchester. 2018, Tyndall Centre for Climate Change Research:
[https://www.research.manchester.ac.uk/portal/en/publications/quantifying-the-implications-of-the-paris-agreement-for-greater-manchester\(d2e50584-952e-472b-a2b0-1c7e7d1651e1\).html](https://www.research.manchester.ac.uk/portal/en/publications/quantifying-the-implications-of-the-paris-agreement-for-greater-manchester(d2e50584-952e-472b-a2b0-1c7e7d1651e1).html).
5. IPCC, Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, R.K. Pachauri and L.A. Meyer, Editors. 2014, IPCC: <https://www.ipcc.ch/report/ar5/syr/>. p. 151.
6. Davies, E., et al., Quantifying Greenhouse Gas Emissions 2017: <https://www.theccc.org.uk/wp-content/uploads/2017/04/Quantifying-Greenhouse-Gas-Emissions-Committee-on-Climate-Change-April-2017.pdf>.
7. Government, H., Climate Change Act 2008 (c.27). 2008:
http://www.opsi.gov.uk/acts/acts2008/ukpga_20080027_en_1.
8. Belcher S, Boucher O, and Sutton R., Why results from the next generation of climate models matter. 2019, Carbon Brief: <https://www.carbonbrief.org/guest-post-why-results-from-the-next-generation-of-climate-models-matter>.
9. Fernandez Pales, A. and Leung Y., Technology Roadmap - Low-Carbon Transition in the Cement Industry. 2018, International Energy Agency: <https://webstore.iea.org/technology-roadmap-low-carbon-transition-in-the-cement-industry>.
10. Anderson K and Broderick J., Natural gas and climate change. 2017:
https://www.research.manchester.ac.uk/portal/files/60994617/Natural_Gas_and_Climate_Change_Anderson_Broderick_FOR_DIST
11. Walsh, C., S. Mander, and A. Larkin, Charting a low carbon future for shipping: A UK perspective. *Marine Policy*, 2017. 82: p. 32-40.
12. BEIS, UK local authority carbon dioxide emissions estimates 2017, E.a.I.S. Department for Business, Editor. 2019, Office of National Statistics: <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2017>.
13. Department for Business Energy and Industrial Strategy, Final UK greenhouse gas emissions national statistics: 1990-2017. 2019:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/776085/2017_Final_emissions_report.pdf.
14. Department for Business Energy and Industrial Strategy, 2018 UK GREENHOUSE GAS EMISSIONS, PROVISIONAL FIGURES BEIS, Editor. 2019: <file:///C:/Users/mbgnhcj2/AppData/Local/Temp/2018-provisional-emissions-statistics-report.pdf>.
15. Park, N., United Kingdom population mid-year estimate, O.f.N. Statistics, Editor. 2018, Office for National Statistics:
<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/timeseries/ukpop/pop>
16. Nash, A., Population projections for local authorities: Table 2 O.f.N. Statistics, Editor. 2018, Office for National Statistics:
<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/localauthorities>
17. Fenton, T., Regional economic activity by gross value added (balanced), UK: 1998 to 2017 O.f.N. Statistics, Editor. 2018, Office for National Statistics:
<https://www.ons.gov.uk/economy/grossvalueaddedgva/bulletins/regionalgrossvalueaddedbalanceduk/1998to2017>.
18. Brown, K., et al., Land use: Reducing emissions and preparing for climate change 2018, Committee on Climate Change: <https://www.theccc.org.uk/publication/land-use-reducing-emissions-and-preparing-for-climate-change/>.
19. IPCC, Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, T.F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley Editor. 2013: <https://www.ipcc.ch/report/ar5/wg1/>.



Air Quality Action Plan for
Kirklees Council

Version 1.4

In fulfillment of Part IV of the
Environment Act 1995

Local Air Quality Management

September 2019

Kirklees Council District Action Plan

Local Authority Officer	Andrew Jameson
Department	Investment and Regeneration Services
Address	Environmental Health Flint Street Depot Flint Street Fartown Huddersfield HD1 6LG
Telephone	01484 221000
e-mail	andrew.jameson@kirklees.gov.uk
Report Reference number	Kirklees_2018_AQAP1.4
Date	September 2019

Kirklees Council District Action Plan

Copy	Date	Reason for Changes	Officer
1.1	20/02/19	Initial Draft	A Jameson
1.2	01/04/19	Inclusion to reflect feedback from approval process	A Jameson
1.3	12/08/19	Inclusion to reflect feedback from public consultation	A Jameson
1.4	23/09/19	Inclusion to reflect feedback from approval process	A Jameson

Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of our duty to Local Air Quality Management (LAQM). It outlines the action we will take to improve air quality in Kirklees Council between April 2019 and March 2024.

This action plan replaces the previous action plan which ran from May 2007 to August 2019. Highlights of successful projects delivered through the past action plan include:

- Redevelopment of congested junctions
- Installation of Split Cycle Offset Optimisation Technique (SCOOT) traffic managements system across the district
- Installation of bus lanes and bus priority at traffic lights
- School Bike-ability Scheme
- Calder Valley Cycle Scheme
- Free parking for ULEV Vehicles
- City Car Club
- Deep clean of AQMA 2
- EV charge point installations across district

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 roughly £16 billion³. Kirklees Council is committed to reducing the exposure of people in the Kirklees district to poor air quality in order to improve health.

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. Valuing the overall impacts of air pollution, March 2010

Kirklees Council District Action Plan

We have developed actions that can be considered under 11 broad topics:

- Alternatives to private vehicle use
- Environmental permits
- Freight and delivery management
- 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 primary priority within Kirklees relates to emissions associated with vehicles, the local topography and congestion. In conjunction with the primary focus, Kirklees will also work with local businesses, home owners and developers to reduce the impact from their emissions.

We have worked hard to engage with stakeholders and communities which can make a difference to air quality in Kirklees. We would like to thank all those who have worked with us in the past and we look forward to working with you again as well with new partners as we deliver this new action plan over the coming years.

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 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 Kirklees Council's direct influence.

Responsibilities and Commitment

This AQAP was prepared by the Environmental Health Department of Kirklees Council with the support and agreement of the following officers and departments:

- Kirklees Council Public Health
- Kirklees Council Highways Department

Kirklees Council District Action Plan

- Kirklees Council Planning Department
- Kirklees Council Procurement
- Kirklees Council Communities and Leisure
- Kirklees Neighbourhood Housing
- Huddersfield University
- Highways England
- West Yorkshire Low Emissions Strategy Steering Group
- West Yorkshire Combined Authority

This AQAP has been approved by:

<Details of high level Council members who have approved the AQAP (NB: In two tier authorities this could include sign off from County Councils) e.g. Head of Transport Planning, Head of Public Health, with e-signatures>.

This AQAP will be subject to an annual review, appraisal of progress and reporting to the relevant Council Committee (specify if relevant). Progress each year will be reported in the Annual Status Reports (ASRs) produced Kirklees Council, as part of our statutory Local Air Quality Management duties.

If you have any comments on this AQAP please send them to Andrew Jameson at:

Address; Environmental Health, Flint Street Depot, Flint Street, Fartown,
Huddersfield, HD1 6LG

Telephone; 01484 221000

Email; andrew.jameson@kirklees.gov.uk

Table of contents

1	<i>Introduction</i>	<i>10</i>
2	<i>Summary of Current Air Quality in Kirklees</i>	<i>11</i>
3	<i>Kirklees Council’s Air Quality Priorities.....</i>	<i>12</i>
4	<i>Development and Implementation of Kirklees Council AQAP.....</i>	<i>14</i>
4.1	<i>Consultation and Stakeholder Engagement.....</i>	<i>14</i>
4.2	<i>Update to Action Plan following public consultation</i>	<i>17</i>
4.3	<i>Steering Group</i>	<i>19</i>
5	<i>Source Apportionment.....</i>	<i>24</i>
6	<i>Air Quality Action Plan Measures</i>	<i>27</i>
	<i>Appendix A - Response to Consultation</i>	<i>72</i>
	<i>Appendix A, Part 1 – Consultee response Overview</i>	<i>72</i>
	<i>Appendix A, Part 2 – Consultee responses</i>	<i>73</i>
	<i>Appendix B - Reasons for Not Pursuing Action Plan Measures.....</i>	<i>94</i>
	<i>Appendix C – Source Apportionment</i>	<i>95</i>
	<i>Appendix D – Air Quality Modelling Details.....</i>	<i>106</i>
	<i>D.1 Ainley Top Detailed Assessment.....</i>	<i>106</i>
	<i>D.2 Birkenshaw Detailed Assessment</i>	<i>109</i>
	<i>D.3 Eastborough Detailed Assessment</i>	<i>112</i>
	<i>D.4 Edgerton Detailed Assessment</i>	<i>115</i>
	<i>D.5 Heckmondwike Detailed Assessment</i>	<i>118</i>
	<i>D.6 Huddersfield Town Centre Detailed Assessment</i>	<i>121</i>
	<i>D.7 Outlane Detailed Assessment.....</i>	<i>124</i>
	<i>D.8 AQMA1 Detailed Assessment.....</i>	<i>127</i>
	<i>D.9 Thornton Lodge</i>	<i>131</i>

List of Tables

Table 4.1 - Consultation Undertaken	15
Table 4.2 Details of Steering Group Meetings.....	20
Table 4.3 Key Stakeholder Meetings.....	21
Table 6.1 –Air Quality Action Plan Measures	28
Table A.1 - Summary of Responses to Consultation and Stakeholder Engagement on the AQAP.....	72
Table B.1 - Action Plan Measures Not Pursued and the Reasons for that Decision	94
Table C.1 AQMA 1 Bradley Source Apportionment.....	95
Table C.2 AQMA 3 – Ainley Top Source Apportionment.....	96
Table C.3 AQMA 4 – Birkenshaw Source Apportionment.....	97
Table C.4 AQMA 5 – Eastborough Source Apportionment	98
Table C.5 AQMA 6 – Eastborough Source Apportionment	99
Table C.6 AQMA 7 – Liversedge / Heckmondwike Source Apportionment.....	100
Table C.7 AQMA 8 – Outlane Source Apportionment	101
Table C.8 AQMA 9 – Huddersfield Town Centre Source Apportionment.....	102
Table C.9 AQMA Emissions Contributions	103
Table D.1.1 Results of Run at diffusion tube sites and statistical analysis of model.....	106
Table D.1.2 Statistical analysis of the corrected data.....	106
Table D.2.1 Results of Run at diffusion tube sites and statistical analysis of model.....	109
Table D.2.2 Statistical analysis of the corrected data	109
Table D.3.1 Results of Run at diffusion tube sites and statistical analysis of model.....	112
Table D.3.2 Statistical analysis of the corrected data.....	112
Table D.4.1 Results of Run at diffusion tube sites and statistical analysis of model.....	115
Table D.4.2 Statistical analysis of the corrected data.....	115
Table D.5.1 Results of Run at diffusion tube sites and statistical analysis of model.....	118
Table D.5.2 Statistical analysis of the corrected data.....	118
Table D.6.1 Results of Run at diffusion tube sites and statistical analysis of model.....	121
Table D.6.2 Statistical analysis of the corrected data.....	121
Table D.7.1 Results of Run at diffusion tube sites and statistical analysis of model.....	124

Table D.7.2	Statistical analysis of the corrected data.....	124
Table D.8.1	Results of Run at diffusion tube sites and statistical analysis of model.....	127
Table D.8.2	Statistical analysis of the corrected data.....	127
Table D.9.1	Results of Run at diffusion tube sites and statistical analysis of model.....	131
Table D.9.2	Statistical analysis of the corrected data.....	131

List of Figures

Figure 5.1	Average AQMA Source Apportionment Composition.....	25
Figure 5.2	Average AQMA Source Apportionment Fuel Composition	26
Figure 5.3	AQMA 5 Source Apportionment Composition	26
Figure 5.4	AQMA 5 Source Apportionment Fuel Composition	27
Figure D.1.1	NO2 Monitored / Modelled scatter graph	107
Map D.1	Ainley Top AQMA.....	108
Figure D.2.1	NO2 Monitored / Modelled scatter graph	110
Map D.2	Birkenshaw AQMA.....	111
Figure D.3.1	NO2 Monitored / Modelled scatter graph	113
Map D.3	Eastborough AQMA.....	114
Figure D4.1	NO2 Monitored / Modelled scatter graph	116
Map D.4	Edgerton AQMA.....	117
Figure D5.1	NO2 Monitored / Modelled scatter graph	119
Map D.5	Heckmondwike AQMA	120
Figure D.6.1	NO2 Monitored / Modelled scatter graph	122
Map D.6	Huddersfield Town Centre AQMA	123
Figure D.7.1	NO2 Monitored / Modelled scatter graph	125
Map D.7	Outlane AQMA.....	126
Figure D.8.1	NO2 Monitored / Modelled scatter graph	128
Map D.7	AQMA 1 Review	129
Figure D.9.1	NO2 Monitored / Modelled scatter graph	132
Map D.9	Thornton Lodge Assessment (AQMA 10).....	133

Abbreviations

AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQS	Air Quality Strategy
ASR	Annual Status Report
LAQM	Local Air Quality Management
NO ₂	Nitrogen dioxide
NO _x	Nitrogen oxides
AQO	Air Quality Objective
PM	Particulate Matter
PM ₁₀	Particulate matter less than 10 micron in diameter
PM _{2.5}	Particulate matter less than 2.5 micron in diameter
SCOOT	Split Cycle Offset Optimisation Technique
WYLES	West Yorkshire Low Emissions Strategy

1 Introduction

This report outlines the actions that Kirklees Council will deliver between October 2019 and October 2024 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 the local authority's administrative area.

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 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 Kirklees Council's air quality ASR.

2 Summary of Current Air Quality in Kirklees

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^{4,5}.

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion⁶.

The air quality issues within Kirklees are focussed around the road network connecting the towns, and traffic which passes between the West Yorkshire conurbation along the M62 and Greater Manchester.

Kirklees Council have conducted monitoring across the district where these primary roads are in close proximity to relevant human activity. To date Kirklees has identified 2 primary pollutants of concern. They are Nitrogen Dioxide and Particulate Matter.

Current trends indicate that the levels of particulate matter has fallen over the last 5 years, which has resulted in the decision to remove an AQMA.

It is noted that between 2012 and 2013 concentrations within the AQMAs and overall fell by roughly $10\mu\text{g}/\text{m}^3$. Since that time concentration levels have stagnated within the AQMA 1. Trends within the new AQMA's and at other non AQMA monitoring locations have seen slightly increases by 1 to $2\mu\text{g}/\text{m}^3$. This indicates that further measures are needed to return to a downward trend and it must also be noted that the assumptions around the turnover in fleet bringing about required reductions should be treated with caution.

⁴ Environmental equity, air quality, socioeconomic status and respiratory health, 2010

⁵ Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

⁶ Defra. Abatement cost guidance for valuing changes in air quality, May 2013

3 Kirklees Council's Air Quality Priorities

Kirklees Council published their Corporate Plan 2018-2020 on 19 July 2018, which outlines the priorities for the next 3 years. The primary shared outcomes of the plan are as follows:

- **Best start** - Children have the best start in life
- **Sustainable economy** - Kirklees has sustainable economic growth and provides good employment for and with communities and businesses.
- **Well** - People in Kirklees are as well as possible for as long as possible
- **Safe and cohesive** - People in Kirklees live in cohesive communities, feel safe and are safe/protected from harm
- **Independent** - People in Kirklees live independently and have control over their lives
- **Clean and green** - People in Kirklees experience a high quality, clean, sustainable and green environment
- **Efficient and effective** - Kirklees Council works smart and delivers efficiently and effectively.
- **Aspire and achieve** - People in Kirklees have aspiration to achieve their ambitions through education, training employment and lifelong learning

Full details on the plan are available at:

<http://www.kirklees.gov.uk/beta/delivering-services/pdf/corporate-Plan-201820.pdf>

The Corporate Plan is reviewed annually and results were published 17 July 2019, highlighting the creation of this action plan, the air quality strategy and a number of measures from **Table 6.1** as key measures in delivering the shared outcomes.

The review is available at;

<http://intranet.kirklees.gov.uk/getattachment/News/News-and-Views/Corporate-Plan-2019-Refresh/Kirklees-Corporate-Plan-2019-Refresh-Final.pdf.aspx>

Air quality is named within the Corporate Plan as a primary key measure for success within the Clean and Green outcomes section. The target within the plan is to “Improve air quality via a Kirklees Air Quality Action Plan and other interventions across the Council and with partners.”

As part of the LAQM process Kirklees Council has identified 10 areas, which have exceeded AQO's. Originally 2 locations were identified in 2007, Bradley and Scouthill.

Bradley was declared for the exceedance of the annual NO₂ AQO and further assessment identified that the primary source of pollutants was as a result of vehicle emissions. Source apportionment results contained within table 8.1 were derived as

part of this further assessment and used to determine measures, which have been implemented reduce the concentrations within the area. Since that time, the levels have fallen within the AQMA and as such proposals to reduce the boundary from 78 residential properties to 2 have been accepted by DEFRA. This area will still be included within the new Action Plan from the district and where applicable, specific measures will be identified.

Scouthill was declared for exceedances of the daily PM₁₀ AQO and further assessment identified that the primary source of PM were from roadside emissions compounded by an elevated background due to neighbouring industrial activities. Through the use of diurnal trends and weather patterns led the council to conclude that exceedances were occurring due to re-suspension of PM and measures were implemented that have resulted in compliance within the AQMA. As such Kirklees Council is in the process of revoking the AQMA completely.

In 2016 a further 7 areas were identified as exceeding Annual NO₂ AQO and following focused studies within these areas Kirklees Council concluded the need for declaration. In 2017, Kirklees Council identified a 1 other area which exceeded the Annual NO₂ AQO. Declaration of these 8 areas increases the number of AQMA's within the Kirklees Council to 10.

A pre-existing Air Quality Strategy and Action Plan are in place and was adopted in 2007. While some of the actions and policies outlined in these documents are still relevant in 2018, majority are either out of date or have been superseded by adoption of other policy documents. As such Kirklees Council plan to replace these documents with this 5 year action plan and the creation of a new overarching Air Quality Strategy for the district.

The most up-to-date policy document currently in use to reduce emissions within the district is the West Yorkshire Low Emission Strategy (WYLES), which provides a regional approach to reducing emissions across a number of work streams including planning, procurement, the electric charging network and freight. This document is used within the district and regionally to inform decision making, strategies and formulate projects to reduce emissions.

The priority of air quality within the corporate plan is also re-enforced in the Kirklees Joint Health and Wellbeing Strategy 2014-2020, which prioritises air quality improvement and its concentrations are a key measure reported to the health as wellbeing board.

16 January 2019 Kirklees Council declared a Climate Emergency and has set up a councillor lead working party to set targets for the district and identify practical measures to reduce emissions. Kirklees Council Environmental Health has representation on this group and is working in partnership with Key Stakeholders to deliver a strategy to as part of the Climate Emergency. It is recognised that there is a clear relationship between Carbon Reduction and Air Quality. As such, the Air Quality Strategy and Action Plan will strongly link with Strategy and Policy constructed as a result of the Climate Emergency. The Action Plan is updated annually and will include greater detail on links to Climate Emergency works/documents upon their development and completion.

Along with these core air quality strategy document, Kirklees Council has a number of other strategic policies that will have impact on climate change and emissions reduction:

- Kirklees Telematics Policy 2017
- Kirklees Employee Handbook 2015
- Kirklees Council Social Values Policy Statement 2013
- Kirklees Climate Local Framework 2013
- Kirklees Climate Change Local Commitments 2013
- Kirklees Flexible, Mobile and Agile Ways of Working Policy Statement 2017
- Kirklees Walking & Cycling Framework 2018
- Kirklees Procurement Strategy 2013
- Kirklees Joint Strategic Needs Assessment: Air Quality 2018
- Highways Asset Management Policy & Strategy Document 2015

Furthermore, Kirklees Council is in the process of developing new strategic documents to promote the reduction of health impacting emissions. These documents are listed below and contained within the action plan schedule of work:

- Kirklees Local Plan Environmental Policy (Adoption)
- New Kirklees Air Quality Strategy
- New Kirklees Air Quality Action Plan
- Kirklees Electric Vehicle Charging Strategy
- Kirklees Climate Emergency Action Plan

Hyperlinks for access to the aforementioned policy documents are available in Appendix C.

4 Development and Implementation of Kirklees Council 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**.

Kirklees Council District Action Plan

In addition, during the construction of the document, we have undertaken the following stakeholder engagement to include their input into the document prior to the consultation process on the completed document

- Promotion of the Draft on the Council Website
- Engagement with Anchor Institutions:
 - Kirklees Neighbourhood Housing
 - Huddersfield University
 - Local NHS Trusts
- Engagement with Local Ward Councillors

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

Table 4.1 - Consultation Undertaken

Contact Type / Date	Consultee
Submitted to DEFRA LAQM Website	The Secretary of State
Letter 18/06/19	The Environment Agency
Letter 18/06/19	Highways England (The Highways Authority)
Letter 18/06/19	Huddersfield / Calderdale NHS Trust
Letter 18/06/19	Mid Yorkshire NHS Trust
Letter 18/06/19	West Yorkshire Public Health (Public Health England)
Letter 18/06/19	Peak District National Park
Emailed 06/06/19	Kirklees Councillors
Letter 18/06/19	Kirklees Neighbourhood Housing
Letter 18/06/19	Kirklees Active Leisure
Letter 18/06/19	Barnsley Council (Neighbouring Local Authority)

Kirklees Council District Action Plan

Contact Type / Date	Consultee
Letter 18/06/19	Bradford Council (Neighbouring Local Authority)
Letter 18/06/19	Calderdale Council (Neighbouring Local Authority)
Letter 18/06/19	High Peak Borough Council (Neighbouring Local Authority)
Letter 18/06/19	Leeds City Council (Neighbouring Local Authority)
Letter 18/06/19	Oldham Council (Neighbouring Local Authority)
Letter 18/06/19	Wakefield Council (Neighbouring Local Authority)
Letter 18/06/19	West Yorkshire Combined Authority
Letter 18/06/19	Poundstretcher Ltd (Local Business)
Letter 18/06/19	PPG Architectural Coating UK Ltd (Local Business)
Letter 18/06/19	Principle Global Ltd (Local Business)
Letter 18/06/19	Tandem 1987 Ltd (Local Business)
Letter 18/06/19	BUY IT Direct Ltd (Local Business)
Letter 18/06/19	Hoyer Petrolog UK Ltd (Local Business)
Letter 18/06/19	Syngenta (Local Business)
Letter 18/06/19	Mamas & Papas (Holdings) Ltd (Local Business)
Letter 18/06/19	FMG Support Group Ltd (Local Business)
Letter 18/06/19	Northern Commercials (Mirfield) Ltd (Local Business)
Letter 18/06/19	Thornton & Ross Ltd (Local Business)
Letter 18/06/19	Premdor Crosby Ltd (Local Business)
Letter 18/06/19	Adare SEC Holding Ltd (Local Business)
Letter 18/06/19	The Simplybiz Group PLC (Local Business)
Letter 18/06/19	DW3 Products Holdings Ltd (Local Business)
Letter 18/06/19	Isaac Timmins Ltd (Local Business)
Letter 18/06/19	Myers Group Holdings Ltd (Local Business)

Kirklees Council District Action Plan

Contact Type / Date	Consultee
Letter 18/06/19	Lawton Yarns Ltd (Local Business)
Letter 18/06/19	ALS Laboratories (UK) Ltd (Local Business)
Letter 18/06/19	DB Santasalo (Local Business)
Letter 18/06/19	AHR Management Services LLP (Local Business)
Letter 18/06/19	South Pennine Academies (Local Business)
Letter 18/06/19	Focus Academy Trust (UK) Ltd (Local Business)
Letter 18/06/19	Waterhead Academy (Local Business)
Letter 18/06/19	The Keys (Local Business)
Letter 18/06/19	National Federation of Plus Areas (Local Business)
Letter 18/06/19	Major Recruitment Ltd (Local Business)
Letter 18/06/19	Local Care Direct (Local Business)
Letter 18/06/19	T.W Broadbent Ltd (Local Business)
Letter 18/06/19	Sun Healthcare Ltd (Local Business)
Public consultation website; Opened 06/06/19 Closed 20/07/19	General Public

4.2 Update to Action Plan following public consultation

Kirklees Council undertook the consultation process over a 6 week period between 06 June 2019 and 20 July 2019. Consultees were able to submit feedback via email or using pro-forma on the council's consultation website. The council received a total of 18 responses to the consultation, details of which are contained within **Appendix A**.

We welcome the feedback we have received and thank stakeholders for their engagement in this process and plan to continue to work with them going forward.

Kirklees Council District Action Plan

In response to the consultation, Kirklees Council have taken the opportunity to address the feedback received and the Action Plan has been updated to reflect the given observations.

Firstly, one of the primary items of discussion received from a number of different stakeholders centred on measurability of the plan. The plan has been updated in acknowledgement of this need and **Table 6.1** has been updated to include stronger targets / measurables / indicators in order to review delivery of the action plan.

Stakeholder responses also requested inclusion of a number of direct measures to bring about air quality improvements. The council has considered these requests and in the most part, the requested measures were already included within **Table 6.1** in some form.

The only measure that received high demand from consultees and not be included in the plan related to anti-idling around schools. In acknowledgement of this, action G.68 has been created, in which the council aim to undertake a feasibility study into anti-idling across the district when funding becomes available to do so.

There were also high demands from consultees for the need for Clean Air Zones, Greater Communications, Development Control and Free parking for E.V's across West Yorkshire.

There are a number of measures within the Generic section of the action plan to address the issues arising from Development control and Kirklees Council have included the need for incentivised ULEV parking across West Yorkshire (G.7).

Kirklees Council has considered the viability of a Chargeable Clean Air Zone and determined that delivery would not be feasible. Notwithstanding this, Kirklees Council have included action G.56, which is to undertake a feasibility study into a Non-charging Clean Air Zone for the district.

Finally, we acknowledge the feedback received about communications and are in agreement that there is significant need to provide information and dialogue between stakeholders and the authority. Therefore as a matter of priority, Kirklees Council will be working on action G.44 to evaluate the current information portals and deliver a plan to improve communication with stakeholders.

As stated at the time of the public consultation, the action plan is an iterative process that is reviewed annually and as such continued feedback and input is welcome at any time.

4.3 Steering Group

Kirklees Council set up internal steering groups to create, review and deliver the action plan over the 5 year life span of the project. The following departments are represented on the steering group:

- Kirklees Environmental Health
- Kirklees Public Health
- Kirklees Strategic Highways
- Kirklees Planning
- Kirklees Highways Maintenance
- Kirklees Procurement
- Kirklees Parking
- Kirklees Carbon Reduction Team
- Kirklees Neighbourhood Housing
- Kirklees UTMC
- Kirklees Strategic Assets
- Kirklees Transport
- Kirklees Investment & Regeneration
- Kirklees Schools
- Kirklees Street Scene
- Kirklees Highways Safety
- Kirklees Waste

Initial goal of the steering group is to input into the action plan to create a council wide document considering emissions reduction.

Once the document has been ratified by national government, Kirklees Council Environmental Health will lead on delivery of the program, liaising with partners to assist in delivery of each project contained within the action plan. The steering group will meet on bi-annual basis to discuss progress of the plan and update where necessary. Meetings of the steering group are highlighted in **Table 4.2**.

Kirklees Council District Action Plan

Table 4.2 Details of Steering Group Meetings

Meeting Title	Date	Attendees	Comments
Inception Meeting	26 Feb 2018	Full Steering Group	Initial meeting to highlight issues currently, explain the process and request information on activities the council currently does which will have impact on emissions reductions
Delivery Meeting	24 May 2018	Public Health & Environmental Health	Meeting to discuss how to integrate Outcomes Based Accountability into the Action Plan assessment process
Update Meeting	12 Sept 2018	Full Steering Group	Follow up meeting to discuss National Action Plan, impacts to Kirklees and how the action plan will be assessed using OBA
Environment & Health Projects	27 Sept 2018	Public Health Environmental Health Carbon Reduction	OBA Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district dealing with health and environment
Strategic Highways Project	2 Oct 2018	Public Health Environmental Health Strategic Highways	OBA Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district dealing with Strategic Highways
Development Control	11 Oct 2018	Public Health Environmental Health Planning Policy and Delivery	OBA Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district dealing with Development Control
Highways Maintenance	16 Oct 2018	Public Health Environmental Health	OBA Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the

Kirklees Council District Action Plan

Meeting Title	Date	Attendees	Comments
and Parking Projects		Road Safety UTMC Parking	district dealing with highways safety, management and parking
Internal Transport Management Projects	30 Oct 2018	Public Health Environmental Health	OBA Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district dealing with internal transport.
Kirklees Neighbourhood Housing Projects	21 Jan 2019	Kirklees Neighbourhood Housing	OBA Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district from Kirklees Neighbourhood Housing

In addition to the steering group meeting, engagement has been undertaken with councillors, anchor institutions and Highways England to include feasible projects into the action plan. Details on these meeting are contained within **Table 4.3**.

Table 4.3 Key Stakeholder Meetings

Meeting Title	Date	Attendees	Comments
Dewsbury East Ward Councillors (AQMA 5)	8 October 2018	Cll Firth Cll Kane Cll Scott Environmental Health	Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district and request local input into the process
Birkenshaw & Birstall Ward Councillor (AQMA 4)	12 October 2018	Cll Light Cll Smaje Cll Thompson Environmental Health	Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district and request local input into the process

Kirklees Council District Action Plan

Meeting Title	Date	Attendees	Comments
Colne Valley Ward Councillors Meeting (AQMA 8)	17 October 2018	Cll Bellamy Cll Griffiths Cll Walker Environmental Health	Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district and request local input into the process
Ashbrow Ward Councillors Meeting (AQMA 1)	17 October 2018	Cll Homewood Cll Pinnock Environmental Health	Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district and request local input into the process
Heckmondwike Ward Councillors (AQMA 7)	30 October 2018	Cll Kendrick Cll Sheard	Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district and request local input into the process
Crosland Moor & Netherton Ward Councillors (AQMA 10)	9 November 2018	Cll Kaushik Environmental Health	Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district and request local input into the process
Dalton Ward Councillors (AQMA 9)	20 November 2018	Cll Khan Cll Mcbride Environmental Health	Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district and request local input into the process
Highways England Meeting (AQMA's 3,4 & 8)	12 December 2018	Highways England Environmental Health	Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district and along highways within their control

Kirklees Council District Action Plan

Meeting Title	Date	Attendees	Comments
Kirklees Neighbourhood Housing (KnH)	21 January 2019	KnH Environmental Health	OBA Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the KnH activities.
West Yorkshire Combined Authority (WYCA)	29 January 2019	WYCA Environmental Health	OBA Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district and how WYCA could support this.
Kirklees Communications and Marketing Meeting	12 February 2019	Communications and Marketing Environmental Health	OBA Meeting to discuss a collective approach to promote air quality and projects within the district and how Comms could support the action plan
Huddersfield & Calderdale NHS Trust	12 February 2019	H&C NHS Trust Environmental Health	Meeting to discuss current projects, future projects and unfunded projects that will have an impact on emissions within the district and collaborative working between the council and the trust
Newsome Councillors (AQMA 9 & 10)	30 May 2019	Cll Cooper Cll Allison Cll Lee-Richards Environmental Health	Meeting to update councillors on action plan process and discuss current projects, future projects and unfunded projects that will have an impact on emissions.
Crosland Moor and Netherton Councillors (AQMA 10)	30 May 2019	Cll Kaushik Environmental Health	Meeting to update councillors on action plan process and discuss current projects, future projects and unfunded projects that will have an impact on emissions.

Kirklees Council District Action Plan

Meeting Title	Date	Attendees	Comments
Birkenshaw & Birstall Ward Councillors (AQMA 4)	6 June 2019	Cll Smaje Cll Thompson Cll Goodwin Environmental Health	Meeting to update councillors on action plan process and discuss current projects, future projects and unfunded projects that will have an impact on emissions.
Lindley Councillors (AQMA)	29 July 2019	Cll Burke Cll Eastwood Cll Smith Environmental Health	Meeting to update councillors on action plan process and discuss current projects, future projects and unfunded projects that will have an impact on emissions.

5 Source Apportionment

In order to determine appropriate methods which Kirklees Council could employ to reduce Pollution within the district, it is necessary that source apportionment is conducted to identify the primary polluters in the area.

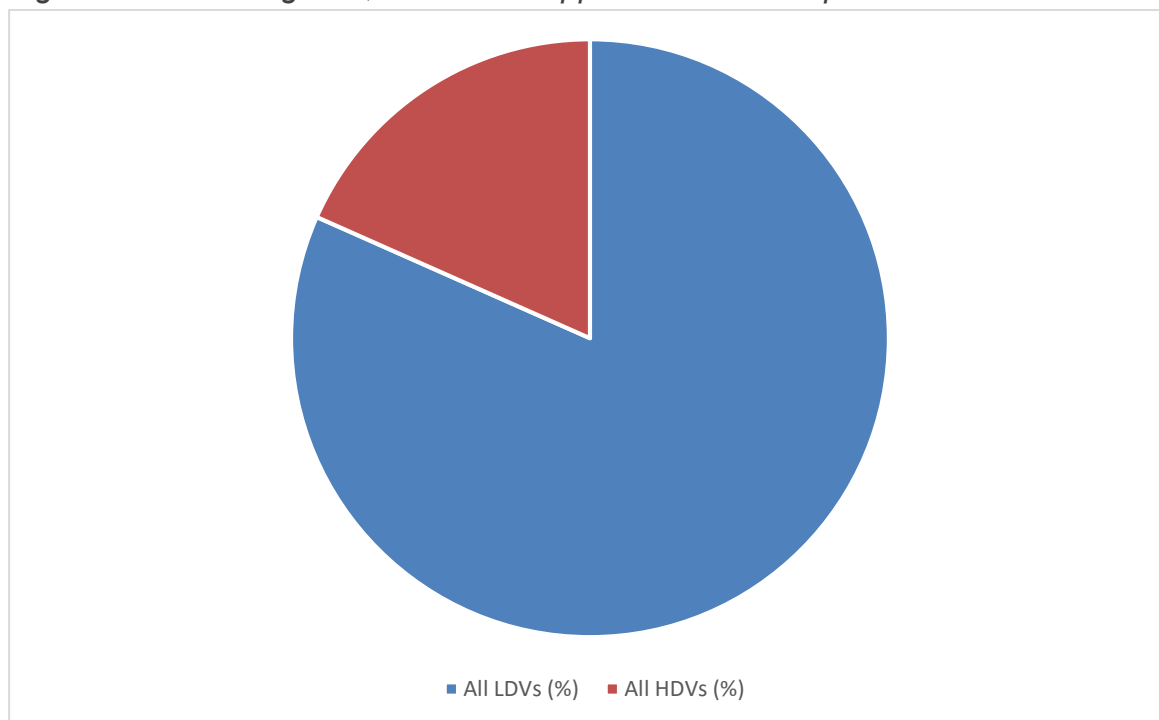
Firstly, it must be noted that 8 of the 10 AQMA's are located at junctions along primary A roads where properties are within 10m of the carriageway and as such, the concentrations are heavily influenced by the stop-start nature of traffic. The remaining 2 AQMAs are located adjacent to the M62 motorway, which results in elevated concentrations due to very high traffic volume.

Emission data obtained from modelling undertaken as part of the LAQM duties which resulted in the declaration of 10 AQMA's. The details for these models are contained within Appendix C.2. Maps for the AQMA's are also included within Appendix C.2

The results generated through the source apportionment exercise were generated using the Emission Factor Toolkit v8.01 and traffic data used within the validated air quality models discussed in the above report. The results of the source apportionment on each individual AQMA is contained within Appendix C.1.

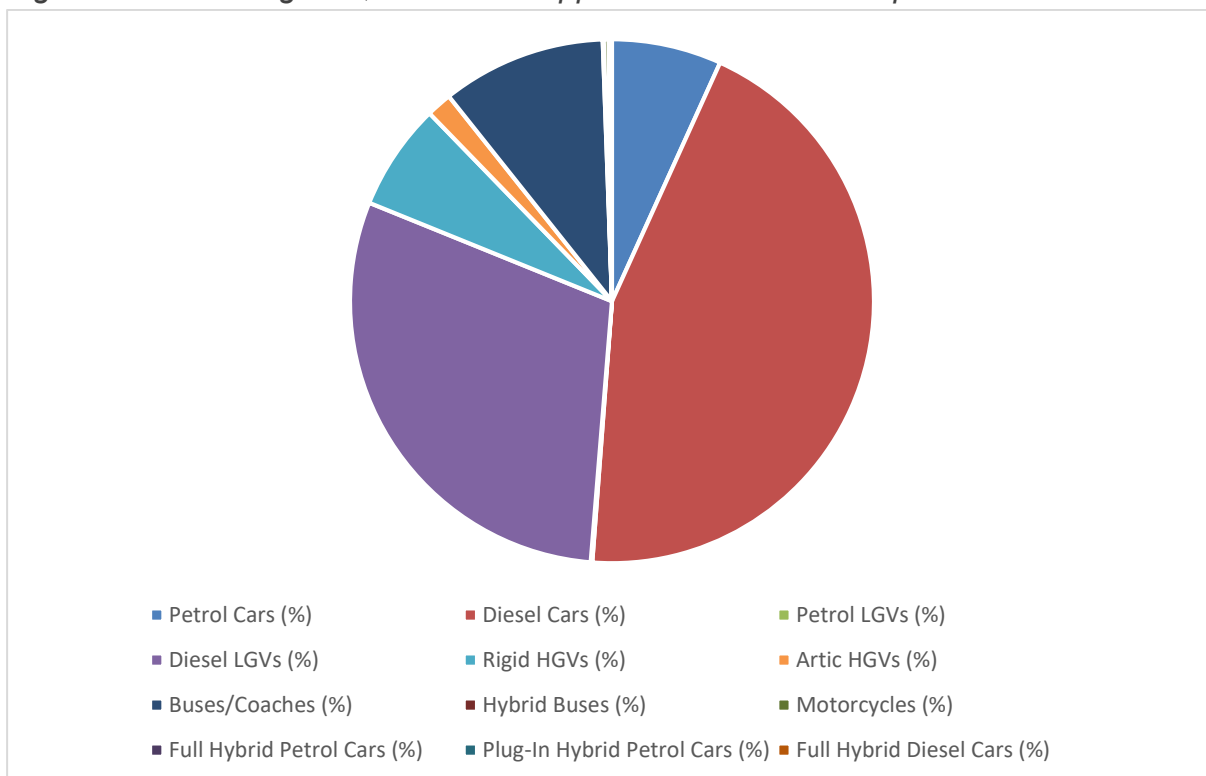
Comparison of the source apportionment results for the 10 AQMA's been broken down in two ways to assist with action plan construction. 9 of the 10 AQMA's have a similar source compositions, which are highlighted in Figure 5.1.

Figure 5.1 – Average AQMA Source Apportionment Composition



NO₂ emissions from the vehicle fleet at 9 of the 10 AQMA's are heavily contributed to by LDV's, with an average of 80% emissions from LDV's and 20% from HGV's. Figure 10.1 has been broken down further in Figure 5.2 to demonstrate the average fleet composition by fuel usage.

Figure 5.2 – Average AQMA Source Apportionment Fuel Composition



Emissions within 9 of our AQMA's are predominantly a result of domestic diesel vehicles or diesel Light Goods Vehicles (LGV's). This composition is common amongst both the motorway influenced roads and also the A road junction AQMA's.

The only AQMA where the composition is significantly different is AQMA 5 and as a result of the AQMA's proximity to the local bus station. Figures 5.3 & 5.4 demonstrates that there is a greater contribution to emissions from the HGV fleet and when the emissions are broken down further there is a greater composition from the bus fleet.

Figure 5.3 –AQMA 5 Source Apportionment Composition

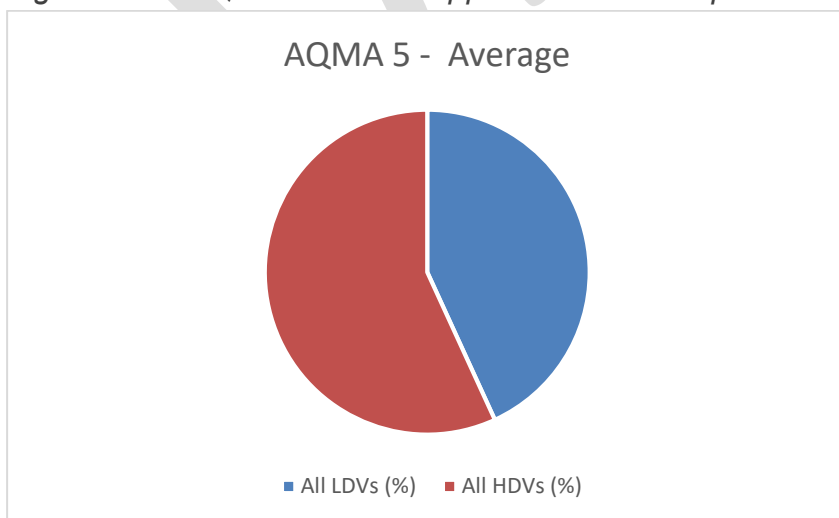
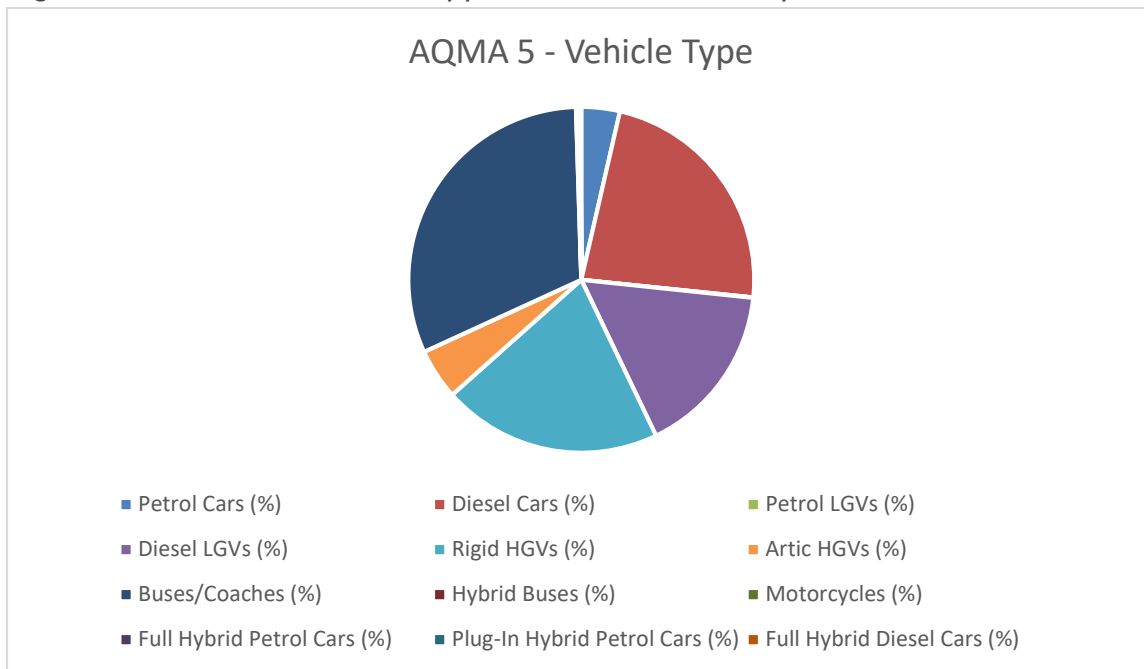


Figure 5.4 –AQMA 5 Source Apportionment Fuel Composition



The information obtained as part of the source apportionment exercise has been used to influence the interventions and mitigation recommended as part of the action planning process. Therefore, there needs to be a focus on flow management, coupled with Domestic and LGV diesel vehicles. Notwithstanding this, interventions centred on the HGV fleet and industry will be included because improvement in all sectors will help to bring about compliance and improve the living environment within Kirklees.

6 Air Quality Action Plan Measures

Table 6.1 shows the Kirklees 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
- expected benefit in terms of pollutant emission and/or concentration reduction;
- the timescale for implementation
- how progress will be monitored

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

Table 6.1 –Air Quality Action Plan Measures

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
Districtwide Actions									
G.1	Adoption of the West Yorkshire Low Emissions Strategy (WYLES)	Kirklees Environmental Health	2014	2015	<p><u>Kirklees Council Target;</u></p> <p>+Conclusions of WYLES benchmarking project demonstrating full compliance with WYLES Objectives</p> <p><u>Kirklees Council Target;</u></p> <p>Delivery of key WYLES objectives;</p> <p><u>Obj 2. Age of vehicles in bus fleet</u> Measured by; +Change in bus fleet composition towards newer Euro Cat Vehicles</p> <p><u>Obj 3. Electric Vehicle Uptake</u> Measured by increase in the; +Number of newly registered E.V vehicles within Kirklees +Number of E.V's using charging Infrastructure +Number of Green Parking Permits issues within district</p> <p><u>Obj 4. ECO-Stars Freight Recognition Scheme</u> Measured by increase in; +Number of operators signed up within the district +Number of fleet vehicles included in the scheme</p>	NO ₂ & PM	2025		<p>Currently adopted within the authority and integrated into Kirklees Council policy and work instructions. This is a 10 year policy document, of which we are in year 4. Further plans outlined in action G.22 for a review of the documents and how they are used. Funding received from Air Quality Grant.</p> <p>Available at; https://www.kirklees.gov.uk/beta/crime-and-safety/pdf/WYLES-strategy.pdf</p>

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					+Number of Operators improving their ECO-Star scores after re-visits <u>Obj 6. Taxi Fleet Improvements</u> Measured by; +increase in the number of licensed Hybrid / ULEV vehicles +reduction in the age of the vehicles licensed +reduction in number of diesel vehicles licensed				
G.2	Kirklees Council - workplace active travel	Public Health	2018	2018	<u>West Yorkshire Target:</u> +Sustainable travel mode increase from 36% in 2011 to 42% by 2026 <u>Kirklees Council Targets:</u> +Increase cycling travel mode by 300% between 2018 baseline and 2030 +Increase walking travel mode by 20% between 2018 baseline and 2030 <u>Kirklees Council Measurable:</u> +Number of employees using sustainable travel modes to commute to work.	NO ₂ & PM	Ongoing	Staff travel selections	Previously implemented in 2009. Frequency of review and the actual plans are currently under review to ensure they remain relevant and include changes in technology & behaviour since previous iteration. Upon conclusion of the review, conclusions to be implemented and comms plan devised to promote actions within the plans. Once new plans have been adopted, ongoing regular review and promotion will be required to ensure this action is still relevant Data for evaluation for this measure to be collected from Employee Travel Survey Results

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.3	Kirklees Sustainable Travel to school Strategy	Public Health / Economy and Infrastructure	2018	2020	<p><u>West Yorkshire Target:</u> +Sustainable travel mode increase from 36% in 2011 to 42% by 2026</p> <p><u>Kirklees Council Targets:</u> +Increase cycling travel mode by 300% between 2018 baseline and 2030 +Increase walking travel mode by 20% between 2018 baseline and 2030</p> <p><u>Kirklees Council Measurable:</u> +Number of employees using sustainable travel modes to commute to work.</p>	NO ₂ and PM	2030	Data development issue – we only have Year 9 survey as intelligence. Question mark over school travel plans. How else will we get this data?	Previously implemented in 2005. Committee set up to review the policy, construction process, pre-existing documents and implementation to reflect changes school operations, in technology and behaviour. Upon conclusion of the review, conclusions to be implemented and comms plan devised to promote actions within the plans. Once new plans have been adopted, ongoing regular review and promotion will be required to ensure this action is still relevant
G.4	Bike-ability training provided to school children	Kirklees Public Health	2009	2010	<p><u>Kirklees Council Targets:</u> +Increase cycling travel mode by 300% between 2018 baseline and 2030</p> <p><u>Kirklees Council Measurable:</u> + Number of children participating in scheme</p>	NO ₂ & PM	Ongoing within schools	Bike usage of pupils who have undertaken course versus those that haven't	This scheme is an ongoing project to provide access and training to children on the use of cycling with the long term goals to promote cycling as a leisure activity and also a mode of transport
G.5	City Cycle Grant	Kirklees Public Health	2016	2016	<p><u>Kirklees Council Targets:</u> + Continued use of the scheme, measured by grant uptake +Contributes to the wider target to increase cycling travel mode by 300% between 2018 baseline and 2030</p> <p><u>Kirklees Council Measurable:</u> + Number of grant applications</p>	NO ₂ & PM	Ongoing		This scheme is an ongoing project to provide assistance to funding purchases with the long term goals to promote cycling as a leisure activity and also a mode of transport

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.6	Green Parking Permit allowing free parking for ULEV Vehicles within Council owned car parks.	Kirklees Economy and Infrastructure	2007	2008	<p><u>Kirklees Council Targets:</u> +Contributes to wider target to increase in percentage of ULEV registered vehicles within the district year on year in line with national average. + Contributes to wider target to meet the projected IMF target of 30% of registered cars within the district to be ULEV by 2027 + Contributes to wider target for 100% car sales to be ULEV's within by 2040 in line with national government targets.</p> <p><u>Kirklees Measurable:</u> + Number of ULEV vehicles registered within Kirklees District</p>	NO ₂ & PM	Ongoing within the district	Number of E.V drivers who reside or work within Kirklees	Currently this scheme is available for Kirklees residents and workers. This action is designed to reduce the cost of Electric Vehicles ownership and to increase the uptake of electric vehicle ownership within the domestic market.
G.7	Service level agreements across West Yorkshire for ULEV Parking permits to allow free parking across the region	Kirklees Environmental Health	2019	2019	<p><u>Kirklees Council Targets:</u> +Contributes to wider target to increase in percentage of ULEV registered vehicles within the district year on year in line with national average. + Contributes to wider target to meet the projected IMF target of 30% of registered cars within the district to be ULEV by 2027 + Contributes to wider target for 100% car sales to be ULEV's within by 2040 in line with national government targets.</p> <p><u>Kirklees Measurable:</u> + Number of ULEV vehicles registered within Kirklees District</p>	NO ₂ & PM	2019	Number of E.V drivers who reside or work within Kirklees	<p>Currently scheme G.6 is available for Kirklees residents and workers. This project is to expand on the Kirklees Scheme to improve viability for users who move across district boundaries within West Yorkshire.</p> <p>This action is designed to reduce the cost of Electric Vehicles ownership and to increase the uptake of electric vehicle ownership within the domestic market.</p> <p>Builds on the success of our own permitting system and to further promote ULEVs</p>

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.8	City Car Club ran within Kirklees district	Kirklees Economy and Resilience	2008	2009	<u>Kirklees Council Measurables:</u> + Number of members within the scheme + Number of car trips for Kirklees based cars	NO ₂ & PM	Ongoing within the district		City Car Club is currently available to local residents to use. The scheme reduces vehicle ownership while also providing access to a vehicle when required.
G.9	Finance & Promote Car Sharing Website	Kirklees Economy and Infrastructure	2006	2007	<u>Kirklees Council Targets:</u> + Increased membership on scheme + Increase number of car shares on system <u>Kirklees Council Measurables:</u> + Number of members on the website + Number of users car sharing	NO ₂ & PM	Ongoing within the district	Number of people currently car sharing and whether this intervention influenced them	Currently this scheme is available for Kirklees residents and workers. This action is designed to promote changes to commuter options and to reduce the number of vehicles on the road. There are 2 car share websites currently promoted by Kirklees Council: www.wycarshare.com www.liftshare.com
G.10	E.V Fleet Feasibility Study for council fleet	Kirklees Operational Service	2018	2019	<u>Kirklees Council Targets:</u> +Contributes to wider target to increase in percentage of ULEV registered vehicles within the district year on year in line with national average. + Contributes to wider target to meet the projected IMF target of 30% of registered cars within the district to be ULEV by 2027 + Contributes to wider target for 100% car sales to be ULEV's within by 2040 in line with national government targets.+ Implementation of further recommendation from study upon completion <u>Kirklees Council Measurables:</u> + Minimum of 27 diesel vehicles to be replaced by 2021 +Number of E.V vehicles within the council fleet	NO ₂ & PM	2019		Internal document, which will steer internal fleet purchasing options and help introduction of charging facilities at council depots. Delivery targets to be determined from outcome of survey. Prior to this study, 27 vehicles were identified to be converted to E.V and should be converted by 2021.

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.11	Conversion of applicable council fleet to electric vehicles	Kirklees Operational Service	2018	2019	<p><u>Kirklees Council Targets:</u> +Contributes to wider target to increase in percentage of ULEV registered vehicles within the district year on year in line with national average. + Contributes to wider target to meet the projected IMF target of 30% of registered cars within the district to be ULEV by 2027 + Contributes to wider target for 100% car sales to be ULEV's within by 2040 in line with national government targets.+ Implementation of further recommendation from study upon completion</p> <p><u>Kirklees Council Measurables:</u> + Initial replacement of 27 diesel vehicles with E.V's by 2021</p>	NO ₂ & PM	Ongoing	Electricity availability at Council Depots	<p>Delivery targets to be determined from outcome of survey outlined in measure G.10 Prior to the study outlined in G.10, 27 vehicles were identified to be converted to E.V and should be converted by 2021. 2018/19 3 EV Vans purchased 2018-21 Transport Capital budget has a commitment to purchase of 24 EV Vehicles.</p>
G.12	Kirklees Bike to Work Scheme	Kirklees Public Health	2008	2009	<p><u>Kirklees Council Targets:</u> + Continued use of the scheme, measured by grant uptake +Contributes to the wider target to increase cycling travel mode by 300% between 2018 baseline and 2030</p> <p><u>Kirklees Council Measurable:</u> + Number of grant applications</p>	NO ₂ & PM	Ongoing within the district	Number of employees using the bikes and accessories as part of their commute to work	This scheme is an ongoing project to provide assistance to funding purchases with the long term goals to promote cycling as a leisure activity and also a mode of transport
G.13	Update Kirklees Air Quality Strategy	Kirklees Environmental Health	2018	2018	<p><u>Kirklees Council Measurable:</u> + Adoption of new 5 year Action Plan</p>	NO ₂ & PM	2019		<p>Kirklees Council originally adopted an Air Quality Strategy in 2006. This document has been updated to reflect technology, policy and scientific changes in the Air Quality Sector This document is in conjunction with the action plan and reviewed periodically in line with Action Plan review process.</p>

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.14	Assess planning applications in accordance with procedures in the WYLES Planning Guidance Document and require the relevant mitigation included on development	Kirklees Planning & Environmental Health	2014	2015	<p><u>Kirklees Council Targets:</u></p> <p>+Assess all planning applications in accordance with WYLES Planning Guidance Document</p> <p>+ Require developers to integrate air quality mitigation into developments according to size of building project</p> <p><u>Kirklees Council Measurables:</u></p> <p>+ Number of E.V chargers installed within new developments</p> <p>+Section 106 contributions</p>	NO ₂ & PM	Ongoing process	Number of electric vehicle charger installed as a result of the planning process	<p>The Planning Guidance document is a key document contained within G.1. This document is currently used to assess all planning applications and integrated into Local Plan policy documents</p> <p>As such all planning applications will be assessed against the West Yorkshire Low Emission Strategy Planning Technical Guidance Document and mitigation requirements for each application will be determined according to criteria outlined within the aforementioned document.</p> <p>The planning guidance is available at;</p> <p>https://www.kirklees.gov.uk/beta/crime-and-safety/pdf/WYLES-air-quality-and-emissions-planning-technical-guide.pdf</p>
G.15	Create a Green Procurement Toolkit	Kirklees Procurement	2018	2019	<p><u>Kirklees Council Targets:</u></p> <p>+ Integrate Air Quality as a consideration on all procurement exercises across Council</p> <p><u>Kirklees Council Measurables:</u></p> <p>+ Creation of a Green Procurement Toolkit</p> <p>+Once created, number of procurement exercises assessed against the green procurement toolkit</p>	NO ₂ & PM	Ongoing		<p>The Green Procurement Toolkit is a key outcome from action G.1. A pre-requisite Procurement Guidance document was included part of the West Yorkshire Low Emission Strategy and is to be used to facilitate the creation of a toolkit that ensures a number of environmental impact is a key consideration in procurement exercises</p> <p>WYLES Procurement Guidance Document is available at;</p> <p>https://www.kirklees.gov.uk/beta/crime-and-safety/pdf/WYLES-procurement-guide.pdf</p>
G.16	Subsidised Bus/Rail Card for Kirklees Council Staff	Kirklees Operational Services	Pre 2006	Pre 2006	<p><u>Kirklees Council Targets:</u></p> <p>+ Increase in the number of short journeys using public transport</p> <p>+ Reduction in number of low mileage journeys for grey & council fleet</p> <p><u>Kirklees Council Measurable:</u></p>	NO ₂ & PM	Ongoing within the district	Number of miles used on public transport	<p>The passes are made available in accordance with Council Travel plans, action G.2 and because the council is a member of the travel plan network available to businesses in the West Yorkshire Region (see action G.43).</p> <p>As part of the travel plan network, discounted Bus/Rail Cards are available for Kirklees Council employees to purchase.</p> <p>The council also have company rail cards, allowing officers to use public transport in their duties as a council officer. This mode of transport is preferred</p>

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					+ Number of Bus/Rail Card applications + Number of bookings of the company railcards + Number of trips taken in grey fleet or fleet vehicles that are 1mile or less				for low millage trips or town centre meetings and is a primary tool to reduce the councils fleet emissions.
G.17	Kirklees Policy on Employee Transport (Employee Handbook)	Kirklees Operational Services	2015	2015	<u>Kirklees Council Targets:</u> +Contribute to increase in the number of short journeys using public transport + Contribute to the reduction in number of low mileage journeys for grey & council fleet + Reduce grey fleet mileage + Increase ULEV Council Fleet Mileage year on year from baseline year 2020 <u>Kirklees Council Measurables:</u> +Number of grey fleet miles +Number of Fleet vehicle miles + Number of trips taken using bus/rail cards	NO ₂ & PM	Ongoing within the Authority		This is the primary policy document to control employee travel both as part of their commute or within their working capacity. The document outlines best practice for travel options within the work place and also promotes alternative commute options in accordance with council travel plans, action G.2. As such, the document recommendations continue to be relevant and in accordance with the council's ambitions to reduce emissions. Advice contained within the document is to be integrated into a Comms Plan
G.18	Retro-fitting Applicable vehicles within the Bus Fleet with Emissions Abatement Equipment	West Yorkshire Combined Authority & Kirklees	2013 & 2017	2013 & 2018	<u>West Yorkshire Target:</u> + 300 Buses Retrofitted with Exhaust abatement technology by Dec 2019 <u>Kirklees Council Measurables:</u> +Number of buses Retro-fitted	NO ₂ & PM	Ongoing Process as funding becomes available	Bus routes that the retro-fitted vehicles use	Bus fleets within the district are key for model shift and vehicle number controls at the AM and PM peaks. As such it is important that the bus fleet remains a transport option available to the public, but also does incorporate relevant technology to ensure lowest emissions possible. The Clean Bus Technology Fund provides financial incentive to private bus operators to continue to improve their own fleet. Therefore, the council will continue to seek funding within this sector to assist with a full conversion of all Euro V & Euro IV buses within the Kirklees district. Previously, through partnership working with West Yorkshire, we have achieved the following; 2013 - £1m CBTF retrofit of 119 School Buses. School buses were retrofitted in 2014/15 and branding added to sides of the buses to promote pollution reduction 2018 - £4.1m CBFT plan to retrofit 300 Buses within WY.

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.19	Electric Vehicle Strategy	Kirklees Environmental Health	2019	2019	<p><u>Kirklees Council Target:</u></p> <p>+ Creation of an Electric Vehicle Strategy for the District by Dec 2020 +Contributes to wider target to increase in percentage of ULEV registered vehicles within the district year on year inline with national average. + Contributes to wider target to meet the projected IMF target of 30% of registered cars within the district to be ULEV by 2027 + Contributes to wider target for 100% car sales to be ULEV's within by 2040 in line with national government targets.</p> <p><u>Kirklees Council Measurable:</u> + Creation and adoption of Electric Vehicle Charging Strategy</p>	NO ₂ & PM	2020	Local demand Number of houses without drives Power Supplies	Currently Kirklees Council have undertaken a number of E.V charging projects to install chargers and also run a green parking permit to reduce the cost of E.V ownership. The strategy is to be created to determine the infrastructure needs within the Kirklees District and to outline an approach to facilitate the move from the combustion engine towards Electric vehicle in both the domestic and commercial sectors within the district
G.20	West Yorkshire ECO-Stars Scheme	Kirklees Environmental Health	2016	2016	<p><u>Kirklees Council Targets:</u> + Year 2 target to get 30 new member for the West Yorkshire Scheme + Year 2 target to re-assess 50% of year 1 members (25 re-assessments)</p> <p><u>Kirklees Council Measurables:</u> +Number of operators signed up within the</p>	NO ₂ & PM	Ongoing within the district		The West Yorkshire ECO-Stars Scheme is in its second year, providing free advice to Kirklees businesses on how to reduce cost, with the by-product of reducing emissions. This project is funded by the LTP and will the scheme will remain available to businesses while funding is available Current Status; Year 1 - 51 members Year 2 – Success of the scheme to be reviewed to assist with determining viability for Year 3 of Scheme

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					district +Number of fleet vehicles included in the scheme +Number of Operators improving their ECO-Star scores after re-visits				
G.21	West Yorkshire Electric Vehicle Taxi Scheme	West Yorkshire Combined	2017	2018	Kirklees Council Target; +Contributes to wider target to increase in percentage of ULEV registered vehicles within the district year on year in line with national average. + Contributes to wider target to meet the projected IMF target of 30% of registered cars within the district to be ULEV by 2027 + Contributes to wider target for 100% car sales to be ULEV's within by 2040 in line with national government targets. + Implementation of further recommendation from study upon completion +increase in the number of licensed Hybrid / ULEV vehicles +reduction in the age of the vehicles licensed +reduction in number of diesel vehicles licensed + increase E.V Taxi charger network usage year on year <u>Kirklees Council Measurables;</u> +Installation of 17 Rapid Chargers within Kirklees	NO ₂ & PM	2020		Currently Kirklees Council have undertaken a number of E.V charging projects to install chargers and also run a green parking permit to reduce the cost of E.V ownership. This project contributes towards the council's ambition towards Electric vehicle adoption in both the domestic and commercial sectors within the district Estimated installation of 34 Rapid Charging Bays within Kirklees. 17 Taxi Bays and 17 Public Bays

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					District by March 2020 + Number of licensed Hybrid / ULEV vehicles +Number of vehicles 8 years or older				
G.22	West Yorkshire Low Emission Strategy Officer	Kirklees Environmental Health	2018	2019	<p><u>Kirklees Council Target:</u> +Conclusions of WYLES benchmarking project demonstrating full compliance with WYLES Objectives</p> <p><u>Kirklees Council Target:</u> Delivery of key WYLES objectives;</p> <p><u>Obj 2. Age of vehicles in bus fleet</u> Measured by; +Change in bus fleet composition towards newer Euro Cat Vehicles</p> <p><u>Obj 3. Electric Vehicle Uptake</u> Measured by increase in the; +Number of newly registered E.V vehicles within Kirklees +Number of E.V's using charging Infrastructure +Number of Green Parking Permits issues within district</p>	NO ₂ & PM	2021	<p>Assessment of which services are currently working to the WYLES and identify failing areas</p>	<p>The WYLES Officer was employed June 2019 and is working on benchmarking. Officer is to be based at Kirklees and work across the 5 West Yorkshire Authorities to integrate the WYLES and also facilitate regional projects.</p> <p>Currently the strategy adopted within the authority and integrated into Kirklees Council policy and work instructions. This is a 10 year policy document, of which we are in year 4. Further plans outlined in action G.22 for a review of the documents and how they are used. Funding received from Air Quality Grant.</p>

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					<p><u>Obj 4. ECO-Stars Freight Recognition Scheme</u> Measured by increase in; +Number of operators signed up within the district +Number of fleet vehicles included in the scheme +Number of Operators improving their ECO-Star scores after re-visits</p> <p><u>Obj 6. Taxi Fleet Improvements</u> Measured by; +increase in the number of licensed Hybrid / ULEV vehicles +reduction in the age of the vehicles licensed +reduction in number of diesel vehicles licensed</p>				
G.23	Joint Strategic Assessment for Air Quality	Kirklees Public Health	2018	2018	<p><u>Kirklees Council Target:</u> +Continued partnership working between Public Health and Environmental Health + Contribute to the delivery of work streams outlined in KJSA</p> <p><u>Kirklees Council Measurables:</u> + Adoption of the Strategy</p>	NO ₂ & PM	2019		<p>Currently the strategy adopted within the authority and integrated into Kirklees Council policy and work instructions. This is a 10 year policy document, of which we are in year 4.</p> <p>Available at http://observatory.kirklees.gov.uk/jsna/airquality</p>

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.24	Corporate Carbon Reduction Targets	Kirklees Economy and Infrastructure	2010-11	2020-2021	<p><u>Kirklees Council Target;</u> + Reduction of 15,214t CO₂ by 2021</p> <p><u>Kirklees Council Measurables;</u> + Tonnes of CO₂ reduction per year</p>	<p>Primary Target: CO₂</p> <p>Secondary reductions in NO₂ & PM</p>	2031		<p>Kirklees Council has declared a Climate Emergency and in the process of constructing an action plan to achieve CO₂ reduction goals. Prior to this Kirklees Council has been working towards CO₂ targets outlined in target column. This is an ongoing process with aim of constant reduction, targets of which are subject to change as a result Climate Emergency Board decisions.</p> <p>Air Quality and Carbon reduction have the shared aim of reducing emissions and Kirklees Council are committed to partnership working to reduce both pollutants rather than individual focus</p>
G.25	West Yorkshire Energy Accelerator Project	Kirklees Economy and Infrastructure	2018-19		<p><u>West Yorkshire Target;</u> + Estimated 590kt CO₂ reduction focusing on high emission industrial sector</p> <p><u>Kirklees Council Measurables;</u> + Tonnes of CO₂ reduction per year</p>	<p>Primary Target: CO₂</p> <p>Secondary reductions in NO₂ & PM</p>	2021		<p>Kirklees Council has declared a Climate Emergency and in the process of constructing an action plan to achieve CO₂ reduction goals. This project will contribute towards achieving the targets set out in the Climate Emergency process.</p> <p>The project also has the potential to reduce industrial emissions covered in the Air Quality Objectives.</p> <p>Air Quality and Carbon reduction have the shared aim of reducing emissions and Kirklees Council are committed to partnership working to reduce both pollutants rather than individual focus</p> <p>Currently this project is at business case stage</p>
G.26	Air Quality section to be included in Quality Place Supplementary Planning Document	Kirklees Planning & Environmental Health	2019	2020	<p><u>Kirklees Council Targets;</u> +Assess all planning applications in accordance with WYLES Planning Guidance Document + Require developers to integrate air quality mitigation into developments according to size of building project</p> <p><u>Kirklees Council Measurables;</u> + Number of E.V chargers installed within new developments +Section 106 contributions</p>	NO ₂ & PM	Once adopted, use of the SPD would be an ongoing activity		<p>Once the Local Plan is accepted. Kirklees Council planning department to create an SPD. Environmental Health and Planning to work collaboratively to include a robust air quality section which integrates the aims, process and mitigation options outlined in the WYLES Planning Guidance Document.</p>

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.27	Trialling Hybrid and E.V Bin Wagon	Kirklees Commercial, Regulatory & Operational Services	2019	2020	<p><u>Kirklees Council Target:</u> + Determine the savings / issues around ULEV Bin Wagons + Promote findings within industry</p> <p><u>Kirklees Council Measurables:</u> + Report on trial impacts</p>	NO ₂ & PM	2021		Kirklees Council are currently on a waiting list to borrow a Dennis Eagle Electric Vehicle Bin Wagon and once acquired, will undertake assessment on real world bin routes to determine viability. Upon completion of the study, a report will be constructed and shared with other within the industry.
G.28	Feasibility Study on use of E.V Mobile Maintenance Equipment	Kirklees Commercial, Regulatory & Operational Services	2019	2019	<p><u>Kirklees Council Target:</u> + Determine cost savings of E.V M.M.E + Replace appropriate M.M.E with E.V equivalent + Promote findings within industry</p> <p><u>Kirklees Council Measurables:</u> + Construction of a report outlining viability of E.V M.M.E's + Number of M.M.E's replaced with E.V alternatives.</p>	NO ₂ & PM	2019		Internal document, which will steer purchasing options and help introduction of E.V M.M .E's. Delivery targets to be determined from outcome of survey.
G.29	Feasibility of delivery of Council Officer Car Lease Scheme and delivery (limiting the available options by emission output)	Kirklees Commercial, Regulatory & Operational Services	2019	2020	<p><u>Kirklees Council Target:</u> + Determine the viability of a Council Officer Lease Scheme with built in ULEV promotion</p> <p>Scheme aim is to contribute to; + Contributes to wider target to increase in percentage of ULEV registered vehicles within the district year on year in line with national average. + Contributes to wider target to meet the projected IMF target of 30% of registered cars within the district to be ULEV by 2027</p>	NO ₂ & PM	Ongoing activity once implement	Employees current vehicle types and commuter choices	Collaborative working between Transport services and Environmental Health to determine viability of providing low emission transport to employees within the local authority

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					<p>+ Contributes to wider target for 100% car sales to be ULEV's within by 2040 in line with national government targets.</p> <p><u>Kirklees Council's Measurables:</u> + Number of ULEV Car Leases</p>				
G.30	Grey Fleet Telematics Trial	Kirklees Commercial, Regulatory & Operational Services	2018	2018	<p><u>Kirklees Council Targets:</u> +Reduce number of grey fleet miles for the council year on year. Baseline year is year prior to introduction of telematics system +Contribute to increase in the number of short journeys using public transport + Reduce grey fleet mileage + Increase ULEV Council Fleet Mileage year on year from baseline year 2020</p> <p><u>Kirklees Council Measurables:</u> + Number of vehicle miles + Number of grey mile trips + Number of service car trips</p>	NO ₂ & PM	2019		Currently trialling a dongle that plugs into the vehicle cigarette lighter port and track via GPS and reports to an app. Initially used to data gather and support future projects to reduce grey millage fleet miles. Analysis of the data will allow the authority to identify short journeys and potentially promote use of public transport

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.31	Master naught Telematics System	Kirklees Commercial, Regulatory & Operational Services	2017	2017	<p><u>Kirklees Council Targets:</u> +Reduction in number of Driver accidents year on year +Reduction in number of speeding / unsafe driving reports year on year +Identify appropriate targeted driver training for safe and eco driving</p> <p><u>Kirklees Council Measurables:</u> + Number of speeding exceedances +Number of heavy breaking events</p>	NO ₂ & PM	Ongoing within the district		Use of the Master naught data allows the Authority to promotes better driving and has already shown a reduction in fleet miles and fuel consumption. Further use of the telematics system can be used for identifying training needs. As such, use of the telematics system is an ongoing process within the lifespan of this action plan.
G.32	Pool Bike Feasibility Study	Kirklees Public Health	2018	2019	<p><u>Kirklees Council Targets:</u> +Assess pool bike usage +Determine barriers of pool bike system +Promote pool bikes + Contributes to the reduction in number of low mileage journeys for grey & council fleet +Contributes to the wider target to increase cycling travel mode by 300% between 2018 baseline and 2030</p> <p><u>Kirklees Council Measurables:</u> + Number of pool bike bookings +Number of miles undertaken on pool bike</p>	NO ₂ & PM	2019		Kirklees Council public health have set up a pilot project of pool bikes to promote modal shift option for shorter journeys. Exploring the viability of pool bike usage as part of a council fleet
G.33	Robust Travel Survey to determine better travel plans internally	Kirklees Public Health	2018	2019	<p><u>Kirklees Council Targets:</u> + Increase the number of completed travel surveys year on year +Collect relevant data to assists with decision making process</p> <p><u>Kirklees Council Measurables:</u> + Number of Travel Survey responses + Yearly report on results of travel survey</p>	NO ₂ & PM	2019		Kirklees Council Internal travel survey for all council employees to help better inform further decision making and influence future projects

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.34	Installation of pollution sensor technology within our AQMA's in conjunction with recognised monitoring to demonstrate validity of new devices	Kirklees Council UTC & Environmental Health	2018	2019	<p><u>Kirklees Council Targets:</u> + Create a report analysing the validity of sensor technology +Analyse cost effectiveness of sensors when measured against existing monitoring tools +Improve accuracy of current AQ monitoring network</p> <p><u>Kirklees Council Measurables:</u> + Report outlining the issues relating to Sensor Technology</p>	NO ₂ & PM	2021		This study will be used as part of a rationalisation project to provide the most accurate, cost effective monitoring network to assist the council to safeguard residents and the environment
G.35	Engagement within the district with regional plans on alternative Low Emission Fuel Sources	Kirklees Environmental Health	2019	2020	<p><u>West Yorkshire Target:</u> + Contribute towards regional low emission fuel source projects currently in development</p>	NO ₂ & PM	2024		Ongoing regional work exploring introduction of low emission fuel sources into West Yorkshire This is a future project currently going through project planning phase
G.36	Review how Environmental Health delivers regulatory requirements of the Clean Air Act	Kirklees Environmental Health	2019	2020	<p><u>Kirklees Council Targets:</u> + Reduce number of burning / smoking chimney complaints +Increased business engagement +Integrate new Clean Air Act into Kirklees Council work procedures</p> <p><u>Kirklees Council Measurables:</u> + Number of complaints Smoking Chimney Complaints to Environmental Health</p>	PM	Ongoing	Number of domestic solid fuel appliances within the district and locations	Kirklees District is currently a smoke control area and investigates complaints & enforces where required. The process will be reviewed to put the council in a good position for future changes to solid fuel legislation. This process is an ongoing iterative process and planned changes to the Clean Air Act will need to be included into future working practices. As such, completion of this action is reliant on the adoption of the new Clean Air Act, which currently does not have a deadline date.
G.37	Implementation of the Medium Combustion Plant Directive through the planning process	Kirklees Environmental Health / Environment Agency	2018	2018	<p><u>Kirklees Council Target:</u> + All plant meeting directive to be registered with relevant authority + Signpost relevant businesses of directive at development control stage</p>	NO ₂ & PM	2030	Number of medium combustion plants	Kirklees Council to work with Environment Agency to discharge requirements of the Medium Combustion Plan Directive

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					<u>Kirklees Council Measurables:</u> + Number of permits issued within the district				
G.38	Zoning project to identify errant PPC businesses	Kirklees Environmental Health	2019	2019	<u>Kirklees Council Targets:</u> + Permit all relevant businesses in accordance with the PPC Regulations. <u>Kirklees Council Measurables:</u> + Number of errant PPC businesses identified + Number of areas assessed	NO ₂ & PM	2020		Kirklees Council routinely inspects businesses requiring permits as prescribed in the Pollution Prevention and Control Regulations. This measure is a piece of work that aims to identify businesses that require permits, but currently do not possess one.
G39	Kirklees Walking and Cycling Strategic Framework	Public Health	2018	2030	<u>West Yorkshire Target:</u> +Sustainable travel mode increase from 36% in 2011 to 42% by 2026 <u>Kirklees Council Targets:</u> +Increase cycling travel mode by 300% between 2018 baseline and 2030 +Increase walking travel mode by 20% between 2018 baseline and 2030 + Increase in number of coaches, leaders & volunteers + Improvement in communication with public <u>Kirklees Council Measurables:</u> +Creation of a policy document around Walking and Cycling	NO ₂ & PM	Ongoing		This is a policy document to outline the council's ambition to promote walking and cycling and also contain a number of measures to assist in achieving the aim. This policy document is currently under construction and once completed will be the primary policy framework for delivering walking and cycling. Therefore, upon adoption, use of this document will be an ongoing process.

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.40	Kirklees Neighbourhood Housing Solid Fuel Policy	Kirklees Neighbourhood Housing	2018	2018	<p><u>Kirklees Council Targets:</u> + Prohibit installation of solid fuel stoves +Educate residents on the policy</p> <p><u>Kirklees Council Measurables:</u> +Number of Solid Fuel Stoves within KnH properties</p>	NO ₂ & PM	Ongoing		Policy prohibits installation of solid fuel stoves. Chimneys are blocked up when gas fires are removed in order to prevent solid fuel use. Completion date has been set as ongoing because of the continuous nature of the action.
G.41	West Yorkshire Travel Plan Network	West Yorkshire Combined Authority	2016	2016	<p><u>West Yorkshire Targets:</u> +Sustainable travel mode increase from 36% in 2011 to 42% by 2026 +Increase number of local businesses registered as members</p> <p><u>Kirklees Council Measurables:</u> + Number of Kirklees businesses that are members of the Travel Plan Network</p>	NO ₂ & PM	Ongoing		West Yorkshire Travel Plan network visit local businesses and assist with improving employee travel option and promote model shift. Revisits and frequent promotions to members of the network once assessment has been conducted. AQMA areas are a priority for business engagement. This project is a continuous, though subject to funding requirements. Completion date has been set as ongoing because of the continuous nature of the action.
G.42	Development of a Comms Strategy to promote air quality, model shift and successful emission reduction projects	<p>Kirklees Environmental Health</p> <p>Kirklees Communications and Marketing</p>	2019	2019	<p><u>Kirklees Council Targets:</u> +Creation of a Comms Strategy for AQ, incorporating joint messages for Green Streets, Public Health, Carbon Reduction and other linked work streams +Improve council website & access to AQ information</p> <p><u>Kirklees Council Measurables:</u></p>	NO ₂ & PM	Ongoing review process of strategy as funding becomes available		Once the strategy is developed, further targets can be formulated to measure the success of promoting air quality within the district. More costly methods of promotion may not be viable at time on inception, but can be considered as funding becomes available.

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					+Strategy document outlining plans to promote Air Quality +Number of promotion activities				
G.43	Collaborative working with NHS Trusts within District	Kirklees Environmental Health NHS Trusts	2019	2019	<u>Kirklees Council Targets:</u> + Set up liaison program with NHS Trusts + Increase number of linked work streams with NHS Trusts	NO ₂ & PM	Ongoing		Kirklees Council has 2 NHS Trust, Mid Yorkshire and Huddersfield Calderdale Trust. As a key partner in the district the council will work with them to promote / deliver low emission projects and policy
G.44	Collaborative working with University of Huddersfield	Kirklees Environmental Health University of Huddersfield	2018	2019	<u>Kirklees Council Targets:</u> + Increase number of linked work streams with Huddersfield University	NO ₂ & PM	Ongoing		Kirklees Council has already begun to develop a number of projects with the university. As a key partner in the district the council will continue to work with them to promote / deliver low emission projects and policy
G.45	Collaborative working with Commercial Bus Companies within the district	Kirklees Environmental Health WYCA Local Bus Companies	2018	2019	<u>Kirklees Council Targets:</u> + Set up liaison program with Bus Companies + Increase number of linked work streams with Bus Companies	NO ₂ & PM	Ongoing		Kirklees Council has already begun to develop a number of projects with the bus partners and the combined authority. As a key partner in the district the council will continue to work with them to promote / deliver low emission projects and policy
G.46	Collaborative working with Highways England	Kirklees Environmental Health Highways England	2018	2019	<u>Kirklees Council Targets:</u> + Set up liaison program with Highways England + Increase number of linked work streams with Highways England	NO ₂ & PM	Ongoing		As a key partner in the district the council will work with them to promote / deliver low emission projects and policy
G.47	De-centralised Energy Use	Kirklees Economy and Infrastructure	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> +Contribute towards targets set by Climate Emergency Work Group <u>Kirklees Council Measurables:</u> + CO ₂ reductions	Primary Target: CO ₂	TBC		The plan for this project is to undertake studies into future energy needs and how de-centralised energy supply will impact on emissions. This is a future project currently going through project planning phase
G.48	Smart Systems to manage energy use within Local Authority Buildings	Kirklees Economy and Infrastructure	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> +Contribute towards targets set by Climate Emergency Work Group	Primary Target: CO ₂	TBC		The plan for this project is to integrate smart technology into council buildings to reduce energy usage. This is a future project currently going through project planning phase

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					<u>Kirklees Council Measurable:</u> + CO ₂ Reductions				
G.49	Study the impact of Green Infrastructure	Kirklees Environmental Health	Estimate 2019/20	TBC	<u>Kirklees Council Target:</u> +To assess the validity of the use of vegetation as a mitigation solution +To determine the best vegetation to reduce air pollution +To assess cost effectiveness of Green Infrastructure +Promote findings within industry <u>Kirklees Council Measurables:</u> + Report determining the impact of Green Infrastructure	NO ₂ & PM	TBC		The plan for this project is to undertake a study looking into different vegetation and the impact of green screening along roadsides. This project includes analysing the viability of Moss Trees. This is a future project currently going through project planning phase
G.50	Generate a pollution based calculation similar to that currently used in carbon reduction calculations	Kirklees Economy and Infrastructure	Estimate 2019/20	TBC	<u>Kirklees Council Target:</u> + Aim to create a simple calculation which will allow the organisation to determine theoretical NO ₂ / PM ₁₀ concentration , which in turn allows firms to set targets similar to Carbon system <u>Kirklees Council Measureable:</u> + Creation of an easier system for calculating emission impact	NO ₂ & PM	TBC		The plan for this project is to create an easier process for calculating emission impacts from projects and schemes. This is a future project currently going through project planning phase
G.51	Research gathering to inform development of neighbourhood plans as part of Local Plan integration	Kirklees Planning	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> + Collected dataset of a quality that allows informed development control decisions to be made <u>Kirklees Council Measurable:</u>	NO ₂ & PM	TBC		The plan for this project is to collect data that can be used to inform the development of the Council's neighbourhood plans This is a future project currently going through project planning phase

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					+ Report containing data to inform neighbourhood plans				
G.52	Development Clusters Research and Solution Systems	Kirklees Planning	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u> + To collect a dataset of a quality that allows informed development control decisions to be made</p> <p><u>Kirklees Council Measureable:</u> + Report containing quality dataset</p>	NO ₂ & PM	TBC		The plan for this project is to collect data that can be used to inform the development of the Council's Development Clusters This is a future project currently going through project planning phase
G.53	Feasibility Study of current Traffic Model and identify further highways improvement projects	Kirklees Economy and Infrastructure	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u> + Use outcomes from feasibility study to identify other highways improvement projects within the district</p> <p><u>Kirklees Council Measureable:</u> + Report outlining the validity and potential improvements to current traffic model</p>	NO ₂ & PM	TBC		The plan for this project is to review the traffic model, validate and make improvements where required. This is a future project currently going through project planning phase
G.54	Voluntary Clean Air Zone Feasibility Study	Kirklees Environmental Health	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u> + Full cost analysis measured against impact of implementing non-charging clean air zone.</p> <p><u>Kirklees Council Measureable:</u> + Report outlining viability of non-charging clean air zone.</p>	NO ₂ & PM	TBC		The plan for this project is to undertake a feasibility assessment to determine the costs and impacts of both a Chargeable and Non-Charging Clean Air Zone This is a future project currently going through project planning phase
G.55	Study into the impact of topography onto bus	Kirklees Environmental Health	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u> + Determine the best bus technology to utilise within the district + Promote findings within industry</p>	NO ₂ & PM	TBC		The plan for this project is to undertake a research project that looks into the impact topography on ULEV Bus Technology This is a future project currently going through project planning phase

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					<u>Kirklees Council Measurable:</u> +Report demonstrating the most appropriate bus technology to deliver a cost effective low emission service within a district with hilly topography				
G.56	Project to engage with public on solid fuel regarding compliance into UK Clean Air Strategy	Kirklees Environmental Health	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> + Reduce number of burning / smoking chimney complaints +Increased business engagement +Reduction in particulate associated with solid fuel <u>Kirklees Council Measurable:</u> + Number of smoking chimney complaints	NO ₂ & PM	TBC		The plan for this project is to devise and run a comms project for both the domestic and commercial sector to promote clean air and smokeless solid fuel practices This is a future project currently going through project planning phase
G.57	Feasibility study into changing internal governance and decision making to further incorporate air quality	Kirklees Environmental Health	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> + Use outcomes from feasibility study to identify policy to integrate AQ within <u>Kirklees Council Measurable:</u> + Report outlining the validity and potential improvements to current policy to incorporate AQ in decision making	NO ₂ & PM	TBC		The plan for this project is to undertake an assessment of council working practices and identify areas where improvement could reduce emissions and benefit air quality This is a future project currently going through project planning phase

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.58	Feasibility Study into On street electric vehicle charging solutions	Environmental Health	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u> +Contributes to wider target to increase in percentage of ULEV registered vehicles within the district year on year in line with national average. + Contributes to wider target to meet the projected IMF target of 30% of registered cars within the district to be ULEV by 2027 + Contributes to wider target for 100% car sales to be ULEV's within by 2040 in line with national government targets.</p> <p><u>Kirklees Council Measurable:</u> + Report outlining the viable solutions to provide charging to properties without off-street parking</p>	NO ₂ & PM	TBC		<p>The plan for this project is to undertake an assessment of current E.V infrastructure and devise a funding plan for delivery for future infrastructure This is a future project currently going through project planning phase</p>
G.59	Creation of a delivery plan for Kirklees EV Charging	Kirklees Environmental Health	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u> +Contributes to wider target to increase in percentage of ULEV registered vehicles within the district year on year in line with national average. + Contributes to wider target to meet the projected IMF target of 30% of registered cars within the district to be ULEV by 2027 + Contributes to wider target for 100% car sales to be ULEV's within by 2040 in line with national government targets.</p> <p><u>Kirklees Council Measurable:</u> + Report outlining the a delivery plan to providing</p>	NO ₂ & PM	TBC		<p>The plan for this project is to undertake an assessment of current E.V infrastructure and devise a funding plan for delivery for future infrastructure This is a future project currently going through project planning phase</p>

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					charging network across the district to meet future needs				
G.60	Provision of EV Charging in all communities of Kirklees	Kirklees Environmental Health	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u></p> <ul style="list-style-type: none"> + Each council ward to have an even spread of charging network per head of population +Contributes to wider target to increase in percentage of ULEV registered vehicles within the district year on year in line with national average. + Contributes to wider target to meet the projected IMF target of 30% of registered cars within the district to be ULEV by 2027 + Contributes to wider target for 100% car sales to be ULEV's within by 2040 in line with national government targets. <p><u>Kirklees Council Measurable:</u></p> <ul style="list-style-type: none"> + Number of chargers in each ward 	NO ₂ & PM	TBC		The plan for this project is to provide charging to each council ward to meet ULEV demands This is a future project currently going through project planning phase

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
G.61	Improvements to the Cycling Network, linking all the Kirklees Towns and with neighbouring districts	Kirklees Economy and Infrastructure	Estimate 2019/20	TBC	<p><u>West Yorkshire Target:</u> Contribute to; +Sustainable travel mode increase from 36% in 2011 to 42% by 2026</p> <p><u>Kirklees Council Targets:</u> +Improve pre-existing walking / cycling facilities within district + Connect local towns and neighbouring districts with improved cycling and walking facilities +Increase cycling travel mode by 300% between 2018 baseline and 2030 +Increase walking travel mode by 20% between 2018 baseline and 2030 Improvement in facilities across the district for cycling and clear links between all towns within the district</p> <p><u>Kirklees Council Measurable:</u> +Number of towns connected by cycle network</p>	NO ₂ & PM	TBC		The plan for this project is to maintain the current cycling infrastructure and identify where there are gaps between cycle only routes between the major Kirklees towns. Where towns are not connected, this project aim is to connect them with cycle only infrastructure This is a future project currently going through project planning phase
G.62	Use of Technology and publicity to incentivise and increase active travel during commute and business activities	Kirklees Public Health Environmental Health Transport	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u> +Development of an App to collect data and recommend appropriate methods of transport</p> <p>Contribute towards; +Increase cycling travel mode by 300% between</p>	NO ₂ & PM	TBC		The plan for this project is to work with Huddersfield University and a 3 rd party company to develop an app that monitors travel and recommend mode of transport. This is a future project currently going through project planning phase Partnership with Huddersfield University

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
		University of Huddersfield			2018 baseline and 2030 +Increase walking travel mode by 20% between 2018 baseline and 2030 <u>West Yorkshire Target:</u> +Sustainable travel mode increase from 36% in 2011 to 42% by 2026 <u>Kirklees Council Measurables:</u> +Creation of an App promoting model shift +Number of journeys made by walking / cycling				
G.63	Project to promote and incentivise working at home to reduce commuter miles	Kirklees Council Environmental Health	Estimate 2019/20	TBC	<u>West Yorkshire Target:</u> +Sustainable travel mode increase from 36% in 2011 to 42% by 2026 <u>Kirklees Council Targets:</u> +Alter modern way of working and reduction in commuter miles +Support business to operate in a modern way +Promote best practice currently being adopted within Kirklees Council <u>Kirklees Council Measurable:</u> + Number of walking / cycling trips	NO ₂ & PM	TBC		The plan for this project is to run a comm project to promote working from home, both within the council and for 3 rd party companies This is a future project currently going through project planning phase Project would promote to companies the benefits of working from home, with the added benefit of emissions reduction.
G.64	E.V research project to identify appropriate demographics and locations within the district.	Kirklees Environmental Health & Public Health	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> + Report outlining the best focus for council delivery plan to providing	NO ₂ & PM	TBC		The piece of work would involve engaging with the community and looking at purchasing trends to identify the E.V market better and would be used to help inform E.V strategy and infrastructure projects

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					<p>charging network across the district to meet future needs</p> <p>+Contributes to wider target to increase in percentage of ULEV registered vehicles within the district year on year in line with national average.</p> <p>+ Contributes to wider target to meet the projected IMF target of 30% of registered cars within the district to be ULEV by 2027</p> <p>+ Contributes to wider target for 100% car sales to be ULEV's within by 2040 in line with national government targets.</p> <p><u>Kirklees Council Measurable:</u> +Report outlining demand for ULEV within the district</p>				<p>The plan for this project is to conduct research into the demand for ULEVS within the district to better inform delivery of infrastructure</p> <p>This is a future project currently going through project planning phase</p>
G.65	Feasibility study into the integration of National and Local UTMC	Kirklees UTMC & Highways England	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u> + Linked UTMC system between HE and Kirklees Council systems +Improved Journey Times +Improved Road user experience</p> <p><u>Kirklees Council Measurable:</u> +Report outlining requirements to integrate HE UTMC and Kirklees UTMC</p>	NO ₂ & PM	TBC		<p>Project will look at the feasibility of integrating local and national UTMC, which would allow for whole network reactivity during traffic events</p> <p>This is a future project currently going through project planning phase</p>
G.66	Feasibility study into the use of anti-idling measures as a control on emissions, giving focus to areas of poor air quality	Environmental Health	Estimate 2019/20	TBC	<p><u>Kirklees Council Target:</u> +To assess the validity of the use of anti-idling as a mitigation solution +To determine the best / appropriate locations for</p>	NO ₂ & PM	TBC		<p>Following updates to the legislation from the Environment Bill to undertake feasibility study into the introduction of anti-idling, prioritising areas where there is evidence, through monitoring, there are air quality problems.</p>

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					anti-idling +To assess cost effectiveness of anti-idling enforcement +Creation of a report determining the impact of anti-idling +Promote findings within industry <u>Kirklees Council Measurable:</u> + Report outlining feasibility of anti-idling measures within the district				
AQMA 1 Bradley Actions									
AQMA1.1	Install Split Cycle Offset Optimisation technique (SCOOT) Traffic Managements System within AQMA 1	Kirklees Highways UTC	2013	2013	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	2013		Reduction of pollutants in AQMA 1 of 12ug/m3 and given rise to further works to improve the system. This was stage 1 of a multi stage improvement project with the aim to reduce emissions through the use of technology to improve flow at junctions. Other stages of the project are discussed in actions AQMA.1.3 and P.9
AQMA1.2	Feasibility Study to Alter SCOOT to incorporate actual Air Quality pollution levels	Kirklees Highways UTC	2016	2017	<u>Kirklees Council Targets:</u> + Report outlining impact of integrating monitors into UTMC system. Looking at cost, flowtimes and pollutant reduction +Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed	NO ₂ & PM	2017		This project was a pre-requisite for the development of project AQMA.1.3 and resulted in collaborative working with our business partners to develop a virtual emissions model to improve UTMC.

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					+AM/PM Queue times				
AQMA1.3	Kirklees "Virtual Emissions Monitoring Project" to rationalise SCOOT system	Kirklees Highways UTC	2017	2018	<p><u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process</p> <p><u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times</p>	NO ₂ & PM	2019		Stage 2 of a multi stage Air Quality UTMC improvement project. Stage 3 contained within P.9 and awaiting funding
AQMA1.4	Cooper Bridge Road Improvements Project	Kirklees Economy and Infrastructure	2018	2021	<p><u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Increased capacity on the road + Redistribution of vehicles on network</p> <p><u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times</p>	NO ₂ & PM	2021		The project is a highways improvement scheme within the AQMA and is currently at outline Business Case Stage
AQMA1.5	Resource Smart Corridor	Kirklees Economy and Infrastructure	2015	2019/20	<p><u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Increased capacity on the road + Redistribution of vehicles on network</p> <p><u>Kirklees Council Measurable:</u></p>	NO ₂ & PM	2021		The project is a highways improvement scheme within the AQMA and is currently at Business Case Stage

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					+ Average road speed +AM/PM Queue times				
AQMA1.6	Kirklees Northern Orbital Route	Kirklees Economy and Infrastructure	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Increased capacity on the road + Redistribution of vehicles on network + Bypass current road network and remove traffic from close proximity to residential properties <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	TBC		The project is a highways improvement scheme within the AQMA and is a future project currently going through project planning phase
AQMA1.7	Trial of Smart UTMC Technology systems within relevant AQMA's	Kirklees Highways UTC	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	TBC		The project is a Traffic Light improvement scheme within the AQMA and is a future project currently going through project planning phase Funding sought from 2018 AQ Grant
AQMA 2 Southill Actions									
AQMA2.1	A640 Road improvements (Mirfield to Dewsbury)	Kirklees Economy and Infrastructure	2020	Post 2021	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Increased capacity on the road + Redistribution of vehicles on network	NO ₂ & PM	TBC		The project is a highways improvement scheme within the AQMA and is at very early stages. Pre outline business case stage

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					<u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times				
AQMA2.2	Program of Deep Cleaning to Paths and Road within the AQMA	Kirklees Environmental Health	2013	2014	<u>Kirklees Council Target:</u> + Keep exceedance of daily PM10 below daily AQO <u>Kirklees Council Measurable:</u> + Daily Exceedances of PM10	Short Term PM10 Exceedances	Ongoing within the district		AQMA now compliant after this measure was put into place. Number of exceedance days fell from 36 to 6.
AQMA2.3	Extension of Ravensthorpe Train Station	WYCA	2016	2018	<u>West Yorkshire Targets:</u> + Increased services to train station +Increase in patronage <u>Kirklees Council Measurable:</u> + Number of passengers using Ravensthorpe Station +Number of services stopping at Ravensthorpe Station	NO ₂ & PM	2019		The project is a Network Rail improvement scheme within the AQMA and is at delivery stage
AQMA2.4	Use "Virtual Emissions Monitoring Project" to determine operate UTC	Kirklees Highways UTC	2018	2019	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	2020		Stage 2 of a multi stage Air Quality UTMC improvement project. Stage 3 contained within P.9 and awaiting funding
AQMA2.5	Kirklees Northern Orbital Route	Kirklees Economy and Infrastructure	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Increased capacity on the road + Redistribution of vehicles on network + Bypass current road network and remove	NO ₂ & PM	TBC		The project is a highways improvement scheme within the AQMA and is a future project currently going through project planning phase

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					traffic from close proximity to residential properties <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times				
AQMA2.6	Trial of Smart UTMC Technology systems within relevant AQMA's	Kirklees Highways UTC	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	TBC		The project is a UTMC improvement scheme within the AQMA and is a future project currently going through project planning phase Funding sought from 2018 AQ Grant
AQMA 3 Birchencliffe Actions									
AQMA3.1	A629 Road improvements as part of Halifax to Huddersfield Road Scheme	Kirklees Economy and Infrastructure	2016	2020	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Increased capacity on the road + Redistribution of vehicles on network <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	2021		The project is a highways improvement scheme within the AQMA and is currently at Business Case Stage

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
AQMA3.2	Assessment of Cycling Infrastructure between Ainley Top and Huddersfield Town Centre	Kirklees Economy and Infrastructure	2019	2020	<p><u>West Yorkshire Target:</u> Contribute to; +Sustainable travel mode increase from 36% in 2011 to 42% by 2026</p> <p><u>Kirklees Council Targets:</u> Contribute to; + Connect local towns and neighbouring districts with improved cycling and walking facilities +Increase cycling travel mode by 300% between 2018 baseline and 2030 +Increase walking travel mode by 20% between 2018 baseline and 2030 Improvement in facilities across the district for cycling and clear links between all towns within the district</p> <p><u>Kirklees Council Measurable:</u> + Construction of new Cycling Infrastructure within the district</p>	NO ₂ & PM	2021		The project is a cycling / highways improvement scheme within the AQMA and is currently at Business Case Stage

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
AQMA3.3	Feasibility into the development of System Activated Planned Cycles	Kirklees Highways UTC	Estimate 2019/20	TBC	<p><u>West Yorkshire Target:</u> Contribute to; +Sustainable travel mode increase from 36% in 2011 to 42% by 2026</p> <p><u>Kirklees Council Targets:</u> Contribute to; + Connect local towns and neighbouring districts with improved cycling and walking facilities +Increase cycling travel mode by 300% between 2018 baseline and 2030 +Increase walking travel mode by 20% between 2018 baseline and 2030 Improvement in facilities across the district for cycling and clear links between all towns within the district</p> <p><u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times</p>	NO ₂ & PM	TBC		The project is a UTM improvement scheme within the AQMA and is a future project currently going through project planning phase
AQMA 4 Birkenshaw									
AQMA4.1	Study into the impact of speed control along the national highway as an emissions reduction tool.	Environmental Health / Highways England	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u> +Work with Highways England to implement the recommendations of the study</p> <p><u>Kirklees Council Measurable:</u> +Creation of a document that determines the impact of speed reduction on the motorway and best method to deliver emissions reduction</p>	NO ₂ & PM	TBC		<p>Study into the impact of speed control along the national highway as an emissions reduction tool.</p> <p>This is a future project currently going through project planning phase</p>

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
AQMA 4.2	Trial of NOx absorbent material integrated into roundabout design	Kirklees Council Environmental Health	2019	2020	<u>Kirklees Council Target:</u> +Installation off material on roundabout <u>Kirklees Council Measurable:</u> +NO ₂ Concentrations adjacent to roundabout	NO ₂	2020		The project is to install absorbent material onto Whitehall Road East / West roundabout to assess the viability of material incorporation into highway design to bring about NO ₂ concentrations
AQMA 5 Eastborough Actions									
AQMA5.1	Free City Bus for Dewsbury Town Centre	Kirklees Economy and Infrastructure	2005	2006	<u>West Yorkshire Target:</u> +Sustainable travel mode increase from 36% in 2011 to 42% by 2026 <u>Kirklees Council Targets:</u> +Increase bus patronage <u>Kirklees Council Measurable:</u> + Number of passengers using service	NO ₂ & PM	Ongoing within the district		
AQMA5.2	A640 Road improvements (Mirfield to Dewsbury)	Kirklees Economy and Infrastructure	2020	Post 2021	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	TBC		The project is a highways improvement scheme within the AQMA and is at very early stages. Pre outline business case stage
AQMA5.4	Install Multi-node SCOOT onto traffic light system in AQMA	Kirklees Highways UTC	2018	2019	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	2021		This is stage 1 of a multi stage improvement project with the aim to reduce emissions through the use of technology to improve flow at junctions. Other stages of the project are discussed in actions AQMA.5.5 and P.9

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
AQMA5.5	Use "Virtual Emissions Monitoring Project" to determine operate UTC	Kirklees Highways UTC	2018	2019	<p><u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process</p> <p><u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times</p>	NO ₂ & PM	2021		Stage 2 of a multi stage Air Quality UTMC improvement project. Stage 3 contained within P.9 and awaiting funding
AQMA5.6	Trial of Smart UTMC Technology systems within relevant AQMA's	Kirklees Highways UTC	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process</p> <p><u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times</p>	NO ₂ & PM	TBC		<p>This is a future project currently going through project planning phase</p> <p>Funding sought from 2018 AQ Grant</p>
AQMA 5.7	Installation of Green Screen at Eastborough J&I School	Kirklees Environmental Health	2019	2020	<p><u>Kirklees Council Target:</u> +Install a screen to block diffusion of pollutants from ring road</p> <p><u>Kirklees Council Measurable:</u> +Concentrations within the playground</p>	NO ₂ & PM	2020		The design of the Green Screen is to improve visual amenity and also provide a barrier between the school playground and the ring road.
AQMA 6 Edgerton Actions									

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
AQMA6.1	A629 Road improvements as part of Halifax to Huddersfield Road Scheme	Kirklees Economy and Infrastructure	2016	2020	<p><u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Increased capacity on the road + Redistribution of vehicles on network</p> <p><u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times</p>	NO ₂ & PM	2021		Currently at Business Case Stage
AQMA6.2	Install Multi-node SCOOT onto traffic light system in AQMA	Kirklees Highways UTC	2018	2019	<p><u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process</p> <p><u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times</p>	NO ₂ & PM	2021		This is stage 1 of a multi stage improvement project with the aim to reduce emissions through the use of technology to improve flow at junctions. Other stages of the project are discussed in actions AQMA.6.3 and P.9
AQMA6.3	Use "Virtual Emissions Monitoring Project" to determine operate UTC	Kirklees Highways UTC	2018	2019	<p><u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process</p> <p><u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times</p>	NO ₂ & PM	2021		Stage 2 of a multi stage Air Quality UTMC improvement project. Stage 3 contained within P.9 and awaiting funding
AQMA6.4	Trial of Smart UTMC Technology systems within relevant AQMA's	Kirklees Highways UTC	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start</p>	NO ₂ & PM	TBC		<p>This is a future project currently going through project planning phase</p> <p>Funding sought from 2018 AQ Grant</p>

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times				
AQMA 7 Liversedge / Heckmondwike Actions									
AQMA7.1	Install Multi-node SCOOT onto traffic light system in AQMA	Kirklees Highways UTC	2018	2019	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	2020		This is stage 1 of a multi stage improvement project with the aim to reduce emissions through the use of technology to improve flow at junctions. Other stages of the project are discussed in actions AQMA.7.2 and P.9
AQMA7.2	Use "Virtual Emissions Monitoring Project" to determine operate UTC	Kirklees Highways UTC	2018	2019	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	2020		Stage 2 of a multi stage Air Quality UTMC improvement project. Stage 3 contained within P.9 and awaiting funding

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
AQMA7.3	Trial of Smart UTMC Technology systems within relevant AQMA's	Kirklees Highways UTC	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	TBC		This is a future project currently going through project planning phase Funding sought from 2018 AQ Grant
AQMA 8 Outlane									
AQMA6.1	Study into the impact of speed control along the national highway as an emissions reduction tool.	Kirklees Environmental Health / Highways England	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> +Work with Highways England to implement the recommendations of the study <u>Kirklees Council Measurable:</u> +Creation of a document that determines the impact of speed reduction on the motorway and best method to deliver emissions reduction	NO ₂ & PM	TBC		Study into the impact of speed control along the national highway as an emissions reduction tool. This is a future project currently going through project planning phase
AQMA 9 Huddersfield Town Centre Actions									
AQMA9.1	Free City Bus for Huddersfield Town Centre	Kirklees Economy and Infrastructure	2005	2006	<u>West Yorkshire Target:</u> +Sustainable travel mode increase from 36% in 2011 to 42% by 2026 <u>Kirklees Council Targets:</u> +Increase bus patronage <u>Kirklees Council Measurable:</u> + Number of passengers using service	NO ₂ & PM	Ongoing within the district		
AQMA9.2	Huddersfield Heat Network Scheme	Kirklees Economy and Infrastructure	2018	2020	<u>Kirklees Council Target:</u> +Contribute towards targets set by Climate Emergency Work Group	NO ₂ & PM	2022		Currently at Business Case Stage

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					<u>Kirklees Council Measurables:</u> +Number of boilers removed + CO ₂ reductions				
AQMA9.3	Resource Smart Corridor	Kirklees Economy and Infrastructure	2015	2019/20	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Increased capacity on the road + Redistribution of vehicles on network <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	2021		Currently at Business Case Stage
AQMA9.4	Huddersfield Southern Gateway Transport Scheme	Kirklees Economy and Infrastructure	2018	2021	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Increased capacity on the road + Redistribution of vehicles on network <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	2022		At Full Business Case Stage
AQMA9.5	Huddersfield Ring Road Junction Improvements	Kirklees Economy and Infrastructure	2018	2021	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	2022		At Full Business Case Stage
AQMA9.6	Feasibility Study in to Pedestrianizing Areas of Town Centre for Cycling Access	Kirklees Economy and Infrastructure	2019	2021	<u>West Yorkshire Target:</u> Contribute to; +Sustainable travel mode increase from 36% in 2011 to 42% by 2026	NO ₂ & PM	TBC		

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					<p><u>Kirklees Council Targets:</u> Contribute to; + Connect local towns and neighbouring districts with improved cycling and walking facilities +Increase cycling travel mode by 300% between 2018 baseline and 2030 +Increase walking travel mode by 20% between 2018 baseline and 2030 Improvement in facilities across the district for cycling and clear links between all towns within the district</p> <p><u>Kirklees Council Measurable:</u> + Creation of a document cost analysing benefits of pedestrianizing / cycling only in town centre areas</p>				
AQMA9.7	Trans-Pennine Express Improvement Scheme	WYCA	2018	2019	<p><u>West Yorkshire Target:</u> Contribute to; +Sustainable travel mode increase from 36% in 2011 to 42% by 2026</p> <p><u>Kirklees Council Measurable:</u> +Number of rail passengers</p>	NO ₂ & PM	2024		Currently at Business Case Stage
AQMA9.8	Use "Virtual Emissions Monitoring Project" to determine operate UTC	Kirklees Highways UTC	2018	2019	<p><u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process</p> <p><u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times</p>	NO ₂ & PM	2021		Stage 2 of a multi stage Air Quality UTMC improvement project. Stage 3 contained within P.9 and awaiting funding
AQMA9.9			2019	2020		NO ₂ & PM	2021		

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
	Input into the development of the Town Centre Master Plan	Kirklees Environmental Health			<p><u>Kirklees Council Targets:</u> +Inclusion of Air Quality within the Town Centre Master Plan Document</p> <p>Contribute towards targets for planning; + Number of E.V chargers installed within new developments +Predicted monetary damage compared against mitigation spend / Section 106 contributions</p> <p><u>Kirklees Council Measurables:</u> + Number of E.V chargers within the town centre + Section 106 money spent on town centre AQ improvements</p>				
AQMA9.10	Trial of Smart UTMC Technology systems within relevant AQMA's	Kirklees Highways UTC	Estimate 2019/20	TBC	<p><u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process</p> <p><u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times</p>	NO ₂ & PM	TBC		<p>This is a future project currently going through project planning phase</p> <p>Funding sought from 2018 AQ Grant</p>
AQMA 10 Thornton Lodge Actions									
AQMA10.1	Huddersfield Southern Gateway Transport Scheme	Kirklees Economy and Infrastructure	2018	2021	<p><u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Increased capacity on the road + Redistribution of vehicles on network</p> <p><u>Kirklees Council Measurable:</u></p>	NO ₂ & PM	2022		At Full Business Case Stage

Measure No.	Measure	Lead Authority	Planning Phase	Implementation Phase	Targets / Indicator / Measurable	Target Pollution Reduction in the AQMA	Estimated Completion Date	Further Data Requirements	Comments
					+ Average road speed +AM/PM Queue times				
AQMA10.2	Install Multi-node SCOOT onto traffic light system in AQMA	Kirklees Highways UTC	2018	2019	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	2020		This is stage 1 of a multi stage improvement project with the aim to reduce emissions through the use of technology to improve flow at junctions. Other stages of the project are discussed in actions AQMA.10.3 and P.9
AQMA10.3	Use "Virtual Emissions Monitoring Project" to determine operate UTC	Kirklees Highways UTC	2018	2019	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	2020		Stage 2 of a multi stage Air Quality UTMC improvement project. Stage 3 contained within P.9 and awaiting funding
AQMA10.4	Trial of Smart UTMC Technology systems within relevant AQMA's	Kirklees Highways UTC	Estimate 2019/20	TBC	<u>Kirklees Council Targets:</u> + Reduction in queuing times and increased through flow + Reduced stop / start driving style + Increased efficiency in combustion engine process <u>Kirklees Council Measurable:</u> + Average road speed +AM/PM Queue times	NO ₂ & PM	TBC		This is a future project currently going through project planning phase Funding sought from 2018 AQ Grant

Appendix A - Response to Consultation

Appendix A, Part 1 – Consultee response Overview

Table A.1 contains a list of consultee types and reference to specific consultation responses, which have been collated and recorded within Appendix A, part 2.

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

Category	Reference
Local Councillor	Response A1
Local Councillor	Response A2
Local Councillor	Response A3
Local Councillor	Response A4
Town Council	Response A5
NHS Trust	Response A6
Local Business	Response A7
Local Business	Response A8
Local Civic Society	Response A9
Local Resident	Response A10
Local Resident	Response A11
Local Resident	Response A12
Local Resident	Response A13
Local Resident	Response A14
Local Resident	Response A15
Anonymous	Response A16
Anonymous	Response A17
Anonymous	Response A18

Appendix A, Part 2 – Consultee responses

Response A1

Some brief points to note,

If the aim of this is to encourage people onto public transport, there has to be public transport that works. Currently there are infrequent and unreliable bus services in my ward. These also seem very expensive so put off working people, as it is far easier, cheaper and quicker to drive.

I also think that there are different challenges across the very different areas within Kirklees. The area I represent is rural and therefore the car is seen as a necessity. Perhaps for people in more urban parts of the district it may be possible to look at public transport as an alternative. The other thing of course is that in the more rural areas, air quality is much less of an issue, because we do not have huge amounts of traffic jams, etc.

Not quite sure what Kirklees can do to encourage people to work at home. This is down to employers. On an infrastructure front, clearly to make this possible, there needs to be high quality, low cost, reliable fibre broadband across the region. Moreover there needs to be a recognition that almost everyone with a job will have an employer who has a policy on whether or not it is permissible to work remotely. It even goes as far as within one organisation having different managers with different opinions on remote working, so clearly there is a challenge here in getting this moving effectively. There are, of course, many jobs that it is not possible to do unless you are physically in the building.

Hope these brief, initial observations are helpful

Response A2

I have read the Action Plan which Aidan Hopson shared with us as Councillors. I have not filled in the pro forma feedback form as I am not sure exactly where my comments should lie. I represent the Kirkburton ward and we do not currently have any AQMA in my ward, however I do think there are some shortcomings in the overall strategy which should be addressed.

G65 talks about promoting and incentivising people to work at home and so reduce commuting miles. I fully support this but see nothing in Kirklees's broader economic plans that would support this in the rural south of Huddersfield, there is no planned investment or strategy for these areas. For example, the gigabit proposals for City Fibre focus only on the urban areas where there is reasonable public transport provision, this does not extend to areas such as mine, so people are expected to

commute to access the gigabit provision in our town or further afield, Manchester, Leeds, Sheffield.

I know from local knowledge that most people in this patch commute and do so using public transport and so no doubt contribute to the air quality issues in places like Huddersfield Town Centre, Bradley, Dewsbury etc.

This links to my second point is the failure to recognise in the strategy the role that can be played by public transport provision in the rural south to counteract commuting. We have a train line which is not recognised in the plans (Pennine Line is) and yet an improved service could reduce the traffic heading into Huddersfield from the South. Bus provision is another omission in my mind, as an example the current bus service from my village, Shepley, into Huddersfield takes between 50 minutes & an hour not because of traffic congestion but because of the convoluted route that it takes. I can get into Huddersfield by car in 15-120 minutes even at peak times, so the poor bus provision in the area is actually forcing people to commute by car and so contribute to the congestion and poor air quality in town and on the commuter routes to Leeds.

I would like to see these points acknowledged in the action plan as it seems to suggest that South Huddersfield, which does not have a AQMA is therefore not a contributory factor to the problems we face and I would dispute this and suggest the lack of strategies for this area are contributing to problems elsewhere.

Response A3

Have looked at the action plan and table for Birkenshaw. There is very little information for Birkenshaw other than stating the zone. No schemes are listed as part of the plan that would help the problems in Birkenshaw at all. The item that research is going to be done to help with integration of local plan is going to be too late for us in Birkenshaw as planning requests are currently being put in for development of houses next to the air quality action zone. This would mean over 300 houses extra next to the zone. Nor is there anything about working with Highways England re the motorway. Nor is there anything any connections to the proposed Bradford link road, or the extra houses planned by Bradford that would impact on our roads. Surely there should be something in the action plan about working with neighbouring councils on assuring that the effects of development do not increase the problems with air quality.

I cannot see a very definite link to health or the JSA in the plan. There are some generic statements but nothing about health conditions in the areas of the zones. Why not? Better Linkages should be made to health inequalities.

Response A4

Did you find the document clear to understand?: Not really - Exec summary was far too short but included preamble, whilst the full report was too long !

What are your thoughts on the targets set out within the document?: Fine

What are your thoughts on the actions presented within the table?: Fine

Are there any areas/specific projects you feel have not been covered as part of the plan?: It would have been good to have identified and acknowledged other areas in Kirklees where there are air quality concerns and perhaps to have given pollution readings - and to have a plan showing how they will be monitored and to introduce reduction measures at these locations too.

Are there any other comments you wish to make relating to Air Quality or this Action plan?: The work focuses on locations where readings are high - is there also a need to look at air quality for people who spend long times on or near our road network - i.e. professional drivers, Street / Place workers (e.g. School Crossing Patrol), utility workers etc, and to give advice.

Response A5

The following motion was resolved at our meeting 2nd July 2019 regarding the above:

MTC52/2019 (2)

Cllr Naisbett Proposed MTC send the following response to Kirklees: MTC are concerned that the last survey in 2017 may be incorrect. There is currently no data to say what the air pollution could be if the Cooper Bridge Link goes ahead. All roads out of and in to Mirfield are congested at Peak times with excessive queue lengths. From Mirfield's perspective the air quality is lamentable in Mirfield and the report shows unrealistic length of traffic flow i.e. Norristhorpe Lane – Sunnybank 2.41 minutes. MTC believe the Local Plan will have significant impact on traffic from Cooper Bridge to Dewsbury Riverside, with no reference in the report of proposed developments within the Local Plan, which could have a significant impact on air quality within Mirfield. MTC are concerned that there is sensory equipment within the AQMA areas but not in areas not in AQMA, which will not show how levels have changed since the report was conducted. MTC believes Kirklees to be disingenuous with journey times and queue lengths within Mirfield. MTC would also request Kirklees look at natural means of absorbing noxious substances like moss walls Cllr Guy Seconded Vote: All in favour

Response A6

Did you find the document clear to understand?: Yes

What are your thoughts on the targets set out within the document?: There's no specific numerical targets, just the primary or secondary pollutant.

What are your thoughts on the actions presented within the table?: They do not seem to be prioritised in terms of actions that will have the greatest impact, a timeline for achieving targets. Table is quite confusing as some actions are older/expired.

Are there any areas/specific projects you feel have not been covered as part of the plan?: No

Are there any other comments you wish to make relating to Air Quality or this Action plan?: Calderdale and Huddersfield NHS Foundation Trust will be updating the Sustainable Development Action Plan, and air quality actions will be included. We are also looking to provide more provision for electric vehicles and tendering for new fleet, specifying minimum of hybrid vehicles.

New Environment Manager in place since May 2019

Response A7

Introduction

Consulting With Purpose Ltd. (CWP) are primarily Sustainability, Renewable Energy, Waste to Energy, Standardisation, Certification and Accreditation, Policy and Regulations Consultancy based in Huddersfield. Our CEO also is a shareholder in a wind energy company based in Kirklees.

Our experience of Air Quality comes mainly through our work on electric and heating networks and transportation. We have advised Kirklees Council on a number of projects over the years, including the provisions for a heat network and on eco-industrial parks, a for runner to the circular economy discussions.

Responsibilities and Commitments

The council commit to reviewing the AQAP annually, appraisal of progress and reporting to the relevant Council Committee. However, in the introduction there appears to be a 5 year review period in the worst case. We would like the council to commit to an annual review and integrate this with the Climate Emergency Motion commitments in as much as improving air quality and reducing the Carbon Dioxide Equivalent Emissions (CO_{2e}) go hand in hand.

Consultation and Stakeholder Engagement

Kirklees Council Air Quality Action Plan

2019

From the Table 4.1 it is unclear whether due process of consultation has fully been achieved at this stage. E.g. There is no confirmation whether the stakeholders have been consulted with or not – as there is no ‘yes’ or ‘no’ indicated in the table.

We note that Huddersfield Town Centre has moved wards into Netherton, given this is the ward our company resides in and is an important ward, it would be helpful that the document specifies the ward correctly.

Source Apportionment and Emission Reduction Activities

The consultation document highlights some 67 measure in table ? on pages 21-34, which many are due for implementation. Are there targets against these strategies? And for those that have been implemented for a while the document does not confirm how successful they have been at changing behaviour or reducing emissions. It would have been useful to see that information as part of the consultation to see how well the council implements measures, given the vast number that are now being proposed.

Electric and Alternative Fuel Vehicles

In figure 6.2 – Average AQMA Source Apportionment Fuel Composition you have 12 categories of vehicle by fuel and yet only 6 segments on the graph. There is no percentage figures and no identification of what the other categories represent in terms of emissions apportionment. This does not allow for easy engagement with the data.

Your assertion is that the predominant emissions from within the 9 AQMAs are from domestic diesel vehicles or diesel Light Goods Vehicles (LGVs). Have the emissions from Plug-in Hybrid Vehicles (PHEV), Full Hybrid Diesel Cars (FHDC) and Full Hybrid Petrol Vehicles (FHPC) been evaluated against their use in electric mode, to establish if promoting and establishing low emissions zones or other such measures will be effective with hybrid vehicles as opposed to battery only versions? We see this as an issue, not only in establishing the Battery Electric Vehicle (BEV) in the market for light vehicles of all types but also as a potential lost opportunity to move away from fossil fuels in the district.

For instance, if the Council were to decide to develop a utility scale Renewable Energy company, then moving the demand away from fossil fuels and towards electric charging from locally sourced renewable energy could provide bigger benefits than moving vehicles from fossil fuel only to hybrid. These kinds of a policy decisions by the Authority could easily benefit cleaner transportation and green jobs through infrastructure development and sustainable employment in the motor trades.

Further concentration should also be made in developing strategies and policies that stimulate the use of alternative fuels (electric and hydrogen) for other types of road transport. While these markets are embryonic and limited at the moment, Kirklees

could potentially lead by example and work with the anchor organisations in the district to stimulate the demand through providing a pilot hydrogen fuelling station.

None of the above takes away from the clear policy of reducing transport movements by private and commercial vehicles, which we note is a clear policy direction.

It is noted, that the document states, there are already BEV charge point across the Kirklees district, which have been part of the Kirklees previous activities. Being an Electric Vehicle driver, it would be useful to understand where these are, their charge rates and if they are available to non-Kirklees Council employees as we have not seen any such charge points in Kirklees?

We understand that the council as part of the West Yorkshire Combined Authority (WYCA) are to receive a number of rapid charge points in the district. Rapid charge points are generally considered to be greater than 50kWh. With the increased battery capacity of BEV the lower rated rapid charge points may not be fast enough for some motorists.

We would also urge the council to consider the dwell-time of those using the charge points in key locations, such as, surrounding the town centres, as reliance on rapid charge points may distort the effects of dwell-time in areas the Council is already trying to regenerate with major investments and infrastructure projects. E.g. having rapid charge points with 45-minute charge limits in areas where the experience would better be suited to 2-4 hour dwell-times. While these are not directly Air Quality issues, the impact of air quality policies and drivers may have a significant effect on other Council strategies.

If the council provide dedicated electric vehicle charge points (EVPs) in the district for taxis, that then use them with hybrid cars (see above), the emissions benefit will be diminished substantially against the requirement for BEV taxis. There are a number of geographic locations and taxi firms where taxi fleets are all BEV and we would encourage the council to ensure that the taxi fleets in Kirklees are '*nudged*' into using BEV and not PHEV vehicles. Range cannot be used as an excuse for taxis to be PHEV any longer.

It would be useful to understand how many vehicles are registered in Kirklees and how many enter Kirklees on a regular basis for work and other activities. Relating this over the five year period would be useful in evaluating the impacts from the reduction of vehicles in favour of public transport and in the changing mix of drivetrains being used.

While we assume pure (BEV) are not categorised on figure 6.2 chart due to the low volume and the fact that they do not give of NO_x, it would be useful to understand the PM_{2.5} and PM₁₀ starting point for all vehicles given that there is a significant discussion with regards to the potential emissions reduction not being achieved even

if we move to more BEVs. Has the council any data to quantify the emissions from tyres and brakes as a baseline?

If we are to rapidly increase the use of BEV vehicles at all scales and for all logistical requirements, it would also be helpful if the council provide the strong 'nudge' stimulus for commercial and public vehicles to utilise these technologies. Therefore, strategies for having deliveries with BEV vehicles could not only ensure lower emissions but could also help with the Huddersfield Town Centre (HTC) regeneration by providing quite deliveries at night, thereby not disturbing residents.

We applaud the free parking scheme for BEV vehicles around our towns and would ask as part of the WYCA and WYLES programmes that this be integrated into a broader region wide scheme that allows vehicles to park not just in Kirklees but also the whole of the Leeds City Region. This would help stimulate the uptake of BEV vehicles commuting and business in general.

Clean Air Zones (CAZ)

While we appreciate that Kirklees has not been allocated as a Clean Air Zone under the government funding schemes, we have a concern that the CAZ in Leeds could have a detrimental effect on Kirklees public transport emissions by moving the less efficient vehicles out to Kirklees. Kirklees should be looking for and expecting the same emissions reducing vehicles as on our roads as in the formal CAZ.

What evaluation of measure to introduce a CAZ have been made for Kirklees main towns? It would be useful to understand that evaluation as part of the consultation exercise.

As an interim measure we would suggest the implementation of no idling zones around key establishments and emissions hot spots, particularly around schools and areas where vulnerable people are.

Cycling and Walking

While we note a number of good initiatives for increasing walking and cycling and we note the emphasis on these in the recently published Huddersfield Town Transformation, these will only be accepted if there are safe routes and safe cycle storage. It should also be recognised that many of our public services do not serve our rural communities well and therefore lead to more private car and taxi use. Making it easy to get a bus stop, having reliable transport, in a timely manner and at times needed throughout the day will be a crucial aspect of persuading people to walk to the public transport. From the position of using rail and bus as part of a

journey, it will be necessary to have more access to bike facilities on the trains and buses.

Better still, having a bike borrow scheme in the town centres would encourage more cycling within the towns and to outlying flat areas. Another aspect of cycling would be to have an ability to have more than one cycle as they have in the Netherlands and to some extent in London where cycle parks at bus and train stations facilitate the ability to commute on a bus or train and then take your bike to the final destination or vice versa.

However, that only works if the costs are perceived to be commensurate with the journey.

Given our geographic location, for many that could walking and cycling are not perceived as such a great option and while encouraging these forms of mobility for many good reasons, such as, health and wellbeing, there needs to be a recognition as to how to enable people to do this without making them feel guilty or disenfranchised.

We support the idea of “quiet routes” and providing more space for parking bikes securely. However, going up some of our big hills and travelling to the further reaches of the district need to be considered in terms of single trip access for bikes, to allow people to start with taking short journeys on foot and using public transport and building up to more strenuous activity. Riding downhill is great, even with a pannier of documents or shopping but getting back up again is much more daunting and restricting.

We would support additional supplementary planning guidance requiring more funds to go to linking any new development with cycle routes and for the council to have a strategy that includes developing the networks into an integrated transport mode between towns and new developments.

Response A8

1. Introduction

We welcome the draft five-year Air Quality Action Plan (AQAP) for Kirklees. Progress on air quality has been slow since the publication of the West Yorkshire Low Emission Strategy in 2015.

To successfully combat poor air quality will require a range of local actions, some of which will take time to implement. It is clear that West Yorkshire Combined Authority (WYCA) through City Connect is gradually implementing or a programme of measures to increase the infrastructure for cycling but there is a lack of urgency in the draft AQAP. We need to see continued increase in the proportion of trips made by walking and cycling and by public transport. Similarly we need to accelerate the Kirklees Council Air Quality Action Plan

adoption of ultra low carbon vehicles and the measures employed to date have not resulted in significant take up.

Nationally the conditions are not all favourable to reducing pollution from motor vehicles and many of the trends are in the wrong direction. Use of the bus is declining; costs of public transport continued to increase faster than the cost of motoring; new petrol and diesel cars sold in 2018 had emission ratings than in 2017, (Note 1). These trends illustrate how the government has failed to create conditions for a growth in walking, cycling and public transport use.

2. Clean Air Zones (CAZ)

We would like to see a more detailed analysis of the use of Clean Air Zones (CAZ) in the AQAP, even if initially it is established as an *Advisory* CAZ. We believe that the introduction of a large zone in Leeds from spring 2020 will make this proposal increasingly relevant to promote clean air in Kirklees.

We also propose the use of **no idling** bans in streets close to school gates. Initially this could be established at the most polluted of Kirklees schools to demonstrate how to enforce such a ban.

3. Modal shift

There is a need to measure progress in achieving modal shift on all local journeys as part of setting long term targets. Our aim should be to expand cycling and walking and use of public transport and reduce the number of trips by private car.

The adoption of targets for cycling, public transport and car use for the relevant travel to work areas for 2024 and 2029 would help to demonstrate that progress is being made.

4. Cycling and walking

We want to see more recognition of **cycling as a transport mode**, particularly in the flatter areas (e.g. into Huddersfield from valleys, using new “quiet routes” alongside A629 to Lindley and links into town from Dewsbury, Mirfield and Brighouse using routes that parallel the Leeds Road/Huddersfield Broad canal.) This will require effective links from/to Huddersfield town centre (railway station, civic centre) across or under the ring road, to integrate the main feeder routes.

Delivering an integrated cycling and walking strategy, which builds on the successful greenways, needs to be more clearly shown as a strategic element of the 5-year plan.

We propose a planning requirement (supplementary planning guidance) for developers to fund the **links from new housing to cycling and walking routes**.

In planning new housing the cycling, walking and public transport links are often not future proofed. Growth in car ownership in new developments can only be arrested by a series of improvements in the alternative travel options.

More secure cycle storage for people working or studying or attending events in the major towns is needed to encourage cycle use, particularly e-bikes. Parking on street is also now possible for cycles using existing car parking spaces – showing that bikes are also road users and a transport mode.

Support for schools in developing and implementing travel plans is no longer available and is increasingly desirable. Kirklees Council needs to partner with voluntary sector organisations to secure funds for promoting cycling, wider use of e-bikes and cycle maintenance in schools from bodies such as UK Cycling.

5. Traffic reduction/public transport

By promoting modal integration we can encourage **traffic reduction**. Effective use of bus and rail needs more facilities for multi-modal travel – through expanding **Park and Ride** (P&R) – and better integration of modes.

In Kirklees one way this could be achieved is a commitment to expanding use of rail (which itself needs key investment decisions made by Network Rail, WYCA and South Yorkshire authorities) and by expanding car parking and secure bike parking at selected railway stations.

In particular the potential of the **Penistone Line** to reduce car traffic travelling into Huddersfield has been ignored consistently by Kirklees Council and WYCA. Its potential is that much greater if the frequency is increased and the use of P&R made possible.

To increase passenger numbers is a long-term objective as it would require investment in track and rolling stock to permit half hour services. Land would be required at stations for increased parking (e.g. at Honley). Its potential contribution to the local economy and environment has regularly been demonstrated by the Huddersfield, Pensitone and Sheffield Rail Users Association (HPSRUA)

There is also a need for expanded services on trains on the Transpennine stations in Kirklees (e.g to allow more cycles to be carried).

6. Cleaner vehicles

The plan lacks a comprehensive strategy to encourage mainstream adoption of ultra low emission vehicles (ULEVs). A future plan for **recharging points** is not spelt out.

Kirklees Council adoption of ULEVs is welcome but we need to encourage **fleet users to work together to adopt** more use of ULEVs (e.g. NHS Trusts, University of Huddersfield, larger local private sector operators).

All taxi and Private Hire (PH) vehicles need to be cleaner by 2023 and progressively improved. Use of diesel vehicles as taxis and private hire should be phased out by 2025. A progressive policy of reducing fees for ULEVs and raising them for polluting diesels would assist this policy. In addition the taxi owners will need help from the licensing authority in promoting the business case for hybrids and ULEVs (as undertaken by Leeds City Council).

Given the effect of motorway traffic on air quality, it is noticeable that support for the AQAP has not been offered by Highways England.

The free car parking concession for ULEVs on streets and sites managed by Kirklees Council needs effective promotion to make more people aware of this facility, which will encourage more people to switch to fully electric.

Local householders without parking on site cannot charge at home. We would like to see proposals to support such households to switch to ULEVs through the use of on-street recharging (e.g. through lighting columns).

7. Adopting the plan

The monitoring of AQ in all Kirklees Council policy decision needs urgent adoption at committee level along with **Climate Emergency**. The AQAP does not yet acknowledge the implications of the climate emergency stance of Kirklees and WYCA.

Note 1

Campaign for Better Transport has reported on declining bus use outside London and continuing increases in the costs of bus and rail travel which has increased faster than the cost of motoring

Transport & Environment (June 2019) Rising CO2 emissions a problem of carmakers own making as they push SUVs but hold back electric cars

Response A9

1. Introduction

We welcome the draft five-year Air Quality Action Plan (AQAP) for Kirklees. Progress on air quality has been slow since the publication of the West Yorkshire Low Emission Strategy in 2015. Action to improve air quality is measurable, but only if a performance measurement methodology is put in place. We recommend that this includes agreed targets; baselines; monitoring frequency; inputs and outputs. We also recommend a higher level of Council-led public engagement regarding the results of air quality monitoring. The likelihood of public support (and action) will be increased through transparent communication of trends. To successfully combat poor air quality will require a range of local actions, some of which will take time to implement. It is clear that West Yorkshire Combined Authority through City Connect is gradually implementing a programme of measures to increase the infrastructure for cycling but there is a lack of urgency in the draft AQMA plan. We need to see continued increase in the proportion of trips made by walking and cycling and by public transport. Similarly

we need to accelerate the adoption of ultra low carbon vehicles and the measures employed to date have not resulted in significant take up. Nationally the conditions are not all favourable to reducing pollution from motor vehicles and many of the trends are in the wrong direction. Use of the bus is declining; costs of public transport continued to increase faster than the cost of motoring; new petrol and diesel cars sold in 2018 had higher emission ratings than in 2017. These trends illustrate how the government has failed to create conditions for a growth in walking, cycling and public transport use - making even more important that local authorities take decisive action using the powers available to them.

2. Clean Air Zones (CAZ)

We would like to see a more detailed analysis of the use of Clean Air Zones (CAZ) in the AQAP, even if initially it is established as an *Advisory CAZ*. We believe that the introduction of a large zone in Leeds from spring 2020 will make this proposal increasingly relevant to promote clean air in Kirklees. We also propose the use of **no idling** bans in streets close to school gates. Initially this could be established at the most polluted of Kirklees schools to demonstrate how to enforce such a ban. Traffic idling is already illegal on public roads. We recommend that the Council communicates this and enforces it through traffic wardens.

3. Modal shift

There is a need to measure progress in achieving modal shift on all local journeys as part of setting long term targets. Our aim should be to expand cycling and walking and use of public transport and reduce the number of trips by private car. The adoption of targets for 2024 and 2029 would help to demonstrate progress.

4. Cycling and walking

We want to see more recognition of **cycling as a transport mode**, particularly in the flatter areas (e.g. into Huddersfield from valleys, using new “quiet routes” alongside A629 to Lindley and links into town from Dewsbury, Mirfield and Brighouse using routes that parallel the Leeds Road/Huddersfield Broad canal.) This will require effective links from/to Huddersfield town centre (railway station, civic centre) across or under the ring road, to integrate the main feeder routes. Delivering an integrated cycling and walking strategy, which builds on the successful greenways, needs to be more clearly shown as a strategic element of the 5-year plan.

We propose a planning requirement (supplementary planning guidance) for developers to fund the **links from new housing to cycling and walking routes**. In planning new housing the cycling, walking and public transport links are often not future proofed. Growth in car ownership in new developments needs can only be arrested by a series of improvements in the alternative travel options.

More secure cycle storage for people working or studying or attending events in the major towns is needed to encourage cycle use, particularly ebikes. Parking on street is also now possible for cycles using existing car parking spaces – showing that bikes are also road users and a transport mode.

Support for schools in developing and implementing travel plans is no longer available and is increasingly desirable. Kirklees Council needs to partner with voluntary sector organisations to secure funds for promoting cycling, wide use of e-bikes and cycle maintenance in schools from bodies such as UK Cycling.

5. Traffic reduction/public transport

By promoting modal integration we can encourage **traffic reduction**. Effective use of bus and rail needs more facilities for multi-modal travel – largely through expanding **park and ride**. In Kirklees this could be achieved by expanding use of rail (which itself

needs key investment decisions made by Network Rail, WYCA and South Yorkshire authorities) and by expanding car parking and secure bike parking at selected railway stations

In particular the potential of the **Penistone Line** to reduce car traffic travelling into Huddersfield has been ignored consistently. Its potential is that much greater if the frequency is increased and the use of P&R made possible.

To increase passenger numbers is a long term objectives as it would require investment in track and rolling stock to permit half hour services. Land would be required at stations for increased parking (e.g. at Honley) as has been regularly demonstrated by the Huddersfield, Pensitone and Sheffield Rail Users Assoaciation (HPSRUA) There is also a need for expanded services on trains on the Transpennine stations in Kirklees (e.g to allow more cycles to be carried).

6. Cleaner vehicles

The plan lacks a comprehensive strategy to encourage mainstream adoption of ultra low emission vehicles (ULEVs). A future plan for **recharging points** is not spelt out. Kirklees Council adoption of EVs is welcome but we need to encourage **fleet users to work together to adopt** more use of ULEVs by other fleet users (e.g. NHS Trusts, University of Huddersfield, private sector operators).

Given the effect of motorway traffic on air quality it is noticeable that support for the AQMA has not been offered by Highways England.

The free car parking concession for ULEVs on streets and sites managed by Kirklees Council needs effective promotion to encourage more people to switch to fully electric. **Local householders without parking on site** cannot charge at home. We would like to see proposals to support such households to switch to ULEVs through the use of on-street recharging (e.g. through lighting columns).

All taxi and PH vehicles need to be cleaner by 2023 and progressively improved. Use of diesel vehicles as taxis and private hire should be phased out by 2025. A progressive policy of reducing fees for ULEVs and raising them for polluting diesels would assist this policy. In addition the taxi owners will need help from the licensing authority in promoting the business case for hybrids and ULEVs (as undertaken by Leeds City Council).

7. Adopting the plan

The monitoring of AQ in all Kirklees Council policy decision needs urgent adoption at committee level along with **Climate Emergency**. The AQAP does not yet acknowledge the implications of the climate emergency stance of Kirklees and WYCA.

Response A10

Did you find the document clear to understand?: Yes, the charts were very enlightening. I will be unable to comment upon a lot of the areas as I know nothing of them.

What are your thoughts on the targets set out within the document?: Any death associated to pollution is unacceptable. Outside of the cities, Kirklees falls around the median. If Kirklees intends to achieve these targets as they stand today, they should not throw petrol on the fire and make them any worse than they currently are

What are your thoughts on the actions presented within the table?: I see no point in employing a person to be responsible, if the current Council plans are to create an environment whereby the problem is just shifted elsewhere.

Are there any areas/specific projects you feel have not been covered as part of the plan?: Yes, these should be areas where the pollution maybe only of a temporary nature ie. Where high levels are concentrated at a time when vulnerable members of the public would be gathering. There are no plans for improving infrastructure when embarking on increasing density where traffic is a major issue. Improved roads in certain areas would disperse current traffic levels thereby reducing the queuing of traffic. Continuous expansion without improvements will only fuel future problems as you concentrate on those mentioned in the report. Electric cars are sadly a fair way off being the norm. If everyone took an electric car there would be insufficient power available to power them and its unlikely to be for many years to come.

Response A11

Did you find the document clear to understand?: Not really. I had a sense that it was an overload of information and data which was not all necessary in specifying ACTIONS i.e. the focus of an Action Plan

What are your thoughts on the targets set out within the document?: Of the 100+ actions in the **Air Quality Action Plan Measures** table, very few had measurable targets

What are your thoughts on the actions presented within the table?: Overall, I think them to be laudable ambitions, but unrealistic in the context of resource constraints within the Council depts. For example, some 42 out of the 100+ actions are either still at business case stage (13) or only identified as a potential future project (29).

In my view it is better to concentrate on those projects which have the greatest potential to improve air quality and reduce CO2 emissions rather than listing everything the Council would like to do, regardless of resource constraints.

Are there any areas/specific projects you feel have not been covered as part of the plan?: Yes. This action plan is not framed in the context of the current Climate Emergency, despite the Council having declared its own emergency in January this year. I think it needs to be more aspirational and radical in terms of CO2 reduction and that means acting in whatever ways it can to drastically reduce diesel and petrol fuelled transport. As a cyclist, it seems to me that actions on pedestrianisation such as AQMA 9.6, will only prove fruitful if the Council addresses safe cycle routes into the town centre crossing the ring road. The dangers of the ring road are the single biggest deterrent to cycling into the town centre as an alternative to driving

Are there any other comments you wish to make relating to Air Quality or this Action plan?: I acknowledge that due to austerity driven cuts by central government,

the Council's resources are depleted for tackling the the climate emergency and delivering a strong AQAP. My suggestions are: 1) Inform the public of Kirklees about the seriousness of the Climate Emergency (in line with the Motion passed on 16 Jan 2019) - this will help to engage us in actions we can take for ourselves. An emergency needs to feel like an emergency. 2) Seek greater collaboration from willing partners outside the Council, such as the University departments, the Cycling Campaign, the Climate Emergency Group, Friends of the Earth, the Civic Society, etc - many of whom can help with projects, measurement, communications etc.

Response A12

General comment about the scope of the AQAP

As a long-standing resident of Kirklees and non-expert but strong supporter of promoting improvement in air quality, I welcome the new action plan within which there is much in to be commended. However, though I recognise the legal constraints on the Local Authority in its powers to innovate and also the severe financial pressures it is under in endeavouring to carry out its statutory and non-statutory duties, I am not convinced that the visioning of the LA's proposals is ambitious enough to create the necessary step-wise change in the culture of our towns and communities, one for example that might substantially increase awareness and ownership of and precipitate constructive responses to the air pollution problem: one that may result in in substantial road and pavement infrastructure change to realistically facilitate people choosing to cycle and/ or walk knowing that it will be a safe and not an unhealthy experience; one that might enable car drivers to recognise that they too are not free from exposure to air pollution and that there are actions they and others should take to mitigate this; one that enables local communities and schools to be aware of the pollution hot spots within their midst and to help monitor this and promote solutions; moreover, one that could put Kirklees on the map as an innovative authority in this matter, as a leading example to others with regards to what can be achieved.

Community involvement

Despite the magnitude of the challenge, the fact that very many of us daily are exposed to excessive exposure to high levels of air pollution and that this constitutes a serious threat to long term and even current health goes largely unrecognised by a wide section of the community. I believe that the strategy and consequent actions of an AQAP should be more wide ranging in involving a higher level of public health engagement and education through schools, churches and mosques, and voluntary organisations and local business with LA reports of actions undertaken and progress, presented in person to such groups.

Setting out of LAQMA's

The establishment of LAQMA's in response to identified primary and major sources of air pollution as priority areas is perfectly understandable. However, as important as

this is, it appears to me that the plan appears to have little to say or to offer in identifying more disseminated hot spots and for possible actions to respond to such outside of these areas. The need for ameliorative action within the LAQMA's takes into account the presence of occupied housing within those areas and rightly prioritises actions in relation to the likely exposure of occupants to excessive levels of pollution even though, mostly, only relatively few residences are affected. It is my understanding, however, that these priority areas have been defined by Air Quality Objectives based on an annualised NO₂ index and (DEFRA/EU) threshold. If one were to apply the hourly threshold of 200 micro grams per M cubed it would be my guess that many thousands of household and/ or individuals would be exposed to levels in excess of this with exceedences in their exposure "more than 18 times per year", thus placing them at clear risk of experiencing "harmful" levels of air pollution. To my knowledge, little or no data or action has been presented in the plan to address this distinct possibility.

In line with the Local Authority's Corporate Plan's first priority that "children (should) have the best start in life", it would be eminently sensible to make a priority of monitoring and facilitating pollution level change within the immediate areas involving children's' ingress and egress to and from school. To this end School management teams and governors should be included as active partners with the LA and bolder solutions to the problem should be envisaged.

Traffic idling

Idling of cars and other vehicles is a significant contributor to single and repeated exposure of the public to above threshold levels of pollution. The LA should seek to ensure together with the police, stronger reinforcement of Rule 123 of the Highway Code. Initiatives with publicity and legal enforcement within school zones should be a priority but the LA should also seek to highlight this issue in the context of its broader air quality improvement publicity and campaigning within the multiple organisations including churches and mosques who themselves can be asked to identify policies and champions to sustain pro-air quality behaviour. The same should be extended to owners of private car parks, including supermarkets.

Solid fuel and wood burning stoves

The proposed measure and indicator (G.38: reduction in PM & number of complaints of smoking chimney complaints) in relation to regulatory requirements of the Clean Air Act would seem rather minimalist. There has been an exponential growth in wood burning in the last 10 years. UK government survey data led to official pollution emission levels being revised to say that wood burning was producing 2.6 times more particle emissions than exhausts (this includes people who are burning wood in Kirklees Council Air Quality Action Plan

open fire places but also households with wood burning stoves. This, unfortunately, reintroduces some of the pollution problems that were successfully dealt with under the clean air act. Wood burning can frequently cause local air pollution problems that expose near neighbours to, in single dose, harmful levels of pollution. Even new stoves are known to omit harmful levels of pollution and the uncontrolled burning of wood with preservative in (CCA) adds a further harmful element. Furthermore, wood-burning is not climate neutral and needs to be discouraged under the Climate Emergency provisions agreed by the LA. These are good reasons for the LA to have some more ambitious actions in nudging people away from wood-burning and to have a more pro-active stance than envisaged to identifying when chimney effluents are non-compliant with legal standards.

Cycling and walking health and safety

The systematic introduction and/ or extension of safe and low pollution cycling routes into and through the town is crucial if significantly more people are going to be induced to see cycling as a viable alternative to the car. The LA needs to do more than pay lip service to this. Infrastructure for safer cycling is mostly lacking and further plans for cycle routes need to ensure that cyclists are not just squeezed in to a notional but unsatisfactory, from the point of view of cyclist safety, cycle lanes. Cycle routes intended to be a serious corridor into the town centre should not be so circuitous as to make their use for commuting too impractical. More secure cycle lock ups at town centre locations are needed. Cycle lane policy and infrastructure developments will need to take into the account the potential for a sizeable increase in hybrid/electric bicycle use.

Pedestrians, equally, should have safer, well maintained walking routes into the town centre without having to endure substantial parts of their journey exposed to high levels of traffic exhaust fumes. Both these and cycle lanes should incorporate clear signage to highlight the route and to warn motorists against parking on the pavement or cycle way, which currently is so hugely under-policed that it has become the norm rather than the exception. More pedestrian crossings are required in key places on some of the principle routes into town as are additional central refuges on the busiest of roads. Pedestrian light controlled crossings on the ring road and other dual carriageways, should not capture users in the central reservation but grant their right of way in a single crossing.

Traffic speed in suburban areas

Proper consideration needs to be given to the adjunctive value of the roll out of a “20’s plenty” policy, which has been substantially achieved in neighbouring Calderdale and Leeds authorities. This, if seriously pursued, can lead to reduced and safer conditions for cyclist and pedestrians and greater awareness by the motorist of the rights and needs of these other street and road users. Research (**) would suggest that, in general, it is incorrect to state that a 20mph speed restriction will lead to greater pollutant emissions for vehicles.

* Abstracted from chapter 11 in: "The Invisible Killer", 2018, Melville House U.K.j

** An evaluation of the estimated impacts on vehicle emissions of a 20mph speed restriction in central London, Transport and Environmental Analysis Group, Centre for Transport Studies, Imperial College London, FINAL REPORT, April 2013.

<https://www.cityoflondon.gov.uk/business/environmental-health/environmental-protection/air-quality/Documents/speed-restriction-air-quality-report-2013-for-web.pdf>

Response A13

Did you find the document clear to understand?: Yes

What are your thoughts on the targets set out within the document?: Focus too heavily on changing transport habits; changing from cars to buses, petrol/diesel to electric, getting people to cycle.

What are your thoughts on the actions presented within the table?: Ok as far as they go and within the targets highlighted.

Are there any areas/specific projects you feel have not been covered as part of the plan?: Planting trees. Focus on areas around schools to ensure pupils not breathing polluted air. Tree planting on school grounds. Congestion in areas of high population, reducing standing traffic. Footpaths and cycleways away from traffic rather than alongside.

Are there any other comments you wish to make relating to Air Quality or this Action plan?: If you want to encourage people to leave cars behind and use public transport you need better parking and park and ride schemes

Response A14

Did you find the document clear to understand?: Lengthy

What are your thoughts on the targets set out within the document?:

Unambitious

What are your thoughts on the actions presented within the table?: Unambitious and lacking the required urgency

Are there any areas/specific projects you feel have not been covered as part of the plan?: Raising public awareness of the scandalously poor air quality in our residential areas and its impact on health. lack of education about what individuals can do about this. backed up by a high profile and ambitious cycle/bus/train/walk strategy. consider park and ride for Huddersfield.

Are there any other comments you wish to make relating to Air Quality or this Action plan?: Just to say again: not enough energy, urgency or scope.

Response A15

Did you find the document clear to understand?: Yes

What are your thoughts on the targets set out within the document?: Kirklees Council need to do more. I understand this is a fluid document. There should be a plan for Batley and Dewsbury Town Centres. A plan to deal with traffic at the bottom of Halifax Road , Heckmondwike especially the queues caused when Heckmondwike Grammar School finishes for the day.

Kirklees Council Air Quality Action Plan

What are your thoughts on the actions presented within the table?: Difficult to have an opinion at this stage.

Are there any areas/specific projects you feel have not been covered as part of the plan?: Batley Town Centre and the traffic problems (air pollution levels) caused by the school run.

Are there any other comments you wish to make relating to Air Quality or this Action plan?:

Response A16

Did you find the document clear to understand?: No

What are your thoughts on the targets set out within the document?: I don't think you will achieve anything near what is necessary for better roads and public transport.

What are your thoughts on the actions presented within the table?:

Are there any areas/specific projects you feel have not been covered as part of the plan?: Non of the Waterways have been explored as a great alternative highway including the towpath links to residential areas and villages/towns and is environmentally friendly. They can be linked with other routes but must be maintained correctly.

Are there any other comments you wish to make relating to Air Quality or this Action plan?: I don't get most of what is trying to be done and im not your average resident but an ex TRA rep.

Response A17

Did you find the document clear to understand?: No. But it is a technical document with a lot of data. It requires careful reading

What are your thoughts on the targets set out within the document?: The targets feel very modest and not sufficiently ambitious

What are your thoughts on the actions presented within the table?: The emphasis is too much about increasing the flow of traffic and not enough about reducing volumes of traffic by improving the use that is made of alternatives such as public transport, particularly buses. There is too much about tiny schemes within the local authority aimed specifically at council employees such as bike-sharing schemes. Why include these? To pad out the table? To give the impression of taking action? The table accords equal weight to everything. It would be more helpful if the table identified the Top Ten actions according to impact on improving air quality.

Are there any areas/specific projects you feel have not been covered as part of the plan?: The high cost of using local public transport, especially buses, is not addressed. The cost of using a bus has risen far beyond the RPI and the use of buses has fallen. It is a dis-incentive to using buses and encourages more car drivers on local roads.

AQMA 6 – Edgerton What are your thoughts on the actions presented within the table?: The proposal emphasises the desire to 'improve the flow of traffic'. Road

improvement schemes elsewhere in the UK and abroad have demonstrated that if this is achieved it is simply a short-term gain. Once drivers realise that the flow has improved then more will start to use the road and it becomes congested once again. This isn't addressed in the proposals although it is a well known tendency.

AQMA 6 – Edgerton Are there any areas/specific projects you feel have not been covered as part of the plan?: There is nothing in the Kirklees proposals to stop vehicles leaving the A629 when it is busy and using the local residential roads as rat-runs. This already happens. By contrast, Calderdale has made all residential roads 20mph. Why doesn't Kirklees do the same? Failing to put measures in place to prevent vehicles looking for short-cuts on residential roads leads to worse air quality on residential streets.

Are there any other comments you wish to make relating to Air Quality or this Action plan?: The Council could do far more to engage with local people on this subject. I recently visited Norwich. The local authority there uses display boards in the city to inform people about air pollution and the measures it is taking. The equipment used to monitor air pollution is made highly visible and is accompanied with information about why it is being deployed. So rather than being a 'dirty secret' that is hidden away the issue is brought more into the open and acknowledged. Walking around Norwich one is left with the impression that there is a problem with air pollution but that something is being done and the local authority is open and honest about it.

Response A18

Did you find the document clear to understand?: It was OK

What are your thoughts on the targets set out within the document?: Good but Kirklees still accepting new builds housing in areas of very high air pollution from traffic congestion. Increasing pollution so making air pollution worse

What are your thoughts on the actions presented within the table?: Kirklees not putting into practice as agreeing to new house residential developments in high pollution and over congested areas ie Merchants fields Hunsworth Cleckheaton
Are there any areas/specific projects you feel have not been covered as part of the plan?:No.

AQMA 4 – Birkenshaw What are your thoughts on the actions presented within the table?: Birkenshaw high pollution due to traffic congestion but yet new building developments agreed to make it worse going into Hunsworth

Are there any other comments you wish to make relating to Air Quality or this Action plan?: It's not achievable by approving new residential housing developments in already congested and high polluted areas. Agreeing to build on green belt when this helps to clean the air. New plans to build on merchants fields will impact on more pollution from over congested roads already

DRAFT

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	Charging Clean Air Zone	There is no mandatory requirement to do so. High infrastructure costs. Could adversely affect local economy, as well as potentially displacing the problem to other areas.

Appendix C – Source Apportionment

Table C.1 AQMA 1 Bradley Source Apportionment

Source Name	All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Diesel Cars (%)	Petrol LGVs (%)	Diesel LGVs (%)	Rigid HGVs (%)	Artic HGVs (%)	Buses/Coaches (%)	Hybrid Buses (%)	Motorcycles (%)	Full Hybrid Petrol Cars (%)	Plug-In Hybrid Petrol Cars (%)	Full Hybrid Diesel Cars (%)
AQMA 1 Leeds Road	63%	37%	5.2%	32.5%	0.1%	24.4%	13.6%	3.0%	20.6%	0.2%	0.3%	0.1%	0.0%	0.1%
AQMA 1 Bradley Road	80%	20%	6.6%	41.1%	0.1%	31.8%	7.2%	1.5%	10.9%	0.1%	0.4%	0.1%	0.0%	0.1%
AQMA 1 B6118	93%	7%	7.7%	49.5%	0.1%	34.8%	2.6%	0.6%	4.0%	0.0%	0.4%	0.1%	0.0%	0.1%
AQMA 1 A62	67%	33%	5.5%	34.5%	0.1%	26.0%	12.1%	2.7%	18.4%	0.1%	0.3%	0.1%	0.0%	0.1%
AQMA 1 A644	55%	45%	4.6%	29.4%	0.1%	20.7%	16.2%	3.7%	24.8%	0.2%	0.2%	0.1%	0.0%	0.1%
AQMA 1 Average	66%	34%	5%	34%	0%	26%	12%	3%	19%	0.1%	0.3%	0.1%	0.0%	0.1%

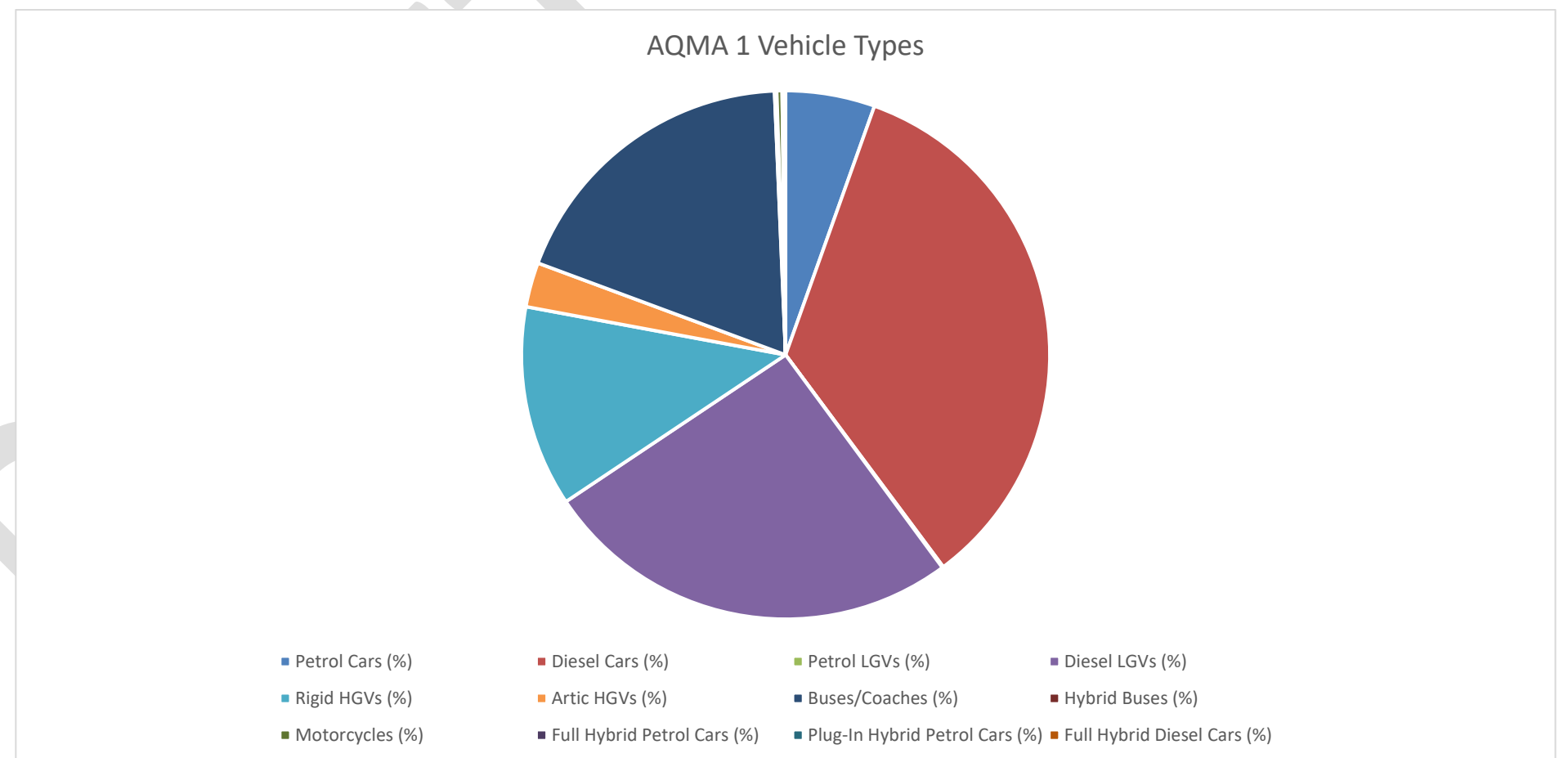
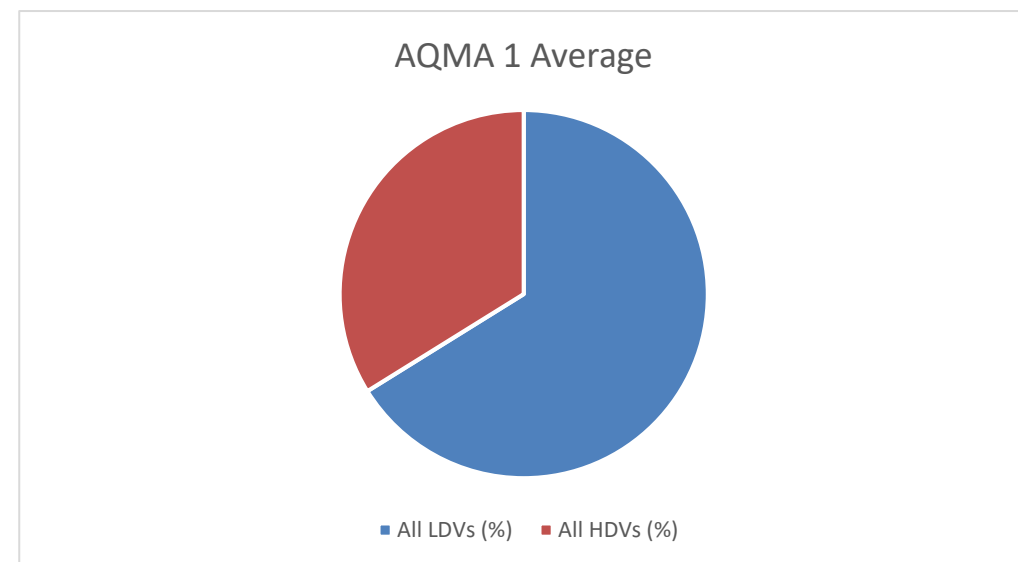


Table C.2 AQMA 3 – Ainley Top Source Apportionment

Source Name	All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Diesel Cars (%)	Petrol LGVs (%)	Diesel LGVs (%)	Rigid HGVs (%)	Artic HGVs (%)	Buses/Coaches (%)	Hybrid Buses (%)	Motorcycles (%)	Full Hybrid Petrol Cars (%)	Plug-In Hybrid Petrol Cars (%)	Full Hybrid Diesel Cars (%)
AQMA 3 - M62 East	75.7%	24.3%	2.8%	40.5%	0.1%	31.9%	9.3%	13.6%	1.3%	0.0%	0.2%	0.1%	0.0%	0.1%
AQMA 3 - M62 West	71.9%	28.1%	2.6%	38.5%	0.1%	30.3%	10.8%	15.8%	1.5%	0.0%	0.2%	0.1%	0.0%	0.1%
AQMA 3 - M62 East Slip	69.4%	30.6%	2.8%	38.1%	0.1%	28.1%	11.7%	17.1%	1.7%	0.0%	0.2%	0.1%	0.0%	0.1%
AQMA 3 - West Slip Road	88.0%	12.0%	3.5%	48.3%	0.1%	35.6%	4.6%	6.7%	0.7%	0.0%	0.2%	0.1%	0.0%	0.1%
AQMA 3 - Halifax Road South	69.7%	30.3%	5.8%	36.9%	0.1%	26.5%	11.0%	2.5%	16.7%	0.1%	0.3%	0.1%	0.0%	0.1%
AQMA 3 - Halifax Road North	69.7%	30.3%	5.8%	36.9%	0.1%	26.5%	11.0%	2.5%	16.7%	0.1%	0.3%	0.1%	0.0%	0.1%
AQMA 3 - Lindley Moor Road East	90.5%	9.5%	7.2%	44.9%	0.1%	37.4%	3.4%	0.7%	5.3%	0.0%	0.6%	0.1%	0.0%	0.1%
AQMA 3 - Lindley Moor Road West	90.5%	9.5%	7.2%	44.9%	0.1%	37.4%	3.4%	0.7%	5.3%	0.0%	0.6%	0.1%	0.0%	0.1%
AQMA 3 - Brighouse Road East	93.1%	6.9%	7.6%	47.3%	0.1%	37.3%	2.5%	0.5%	3.8%	0.0%	0.5%	0.1%	0.0%	0.1%
AQMA 3 - Brighouse Road West	93.1%	6.9%	7.6%	47.3%	0.1%	37.3%	2.5%	0.5%	3.8%	0.0%	0.5%	0.1%	0.0%	0.1%
AQMA 3 - Average	81%	19%	5%	42%	0%	33%	7%	6%	6%	0%	0%	0.1%	0.0%	0.1%

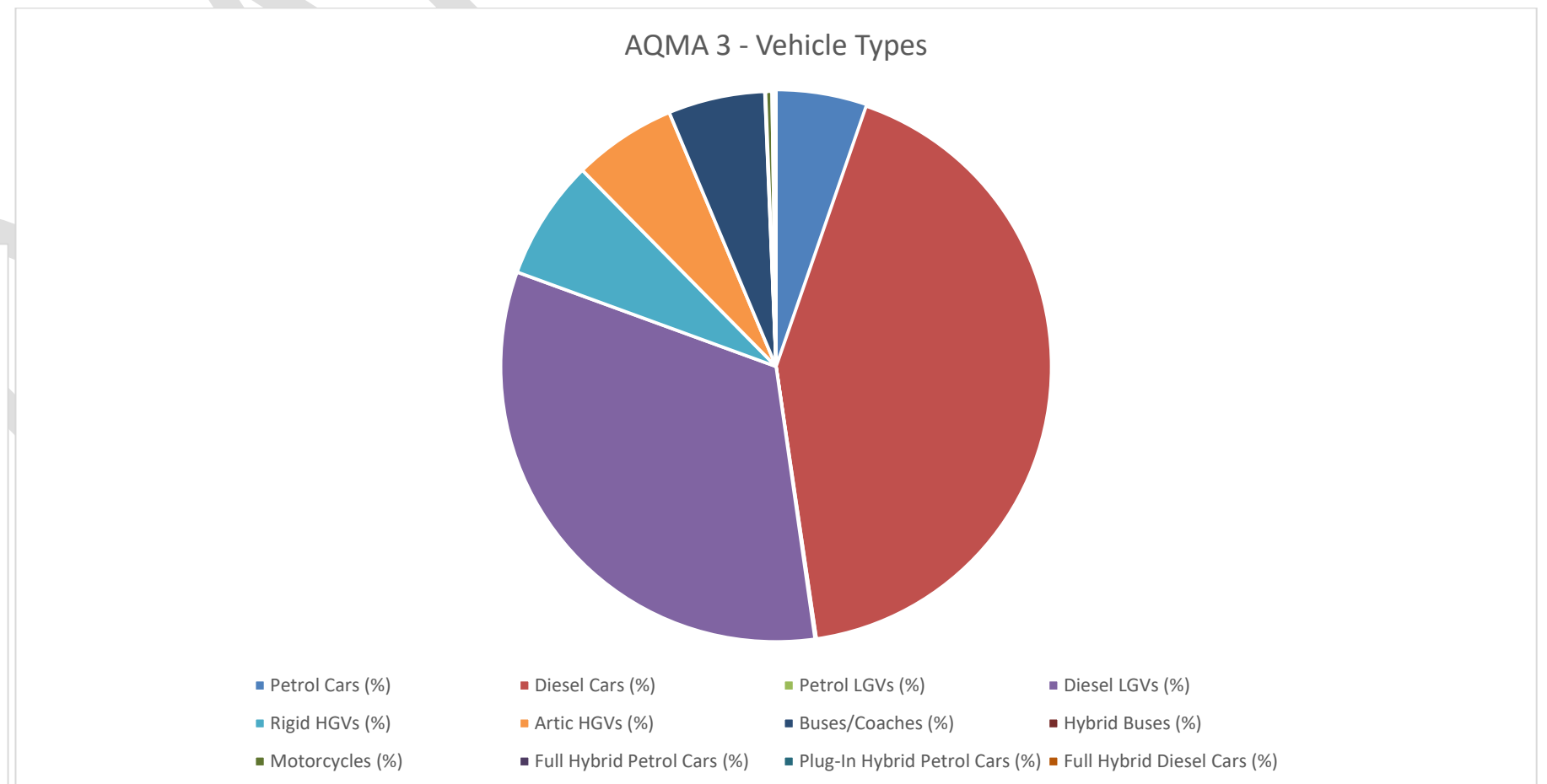
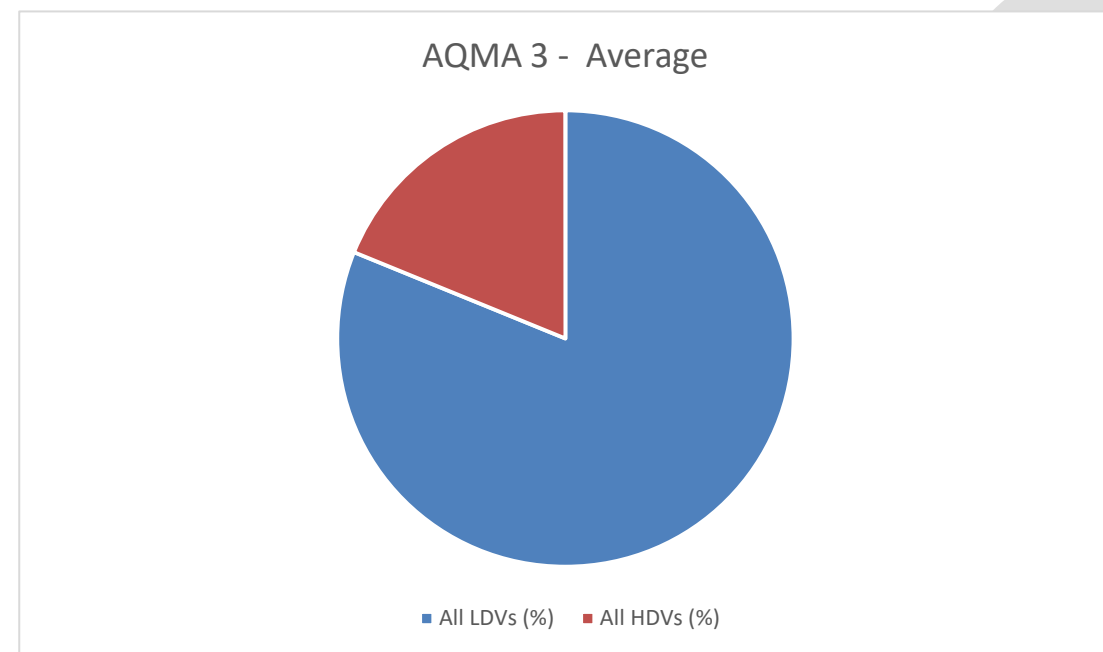


Table C.3 AQMA 4 – Birkenshaw Source Apportionment

Source Name	All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Diesel Cars (%)	Petrol LGVs (%)	Diesel LGVs (%)	Rigid HGVs (%)	Artic HGVs (%)	Buses/Coaches (%)	Hybrid Buses (%)	Motorcycles (%)	Full Hybrid Petrol Cars (%)	Plug-In Hybrid Petrol Cars (%)	Full Hybrid Diesel Cars (%)
AQMA 4 - M62 East	71.2%	28.8%	2.6%	38.1%	0.1%	30.0%	11.1%	16.1%	1.6%	0.0%	0.2%	0.1%	0.0%	0.1%
AQMA 4 - M62 West	71.2%	28.8%	2.6%	38.1%	0.1%	30.0%	11.1%	16.1%	1.6%	0.0%	0.2%	0.1%	0.0%	0.1%
AQMA 4 B-Bradford Road North	73.6%	26.4%	6.1%	39.7%	0.1%	27.2%	9.5%	2.2%	14.6%	0.1%	0.3%	0.1%	0.0%	0.1%
AQMA 4 B-Bradford Road South	76.2%	23.8%	6.3%	41.1%	0.1%	28.2%	8.6%	2.0%	13.1%	0.1%	0.3%	0.1%	0.0%	0.1%
AQMA 4 - Whitehall Road East	73.6%	26.4%	6.1%	39.7%	0.1%	27.2%	9.5%	2.2%	14.6%	0.1%	0.3%	0.1%	0.0%	0.1%
AQMA 4 -Whitehall Road West	62.4%	37.6%	5.2%	33.7%	0.1%	23.1%	13.5%	3.2%	20.7%	0.1%	0.2%	0.1%	0.0%	0.1%
AQMA 4 - Average	71%	29%	5%	38%	0%	28%	11%	7%	11%	0%	0%	0.1%	0.0%	0.1%

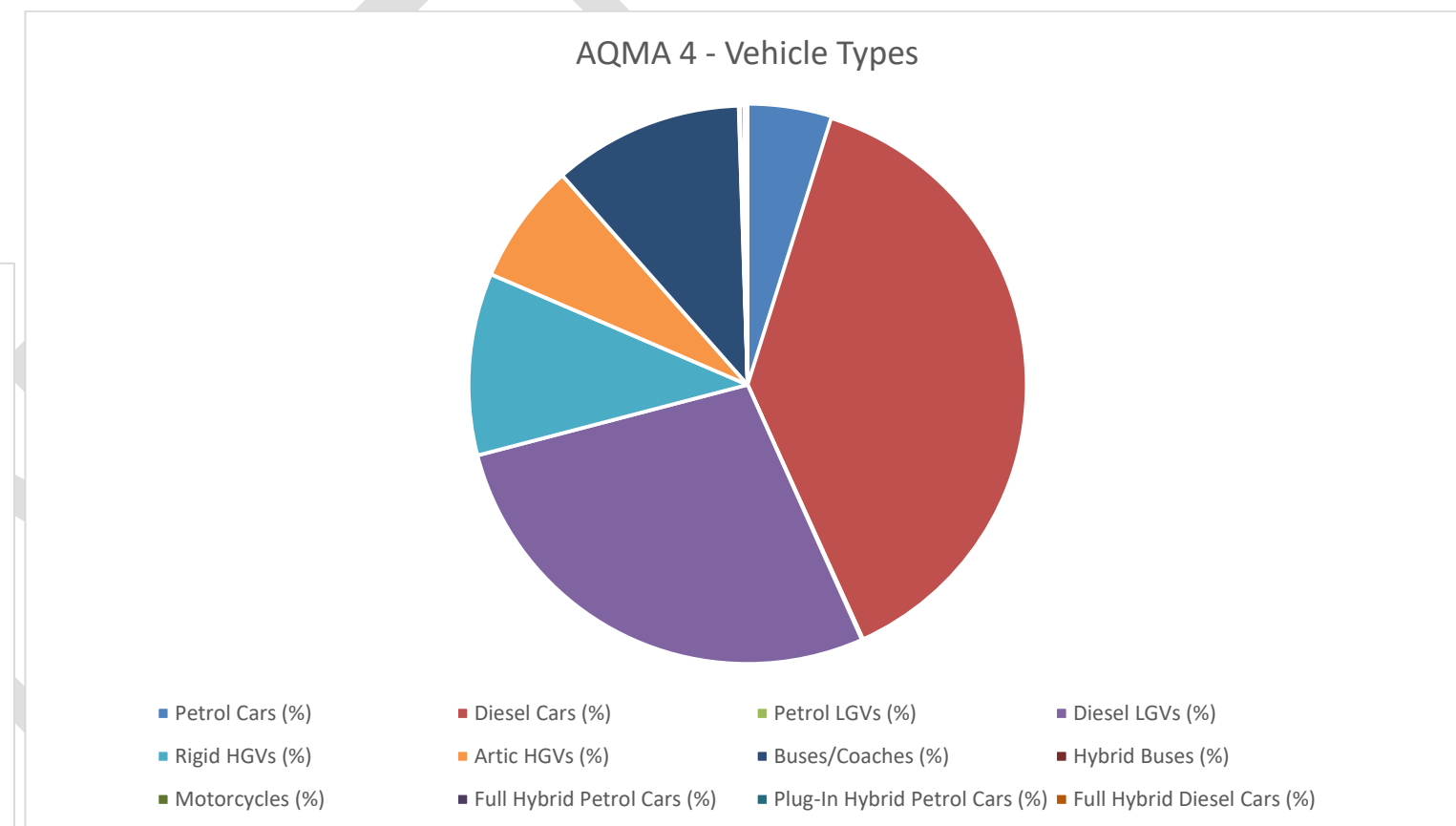
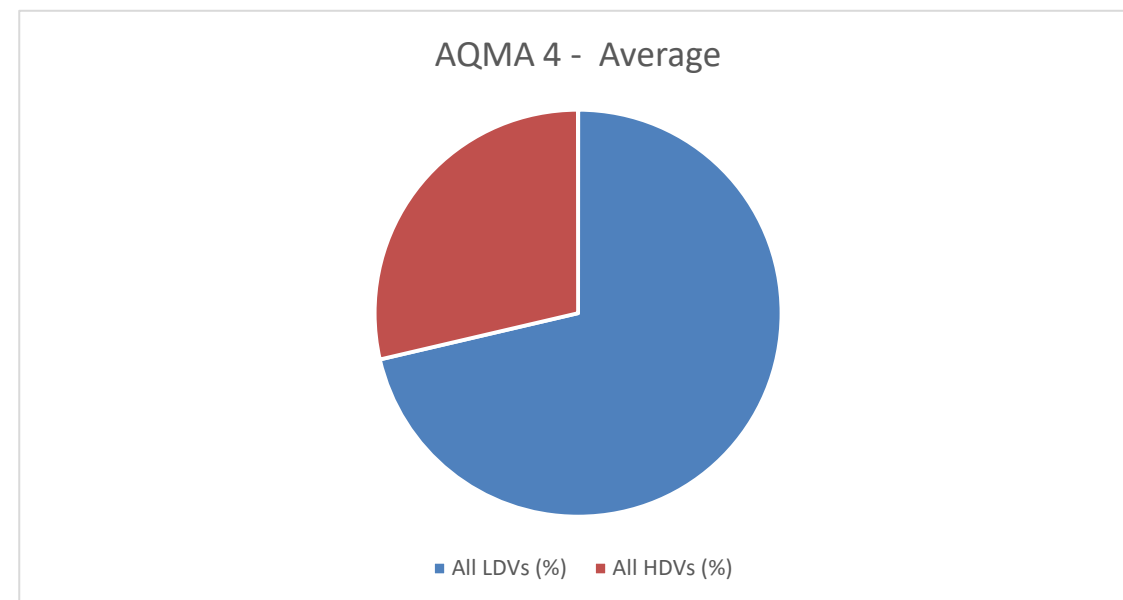


Table C.4 AQMA 5 – Eastborough Source Apportionment

Source Name	All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Diesel Cars (%)	Petrol LGVs (%)	Diesel LGVs (%)	Rigid HGVs (%)	Artic HGVs (%)	Buses/Coaches (%)	Hybrid Buses (%)	Motorcycles (%)	Full Hybrid Petrol Cars (%)	Plug-In Hybrid Petrol Cars (%)	Full Hybrid Diesel Cars (%)
AQMA 5 - Leeds Road	40.2%	59.8%	3.3%	21.5%	0.0%	15.1%	21.6%	5.0%	33.0%	0.2%	0.2%	0.0%	0.0%	0.1%
AQMA 5 - Wakefield Road	44.6%	55.4%	3.7%	23.8%	0.0%	16.8%	20.0%	4.6%	30.5%	0.2%	0.2%	0.0%	0.0%	0.1%
AQMA 5 - Ring Road	44.6%	55.4%	3.7%	23.8%	0.0%	16.8%	20.0%	4.6%	30.5%	0.2%	0.2%	0.0%	0.0%	0.1%
AQMA 5 - Average	43%	57%	4%	23%	0%	16%	21%	5%	31%	0%	0%	0.0%	0.0%	0.1%

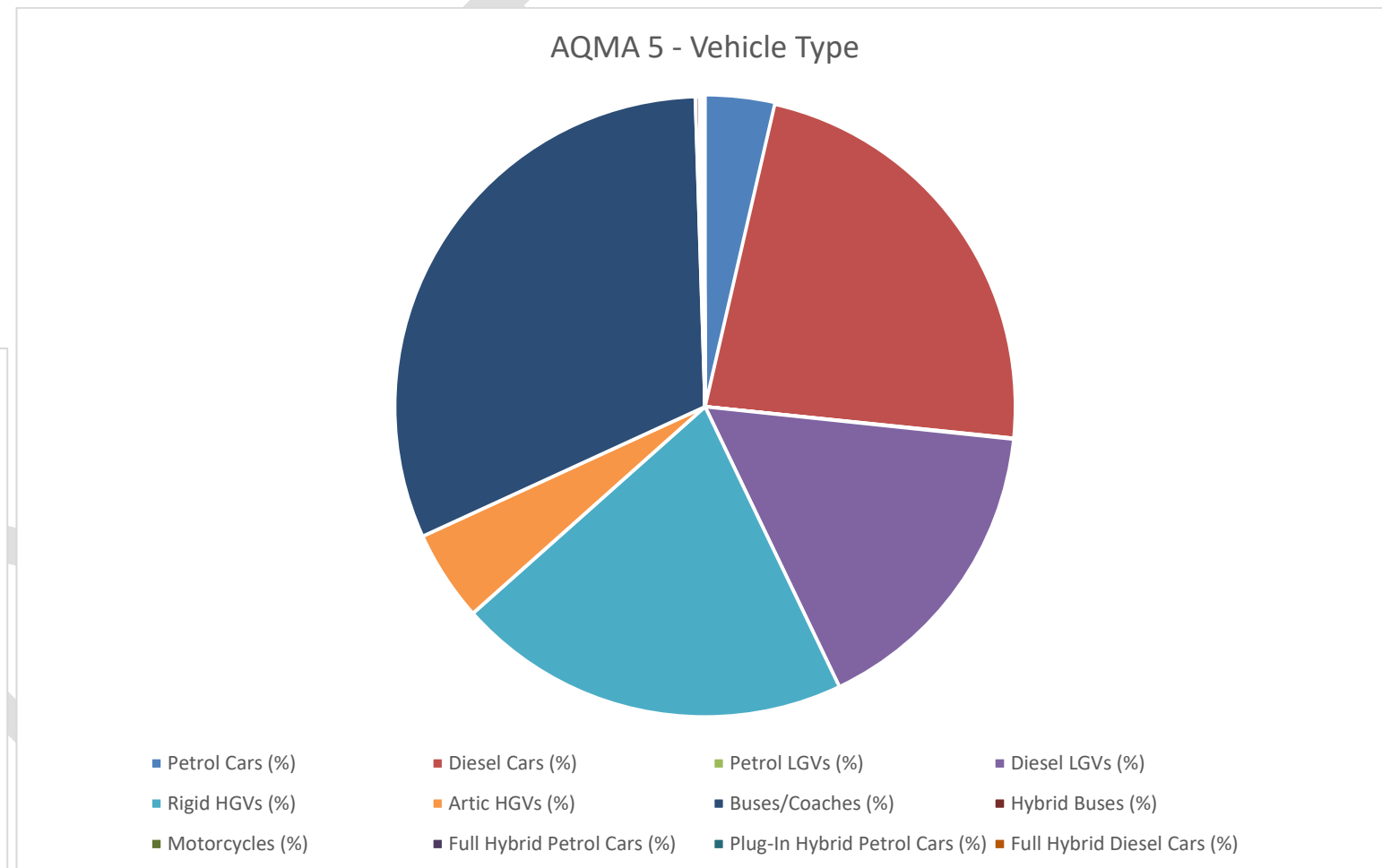
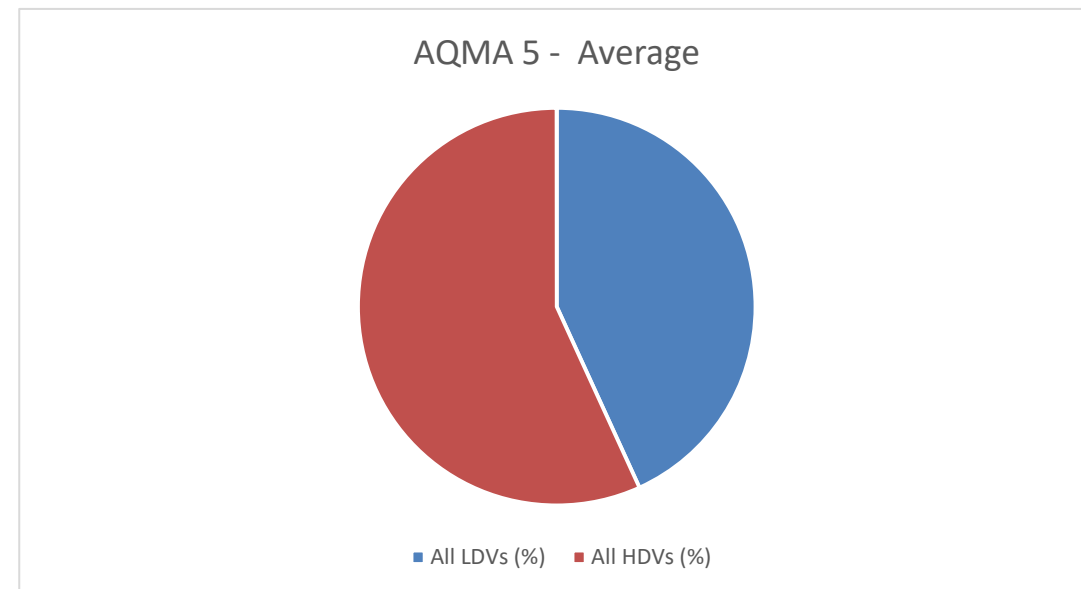


Table C.5 AQMA 6 – Eastborough Source Apportionment

Source Name	All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Diesel Cars (%)	Petrol LGVs (%)	Diesel LGVs (%)	Rigid HGVs (%)	Artic HGVs (%)	Buses/Coaches (%)	Hybrid Buses (%)	Motorcycles (%)	Full Hybrid Petrol Cars (%)	Plug-In Hybrid Petrol Cars (%)	Full Hybrid Diesel Cars (%)
AQMA 6 - Halifax Road	71.2%	28.8%	5.9%	38.0%	0.1%	26.7%	10.4%	2.4%	15.9%	0.1%	0.3%	0.1%	-	0.1%
AQMA 6 - Blacker Road	84.5%	15.5%	7.0%	46.3%	0.1%	30.5%	5.6%	1.4%	8.6%	0.1%	0.3%	0.1%	-	0.1%
AQMA 6 - Edgerton Grove Road	89.3%	10.7%	7.4%	49.0%	0.1%	32.3%	3.8%	0.9%	5.9%	-	0.3%	0.1%	-	0.1%
AQMA 6 - Average	82%	18%	7%	44%	0%	30%	7%	2%	10%	0%	0%	0.1%	0.0%	0.1%

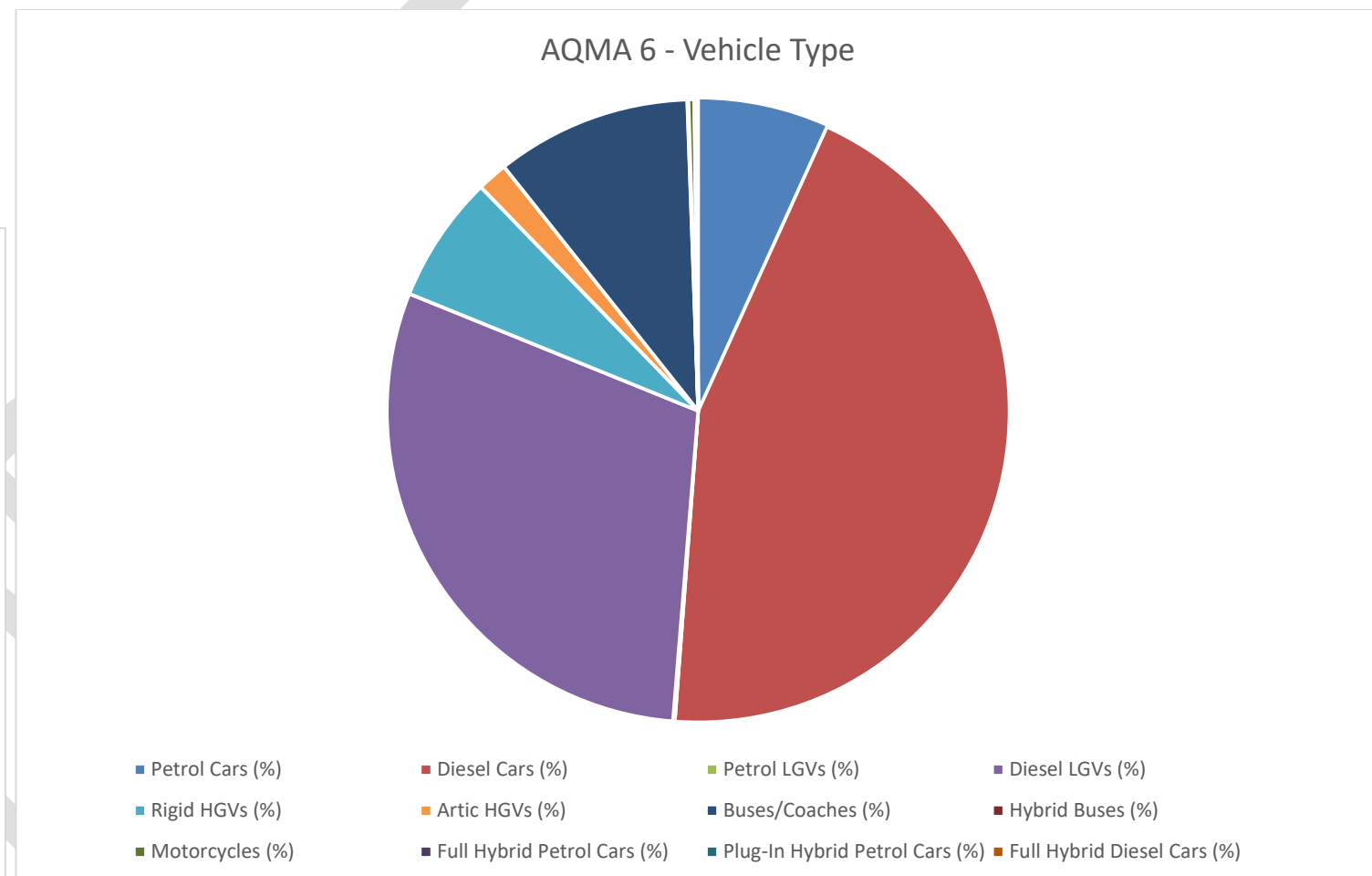
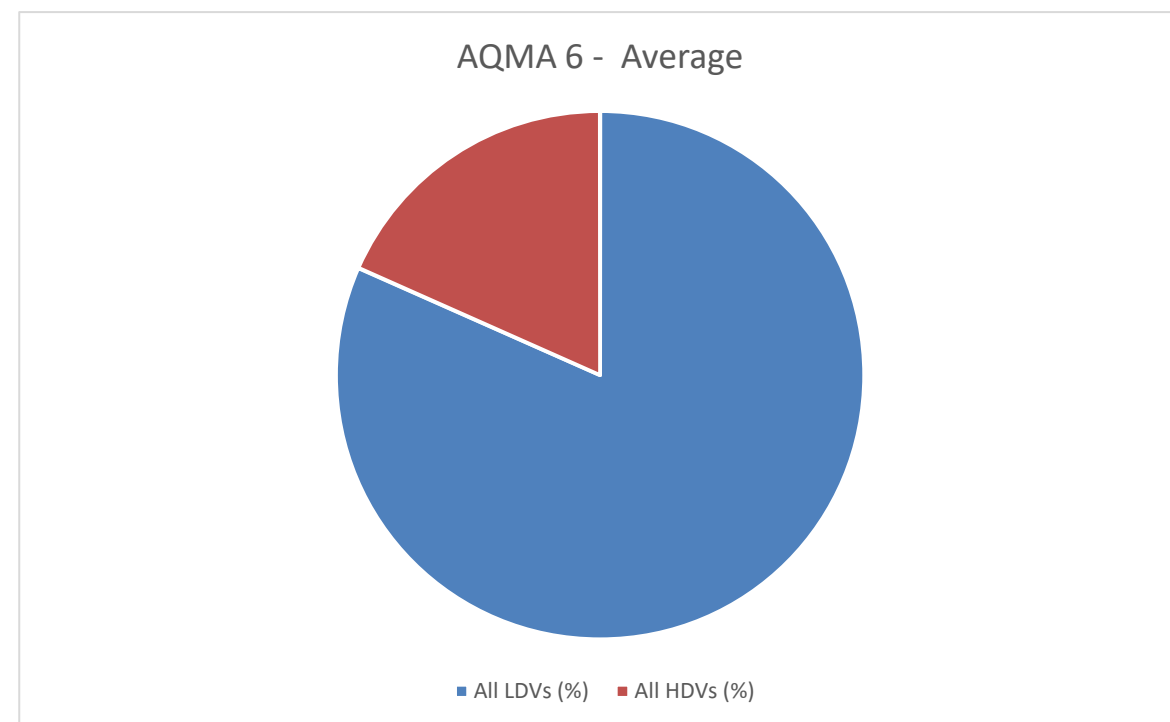


Table C.6 AQMA 7 – Liversedge / Heckmondwike Source Apportionment

Source Name	All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Diesel Cars (%)	Petrol LGVs (%)	Diesel LGVs (%)	Rigid HGVs (%)	Artic HGVs (%)	Buses/Coaches (%)	Hybrid Buses (%)	Motorcycles (%)	Full Hybrid Petrol Cars (%)	Plug-In Hybrid Petrol Cars (%)	Full Hybrid Diesel Cars (%)
AQMA 7 - Leeds Road	88.0%	12.0%	7.3%	47.0%	0.1%	33.1%	4.3%	1.0%	6.6%	-	0.4%	0.1%	-	0.1%
AQMA 7 - Wakefield Road	90.4%	9.6%	7.5%	49.6%	0.1%	32.7%	3.5%	0.8%	5.3%	-	0.3%	0.1%	-	0.1%
AQMA 7 - Bradford Road	76.7%	23.3%	6.4%	40.9%	0.1%	28.8%	8.4%	1.9%	12.9%	0.1%	0.3%	0.1%	-	0.1%
AQMA 7 - Halifax Road	78.8%	21.2%	6.6%	42.0%	0.1%	29.6%	7.7%	1.8%	11.7%	0.1%	0.3%	0.1%	-	0.1%
AQMA 7 - Average	83%	17%	7%	45%	0%	31%	6%	1%	9%	0%	0%	0.1%	0.0%	0.1%

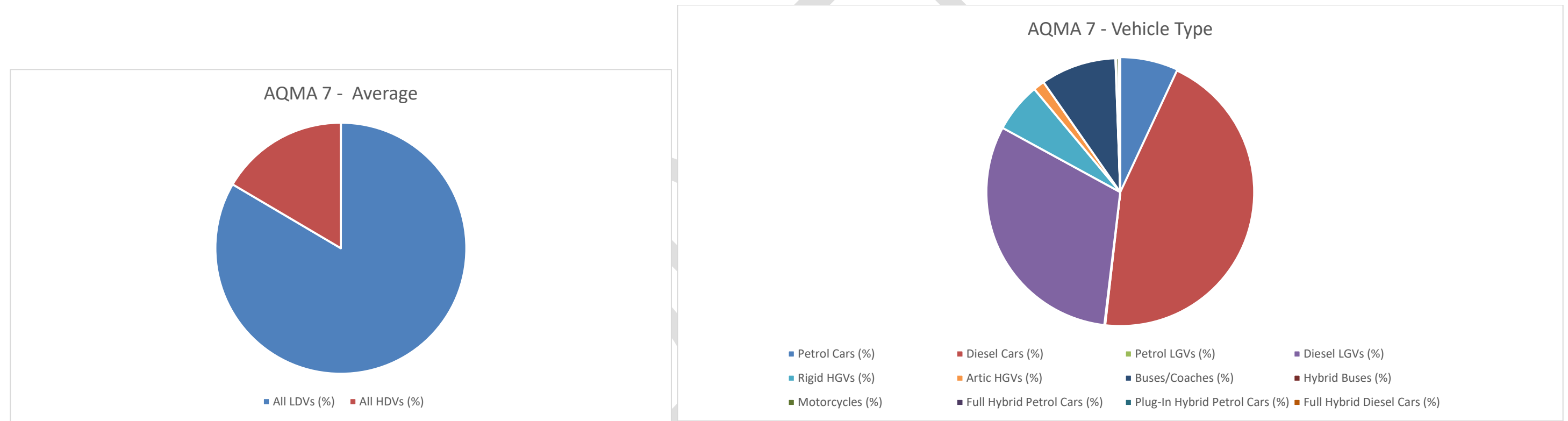


Table C.7 AQMA 8 – Outlane Source Apportionment

Source Name	All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Diesel Cars (%)	Petrol LGVs (%)	Diesel LGVs (%)	Rigid HGVs (%)	Artic HGVs (%)	Buses/Coaches (%)	Hybrid Buses (%)	Motorcycles (%)	Full Hybrid Petrol Cars (%)	Plug-In Hybrid Petrol Cars (%)	Full Hybrid Diesel Cars (%)
AQMA 8 - M62 East	74.4%	25.6%	2.7%	39.7%	0.1%	31.5%	9.9%	14.4%	1.4%	-	0.2%	0.1%	-	0.1%
AQMA 8 - M62 West	74.4%	25.6%	2.7%	39.7%	0.1%	31.5%	9.9%	14.4%	1.4%	-	0.2%	0.1%	-	0.1%
AQMA 8 -Round Ings Road	87.4%	12.6%	7.3%	46.0%	0.1%	33.4%	4.6%	1.0%	6.9%	-	0.4%	0.1%	-	0.1%
AQMA 8 - Average	79%	21%	4%	42%	0%	32%	8%	10%	3%	0%	0%	0.1%	0.0%	0.1%

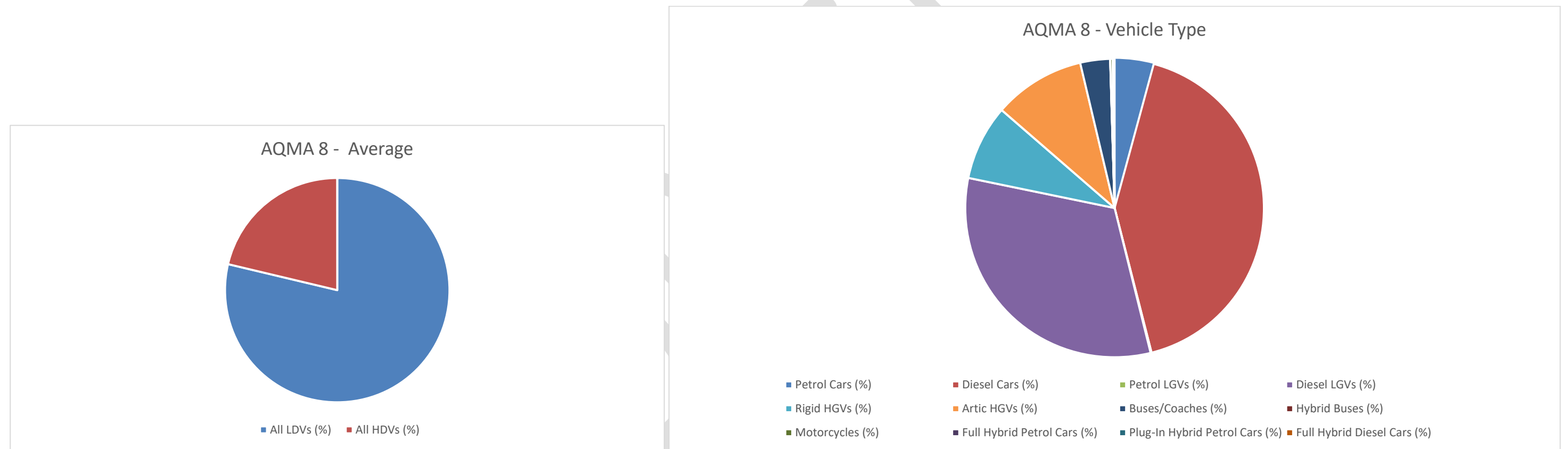


Table C.8 AQMA 9 – Huddersfield Town Centre Source Apportionment

Source Name	All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Diesel Cars (%)	Petrol LGVs (%)	Diesel LGVs (%)	Rigid HGVs (%)	Artic HGVs (%)	Buses/Coaches (%)	Hybrid Buses (%)	Motorcycles (%)	Full Hybrid Petrol Cars (%)	Plug-In Hybrid Petrol Cars (%)	Full Hybrid Diesel Cars (%)
Wakefield Rd EB 1	91.9%	8.1%	7.6%	48.6%	0.1%	34.9%	2.9%	0.7%	4.5%	0.0%	0.4%	0.1%	0.0%	0.1%
Wakefield Rd WB 1	91.9%	8.1%	7.6%	48.6%	0.1%	34.9%	2.9%	0.7%	4.5%	0.0%	0.4%	0.1%	0.0%	0.1%
St Andrews Rd	79.4%	20.6%	6.6%	42.2%	0.1%	29.9%	7.4%	1.7%	11.4%	0.1%	0.3%	0.1%	0.0%	0.1%
Firth St	82.1%	17.9%	6.8%	43.7%	0.1%	30.9%	6.5%	1.5%	9.9%	0.1%	0.3%	0.1%	0.0%	0.1%
Queensgate EB 1	89.5%	10.5%	7.5%	47.6%	0.1%	33.7%	3.8%	0.9%	5.8%	0.0%	0.4%	0.1%	0.0%	0.1%
Queensgate WB 1	89.5%	10.5%	7.5%	47.6%	0.1%	33.7%	3.8%	0.9%	5.8%	0.0%	0.4%	0.1%	0.0%	0.1%
Southgate SB1	89.1%	10.9%	7.4%	47.3%	0.1%	33.7%	3.9%	0.9%	6.0%	0.0%	0.4%	0.1%	0.0%	0.1%
Southgate NB1	89.1%	10.9%	7.4%	47.3%	0.1%	33.7%	3.9%	0.9%	6.0%	0.0%	0.4%	0.1%	0.0%	0.1%
Kingsgate Roundabout	87.9%	12.1%	7.2%	48.9%	0.1%	31.2%	4.3%	1.1%	6.7%	0.0%	0.3%	0.1%	0.0%	0.1%
Kirkgate	10.3%	89.7%	0.9%	5.5%	0.0%	3.8%	32.3%	7.6%	49.5%	0.3%	0.0%	0.0%	0.0%	0.0%
Leeds Rd WB	76.5%	23.5%	6.4%	40.5%	0.1%	29.0%	8.5%	1.9%	13.0%	0.1%	0.3%	0.1%	0.0%	0.1%
Leeds Rd EB	76.5%	23.5%	6.4%	40.5%	0.1%	29.0%	8.5%	1.9%	13.0%	0.1%	0.3%	0.1%	0.0%	0.1%
Northumberland St	90.8%	9.2%	7.6%	48.0%	0.1%	34.5%	3.3%	0.8%	5.1%	0.0%	0.4%	0.1%	0.0%	0.1%
Castle/Southgate SB	79.2%	20.8%	6.6%	42.0%	0.1%	30.0%	7.5%	1.7%	11.5%	0.1%	0.3%	0.1%	0.0%	0.1%
Castle/Southgate NB	79.2%	20.8%	6.6%	42.0%	0.1%	30.0%	7.5%	1.7%	11.5%	0.1%	0.3%	0.1%	0.0%	0.1%
Lower Fitzwilliam St	89.4%	10.6%	7.4%	48.3%	0.1%	32.9%	3.8%	0.9%	5.9%	0.0%	0.3%	0.1%	0.0%	0.1%
Castlegate EB	88.6%	11.4%	7.4%	47.0%	0.1%	33.5%	4.1%	0.9%	6.3%	0.0%	0.4%	0.1%	0.0%	0.1%
Castlegate WB	88.6%	11.4%	7.4%	47.0%	0.1%	33.5%	4.1%	0.9%	6.3%	0.0%	0.4%	0.1%	0.0%	0.1%
John William St 1	89.4%	10.6%	7.4%	48.3%	0.1%	32.9%	3.8%	0.9%	5.9%	0.0%	0.3%	0.1%	0.0%	0.1%
Castlegate NB 1	82.0%	18.0%	6.8%	43.4%	0.1%	31.1%	6.5%	1.5%	9.9%	0.1%	0.3%	0.1%	0.0%	0.1%
Castlegate SB 1	82.0%	18.0%	6.8%	43.4%	0.1%	31.1%	6.5%	1.5%	9.9%	0.1%	0.3%	0.1%	0.0%	0.1%
Fitzwilliam St	92.3%	7.7%	7.7%	49.9%	0.1%	34.0%	2.8%	0.7%	4.2%	0.0%	0.3%	0.1%	0.0%	0.1%
Castlegate Slip	88.2%	11.8%	7.3%	46.7%	0.1%	33.5%	4.3%	1.0%	6.5%	0.0%	0.4%	0.1%	0.0%	0.1%
New North Rd Slip	89.7%	10.3%	7.5%	47.5%	0.1%	34.1%	3.7%	0.8%	5.7%	0.0%	0.4%	0.1%	0.0%	0.1%
New North Rd	90.3%	9.7%	7.5%	47.8%	0.1%	34.3%	3.5%	0.8%	5.4%	0.0%	0.4%	0.1%	0.0%	0.1%
Westgate 1	26.6%	73.4%	2.2%	14.1%	0.0%	10.0%	26.6%	6.1%	40.5%	0.3%	0.1%	0.0%	0.0%	0.0%
Railway St	65.6%	34.4%	5.5%	35.5%	0.1%	24.2%	12.4%	2.9%	19.0%	0.1%	0.2%	0.1%	0.0%	0.1%
Trinity St	80.5%	19.5%	6.7%	43.5%	0.1%	29.7%	7.0%	1.7%	10.7%	0.1%	0.3%	0.1%	0.0%	0.1%
Market St 1	41.0%	59.0%	3.4%	22.2%	0.0%	15.1%	21.2%	5.0%	32.5%	0.2%	0.2%	0.0%	0.0%	0.1%
Dundas St	96.7%	3.3%	8.0%	52.3%	0.1%	35.6%	1.2%	0.3%	1.8%	0.0%	0.4%	0.1%	0.0%	0.2%
Bus Station Route	-	100.0%	-	-	-	-	35.3%	9.1%	55.2%	0.4%	-	-	-	-

Source Name	All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Diesel Cars (%)	Petrol LGVs (%)	Diesel LGVs (%)	Rigid HGVs (%)	Artic HGVs (%)	Buses/Coaches (%)	Hybrid Buses (%)	Motorcycles (%)	Full Hybrid Petrol Cars (%)	Plug-In Hybrid Petrol Cars (%)	Full Hybrid Diesel Cars (%)
Manchester Rd NB	70.5%	29.5%	5.8%	39.2%	0.1%	25.0%	10.5%	2.6%	16.3%	0.1%	0.2%	0.1%	0.0%	0.1%
Manchester Rd SB	70.5%	29.5%	5.8%	39.2%	0.1%	25.0%	10.5%	2.6%	16.3%	0.1%	0.2%	0.1%	0.0%	0.1%
Chapel Hill	77.1%	22.9%	6.4%	42.9%	0.1%	27.3%	8.1%	2.0%	12.6%	0.1%	0.2%	0.1%	0.0%	0.1%
Bradford RD NB 1	94.1%	5.9%	7.8%	49.8%	0.1%	35.7%	2.1%	0.5%	3.3%	0.0%	0.4%	0.1%	0.0%	0.1%
Bradford RD SB	88.7%	11.3%	7.4%	46.9%	0.1%	33.7%	4.1%	0.9%	6.2%	0.0%	0.4%	0.1%	0.0%	0.1%
AQMA 9 - Average	79.8%	20.2%	6.6%	42.7%	0.1%	29.9%	7.3%	1.7%	11.1%	0.1%	0.3%	0.1%	0.0%	0.1%

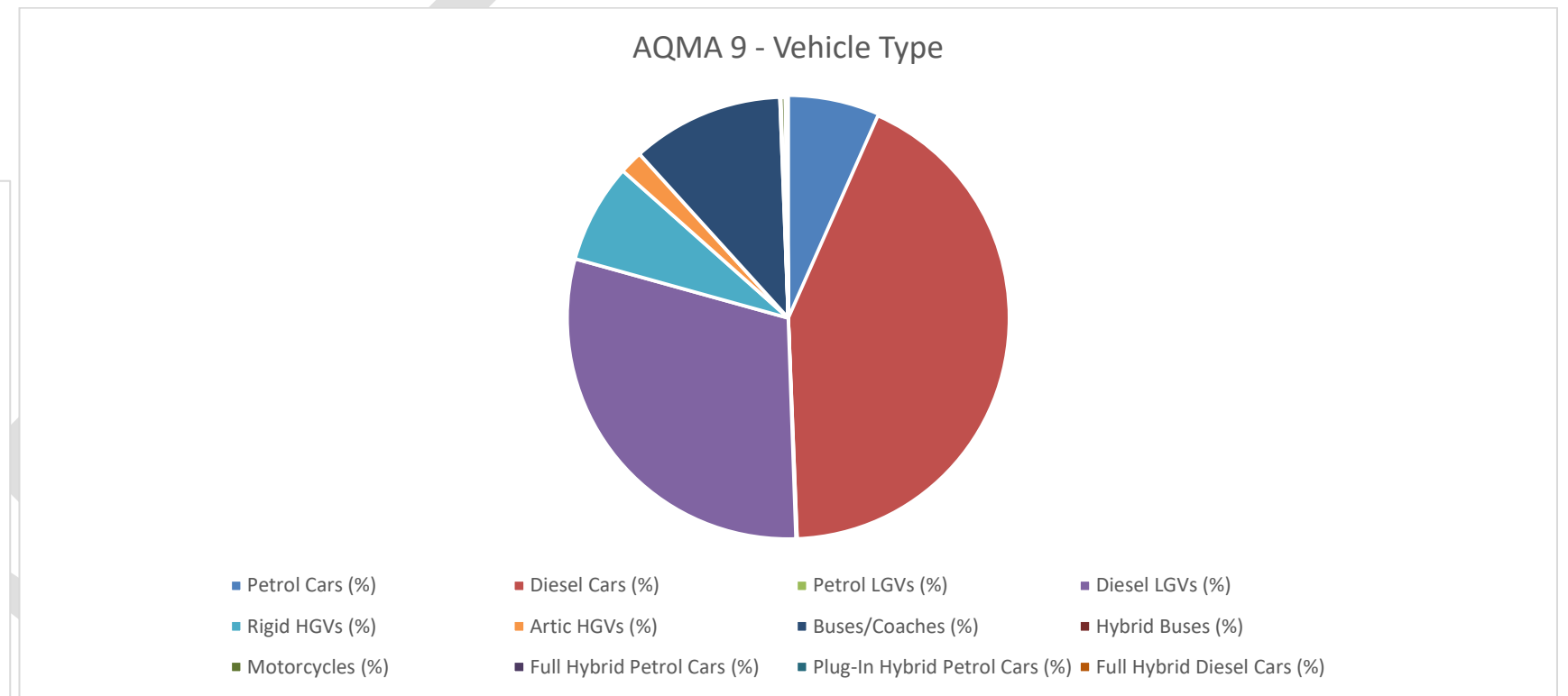
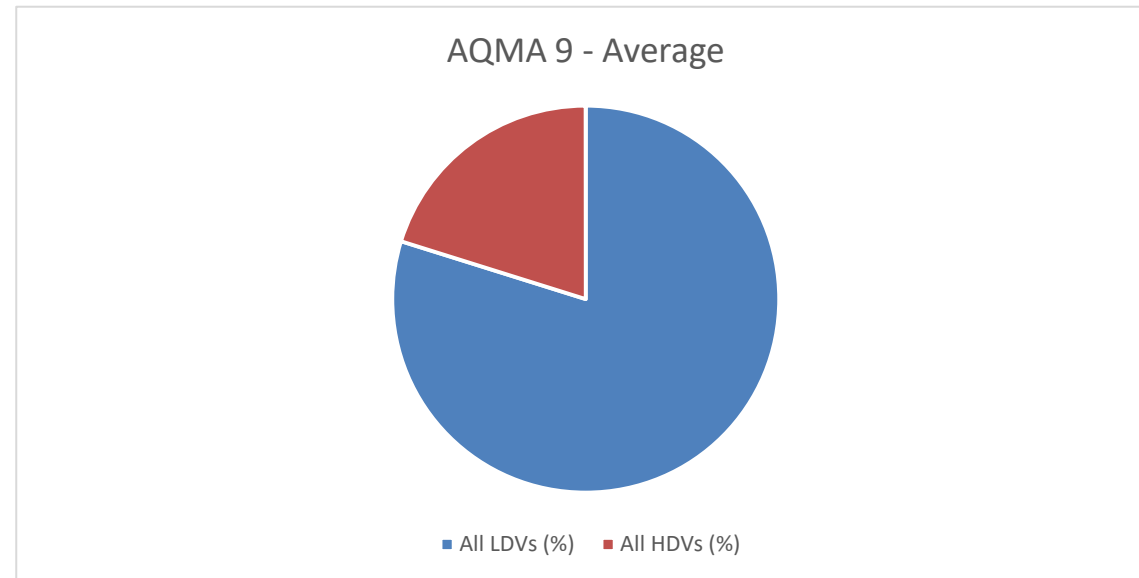


Table C.9 AQMA Emissions Contributions

Source Name	Pollutant Name	All Vehicles (g/km/s)	All LDVs (g/km/s)	All HDVs (g/km/s)
AQMA 1 Leeds Road	NOx	1.14302	0.71624	0.42677
AQMA 1 Bradley Road	NOx	0.03514	0.02820	0.00695
AQMA 1 B6118	NOx	0.00265	0.00246	0.00019
AQMA 1 A62	NOx	0.15341	0.10224	0.05117
AQMA 1 A644	NOx	0.12321	0.06788	0.05533
AQMA 3 - M62 East	NOx	0.31961	0.24195	0.07766
AQMA 3 - M62 West	NOx	0.29122	0.20928	0.08194
AQMA 3 - M62 East Slip	NOx	0.02684	0.01863	0.00821
AQMA 3 - West Slip Road	NOx	0.06672	0.05874	0.00798
AQMA 3 - Halifax Road South	NOx	0.05382	0.03753	0.01629

Source Name	Pollutant Name	All Vehicles (g/km/s)	All LDVs (g/km/s)	All HDVs (g/km/s)
AQMA 3 - Halifax Road North	NOx	0.05382	0.03753	0.01629
AQMA 3 - Lindley Moor Road East	NOx	0.02445	0.02214	0.00231
AQMA 3 - Lindley Moor Road West	NOx	0.02445	0.02213	0.00231
AQMA 3 - Brighouse Road East	NOx	0.02153	0.02004	0.00149
AQMA 3 - Brighouse Road West	NOx	0.02153	0.02004	0.00149
AQMA 4 - M62 East	NOx	0.31392	0.22348	0.09044
AQMA 4 - M62 West	NOx	0.31392	0.22348	0.09044
AQMA 4 B-Bradford Road North	NOx	0.10036	0.07382	0.02654
AQMA 4 B-Bradford Road South	NOx	0.11198	0.08532	0.02665
AQMA 4 - Whitehall Road East	NOx	0.10036	0.07382	0.02654
AQMA 4 -Whitehall Road West	NOx	0.11889	0.07424	0.04465
AQMA 5 - Leeds Road	NOx	0.14380	0.05783	0.08597
AQMA 5 - Wakefield Road	NOx	0.21450	0.09575	0.11875
AQMA 5 - Ring Road	NOx	0.21450	0.09575	0.11875
AQMA 6 - Halifax Road	NOx	0.92131	0.65562	0.26569
AQMA 6 - Blacker Road	NOx	0.05157	0.04356	0.00802
AQMA 6 - Edgerton Grove Road	NOx	0.03659	0.03268	0.00391
AQMA 7 - Leeds Road	NOx	0.21516	0.18941	0.02575
AQMA 7 - Wakefield Road	NOx	0.08435	0.07621	0.00814
AQMA 7 - Bradford Road	NOx	0.18724	0.14353	0.04371
AQMA 7 - Halifax Road	NOx	0.12274	0.09670	0.02604
AQMA 8 - M62 East	NOx	0.97387	0.72410	0.24977
AQMA 8 - M62 West	NOx	0.97387	0.72410	0.24977
AQMA 8 -Round Ings Road	NOx	0.03300	0.02885	0.00414
AQMA 9 Wakefield Rd EB 1	NOx	0.08627	0.07925	0.00702
AQMA 9 Wakefield Rd WB 1	NOx	0.08627	0.07925	0.00702
AQMA 9 St Andrews Rd	NOx	0.08109	0.06440	0.01669
AQMA 9 Firth St	NOx	0.09267	0.07608	0.01659
AQMA 9 Wakefield Rd EB 2	NOx	0.08765	0.08036	0.00729
AQMA 9 Wakefield Rd WB 2	NOx	0.08765	0.08036	0.00729
AQMA 9 Queensgate EB 1	NOx	0.07116	0.06371	0.00746
AQMA 9 Queensgate WB 1	NOx	0.07116	0.06371	0.00746
AQMA 9 Southgate SB1	NOx	0.07618	0.06788	0.00830
AQMA 9 Southgate NB1	NOx	0.07618	0.06788	0.00830
AQMA 9 Kingsgate Roundabout	NOx	0.28156	0.24752	0.03404
AQMA 9 Kirkgate	NOx	0.03829	0.00393	0.03436
AQMA 9 Leeds Rd WB	NOx	0.06387	0.04884	0.01503
AQMA 9 Leeds Rd EB	NOx	0.06387	0.04884	0.01503
AQMA 9 Northumberland St	NOx	0.02596	0.02357	0.00239
AQMA 9 Castle/Southgate SB	NOx	0.04457	0.03528	0.00928
AQMA 9 Castle/Southgate NB	NOx	0.04457	0.03528	0.00928
AQMA 9 Lower Fitzwilliam St	NOx	0.03422	0.03059	0.00364
AQMA 9 Castlegate EB	NOx	0.06803	0.06026	0.00776
AQMA 9 Castlegate WB	NOx	0.06803	0.06026	0.00776
AQMA 9 John William St 1	NOx	0.03090	0.02762	0.00328
AQMA 9 Castlegate NB 1	NOx	0.10645	0.08728	0.01917
AQMA 9 Castlegate SB 1	NOx	0.10645	0.08728	0.01917

Source Name	Pollutant Name	All Vehicles (g/km/s)	All LDVs (g/km/s)	All HDVs (g/km/s)
AQMA 9 Fitzwilliam St	NOx	0.01619	0.01495	0.00125
AQMA 9 Castlegate Slip	NOx	0.03650	0.03219	0.00431
AQMA 9 New North Rd Slip	NOx	0.03510	0.03149	0.00360
AQMA 9 New North Rd	NOx	0.03316	0.02993	0.00323
AQMA 9 Castlegate NB 2	NOx	0.10840	0.08850	0.01990
AQMA 9 Castlegate SB 2	NOx	0.10840	0.08850	0.01990
AQMA 9 Westgate 1	NOx	0.05157	0.01370	0.03787
AQMA 9 Westgate 2	NOx	0.06021	0.02640	0.03381
AQMA 9 John William St 2	NOx	0.02790	0.02509	0.00280
AQMA 9 Railway St	NOx	0.03497	0.02292	0.01204
AQMA 9 Trinity St	NOx	0.07667	0.06173	0.01494
AQMA 9 Castlegate SB 3	NOx	0.07664	0.06559	0.01105
AQMA 9 Castlegate NB 3	NOx	0.07664	0.06559	0.01105
AQMA 9 Market St 1	NOx	0.03992	0.01637	0.02354
AQMA 9 Market St 2	NOx	0.03992	0.01637	0.02354
AQMA 9 Dundas St	NOx	0.00919	0.00888	0.00031
AQMA 9 Bus Station Route	NOx	0.07461	-	0.07461
AQMA 9 Manchester Rd NB	NOx	0.02744	0.01934	0.00810
AQMA 9 Manchester Rd SB	NOx	0.02744	0.01934	0.00810
AQMA 9 Chapel Hill	NOx	0.08959	0.06907	0.02051
AQMA 9 Bradford RD NB 1	NOx	0.01367	0.01286	0.00081
AQMA 9 Bradford RD NB 2	NOx	0.01495	0.01407	0.00089
AQMA 9 Bradford RD NB 3	NOx	0.03005	0.02666	0.00340
AQMA 9 Bradford RD SB	NOx	0.03095	0.02745	0.00350

Appendix D – Air Quality Modelling Details

D.1 Ainley Top Detailed Assessment

Kirklees Council has modelled the annual mean NO_x for 2014 in the area around Ainley Top Roundabout. This modelling was conducted to determine the boundaries of the AQMA.

Kirklees Council has used Atmospheric Dispersion Modelling System for Urban areas (ADMS Urban) to create this model and validated it against the 2014 automatic monitoring data.

Meteorological Data for the model has been taken from Huddersfield Civic 3 Weather Station. The weather data for 2004 has been selected as the weather patterns in that year are representative of the usual weather conditions in the district.

The Traffic Figures have been obtained from the Department of Transport for 2013 count points in close proximity to the assessment areas.

Traffic counts and average speeds were entered into the Emission Factor Toolkit 2014

Background figures for the model have been taken from the *2014 based background maps* (DEFRA).

The topography and road layout was obtained from Kirklees Council GIS data and ordinance survey records.

Kirklees conducted a statistical procedure as set out in TG(09) to determine the model uncertainty and performance. Table D.1.1 indicates the results at diffusion tube sites and the results of the statistical analysis are contained within Table D.1.2 and Figure D.1.1.

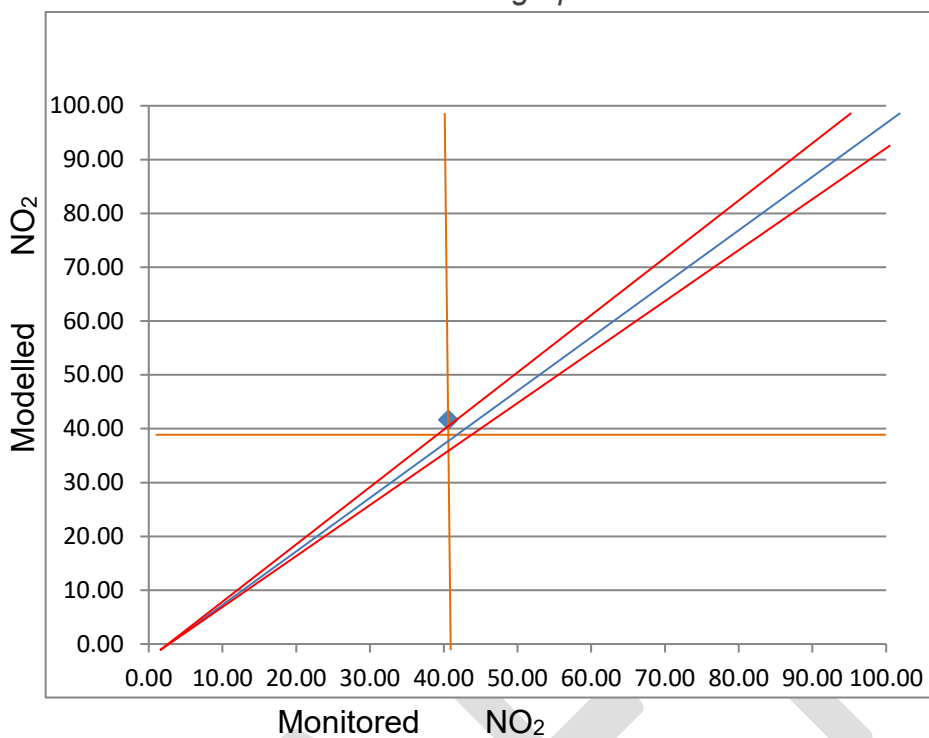
Table D.1.1 Results of Run at diffusion tube sites and statistical analysis of model

	Tube result (µg/m ³)	Modelled increment NO _x (µg/m ³)	Calculated NO ₂ from NO _x (µg/m ³)	% Difference	Correction Factor
Roadside 6	41.70	29.99	40.61	-3	0.97

Table D.1.2 Statistical analysis of the corrected data

Ainley Top Run 2 - 2014	
RMSE	1.09
Fractional Bias	0.03

Figure D.1.1 NO₂ Monitored / Modelled scatter graph

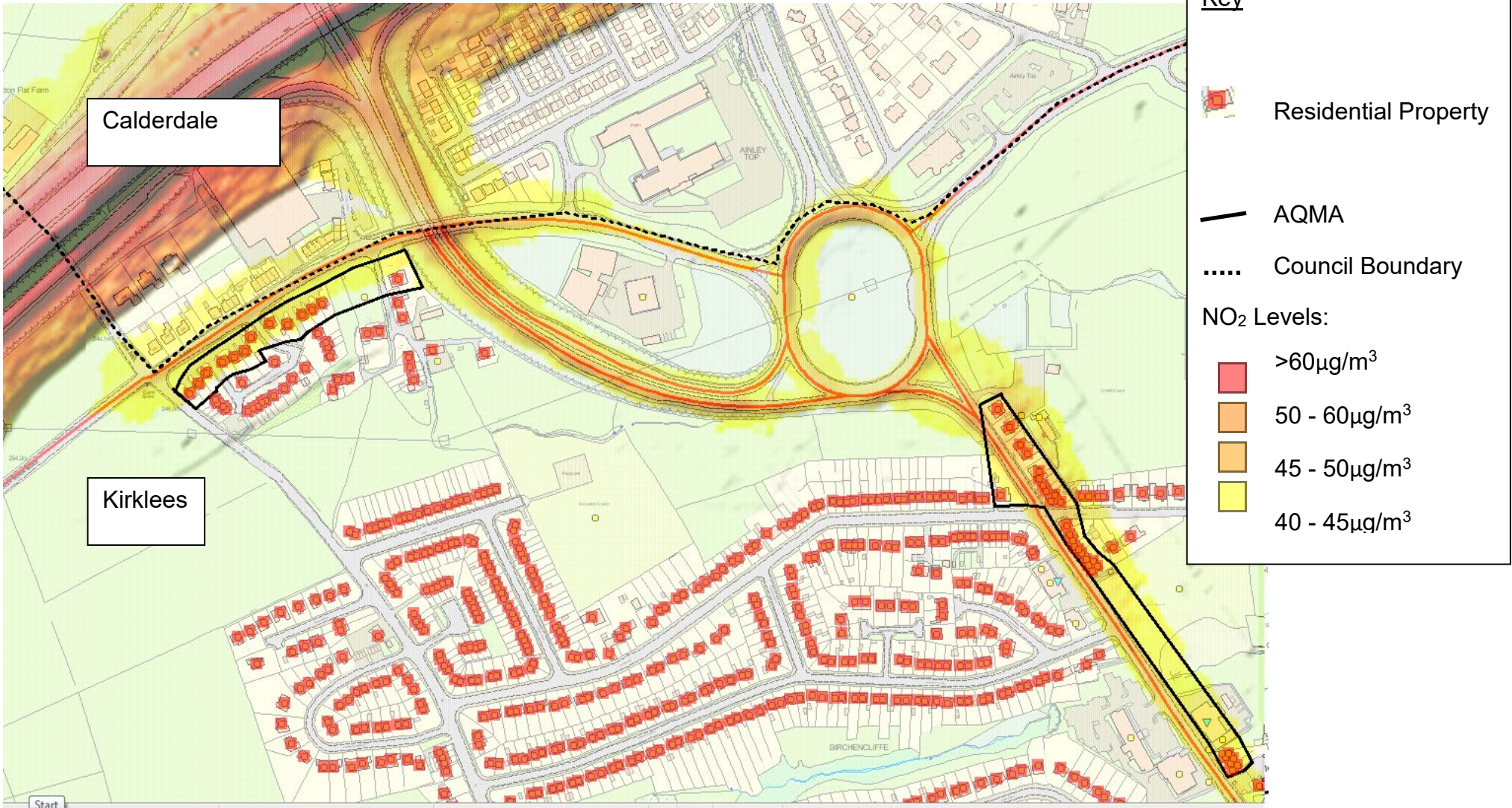


The statistical analysis carried out at the validation stage shows that the model accuracy is good and the fractional bias indicates that the model is only slightly underestimating

Figure D.1.1 graphs the correlation between the monitored and modelled data. It is clear to see that trend line is close to the mid-point and all points fall well within the +/- 5% region

Map D.1 was constructed using the correction factor of 0.97. The yellow and red areas indicate the areas of exceedance and how NO₂ diffuses around the Ainley Top Roundabout assessment area

Map D.1 Ainley Top AQMA



D.2 Birkenshaw Detailed Assessment

Kirklees Council has modelled the annual mean NO_x for 2015 in the area of Birkenshaw. This modelling was conducted to determine the boundaries of the AQMA.

Kirklees Council has used Atmospheric Dispersion Modelling System for Urban areas (ADMS Urban) to create this model and validated it against the 2015 automatic monitoring data.

Meteorological Data for the model has been taken from Huddersfield Civic 3 Weather Station. The weather data for 2004 has been selected as the weather patterns in that year are representative of the usual weather conditions in the district.

The Traffic Figures have been obtained from the Department of Transport for 2015 count points in close proximity to the assessment areas.

Traffic counts and average speeds were entered into the Emission Factor Toolkit 2014

Background figures for the model have been taken from the *2015 based background maps* (DEFRA).

The topography and road layout was obtained from Kirklees Council GIS data and ordinance survey records.

Kirklees conducted a statistical procedure as set out in TG(09) to determine the model uncertainty and performance. Table D.2.1 indicates the results at diffusion tube sites and the results of the statistical analysis are contained within Table D.2.2 and Figure D.2.1.

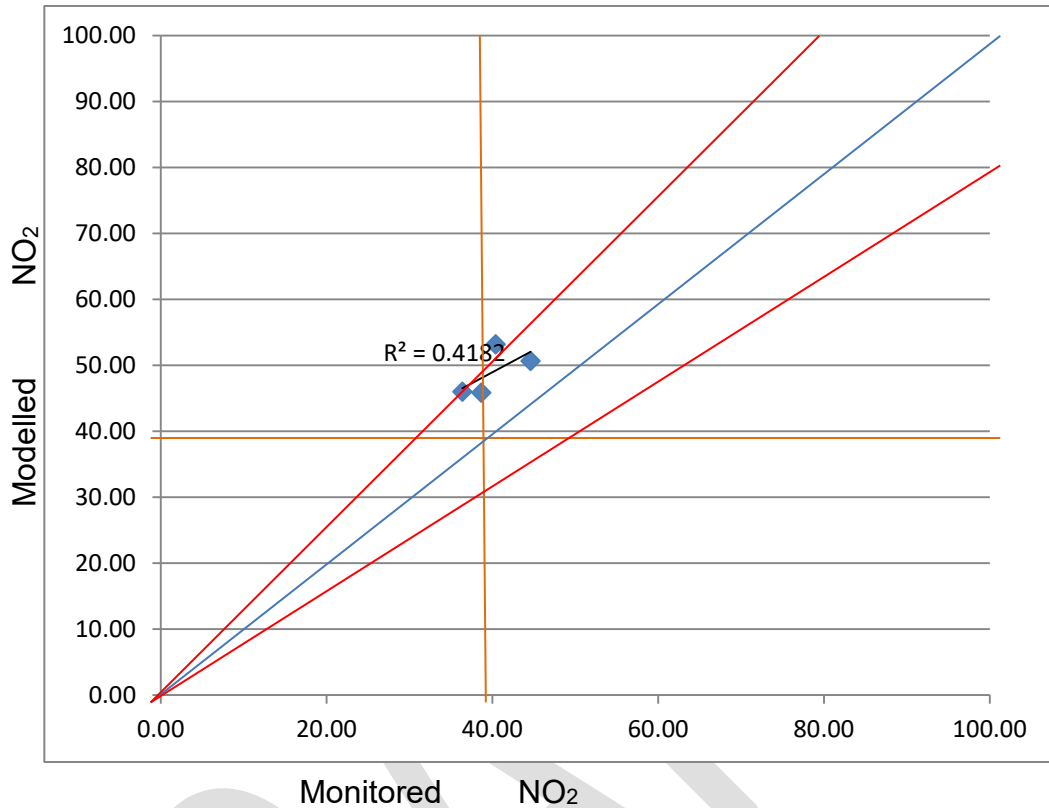
Table D.2.1 Results of Run at diffusion tube sites and statistical analysis of model

	Tube result (µg/m ³)	Modelled increment NO _x (µg/m ³)	Calculated NO ₂ from NO _x (µg/m ³)	% Difference	Correction Factor
RS4	44.60	70.09	50.71	14	0.88
Tube 13	40.38	77.69	53.22	32	0.76
Tube 37	36.36	56.64	46.04	27	0.79
Tube 38	38.66	56.17	45.87	19	0.84

Table D.2.2 Statistical analysis of the corrected data

Birkenshaw Run - 2015	
RMSE	7.05
Fractional Bias	-0.20

Figure D.2.1 NO₂ Monitored / Modelled scatter graph

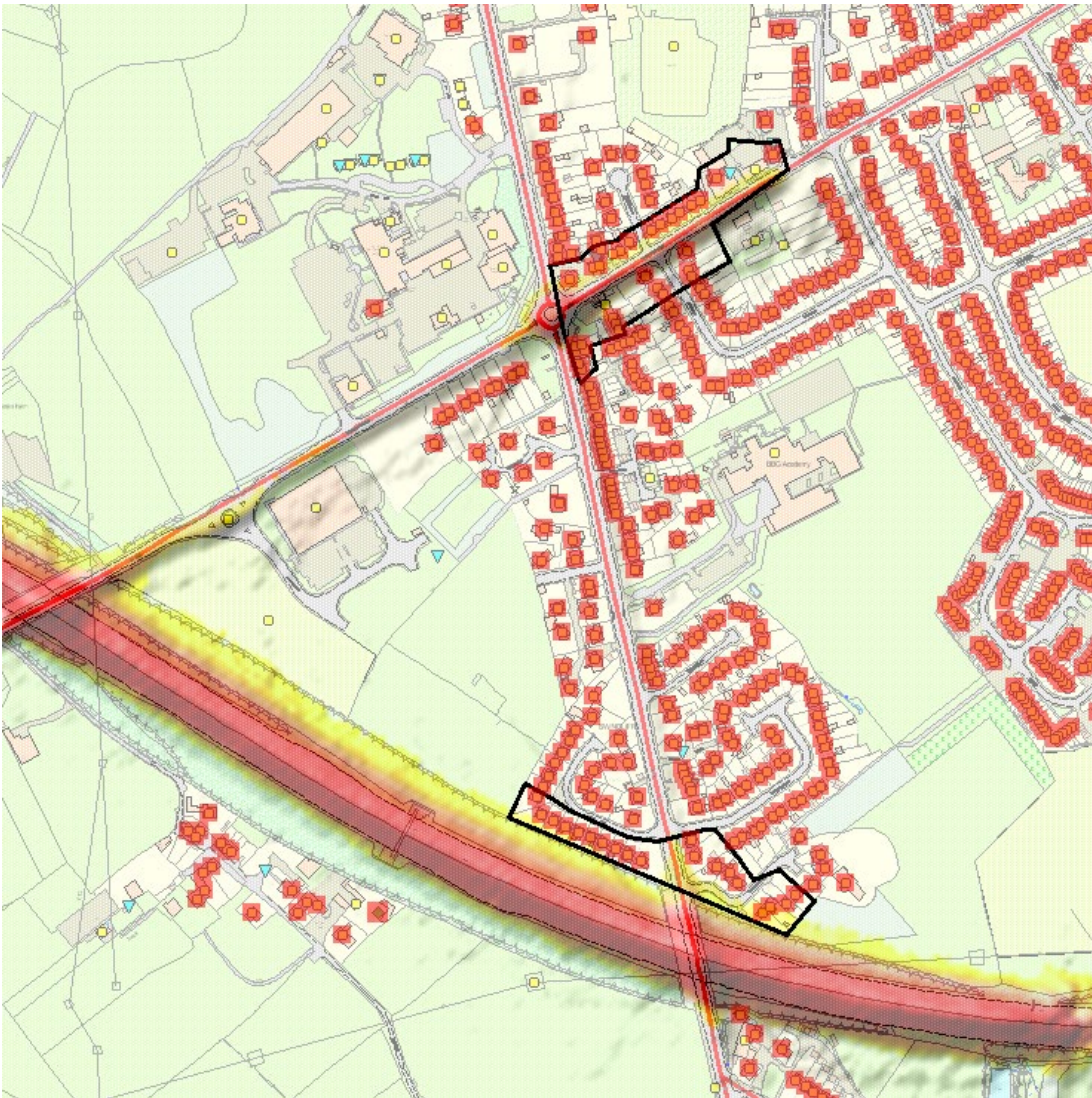


The statistical analysis carried out at the validation stage shows that the model accuracy is average and the fractional bias indicates that the model is over estimating



Figure D.2.1 graphs the correlation between the monitored and modelled data. It is clear to see that trend line falls within the +/- 20% region

Map D.2 was constructed using the correction factor of 0.88. The yellow and red areas indicate the areas of exceedance and how NO₂ diffuses around the Ainley Top Roundabout assessment area





Map D.2 Birkenshaw AQMA



Key

-  Residential Property
-  AQMA

NO₂ Levels:

-  >60µg/m³
-  50 - 60µg/m³
-  45 - 50µg/m³
-  40 - 45µg/m³

D.3 Eastborough Detailed Assessment

Kirklees Council has modelled the annual mean NO_x for 2015 in the area of Eastborough. This modelling was conducted to determine the boundaries of the AQMA.

Kirklees Council has used Atmospheric Dispersion Modelling System for Urban areas (ADMS Urban) to create this model and validated it against the 2015 automatic monitoring data.

Meteorological Data for the model has been taken from Huddersfield Civic 3 Weather Station. The weather data for 2004 has been selected as the weather patterns in that year are representative of the usual weather conditions in the district.

The Traffic Figures have been obtained from the Department of Transport for 2015 count points in close proximity to the assessment areas.

Traffic counts and average speeds were entered into the Emission Factor Toolkit 2014

Background figures for the model have been taken from the *2015 based background maps* (DEFRA).

The topography and road layout was obtained from Kirklees Council GIS data and ordinance survey records.

Kirklees conducted a statistical procedure as set out in TG(09) to determine the model uncertainty and performance. Table D.3.1 indicates the results at diffusion tube sites and the results of the statistical analysis are contained within Table D.3.2 and Figure D.3.1.

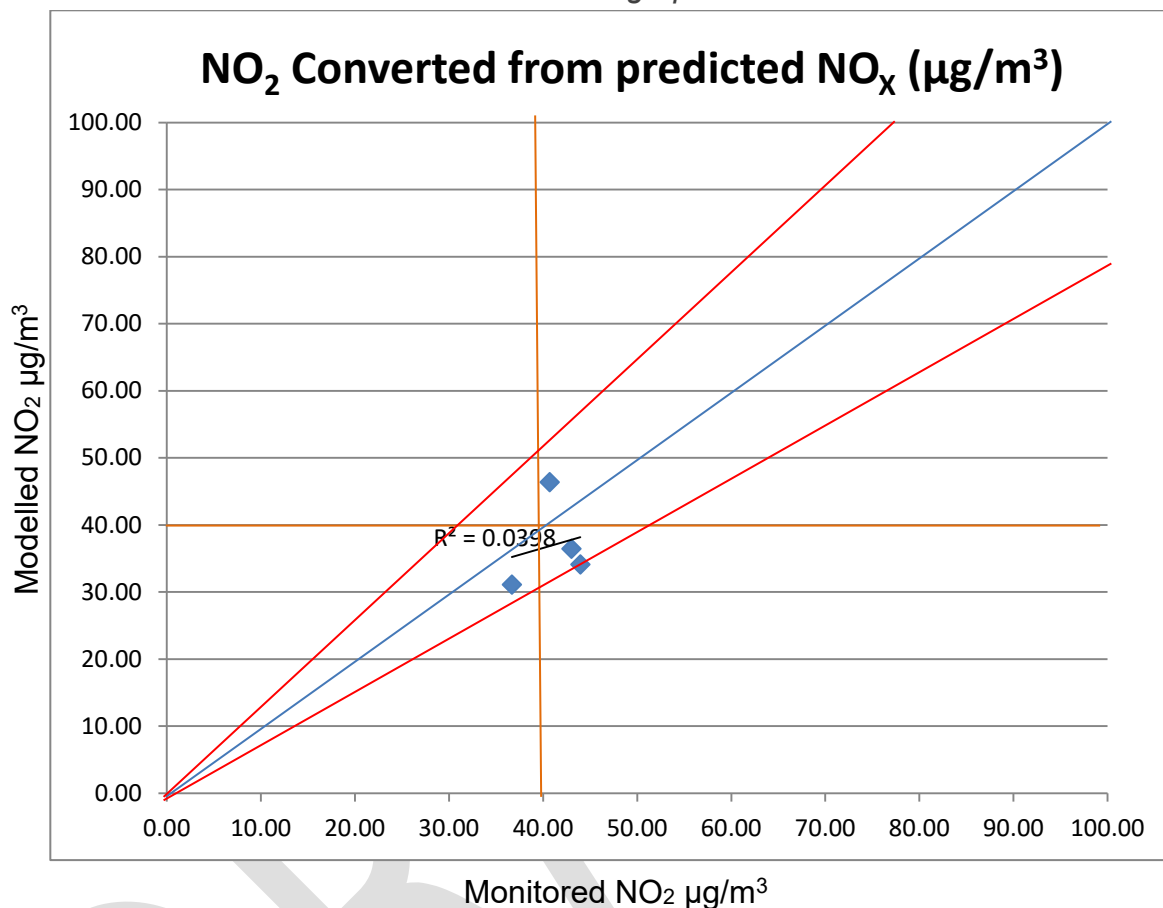
Table D.3.1 Results of Run at diffusion tube sites and statistical analysis of model

	Tube result (µg/m ³)	Modelled increment NO _x (µg/m ³)	Calculated NO ₂ from NO _x (µg/m ³)	% Difference	Correction Factor
Tube 20	40.68	100.15	46.39	14	0.88
Tube 40	60.39	86.89	41.48	-31	1.46
Tube 42	42.99	74.35	36.48	-15	1.18
Tube 43	43.97	68.74	34.12	-22	1.29
Tube 44	36.68	61.83	31.11	-15	1.18

Table D.3.2 Statistical analysis of the corrected data

Eastborough Run - 2015	
RMSE	8.95
Fractional Bias	0.17

Figure D.3.1 NO₂ Monitored / Modelled scatter graph

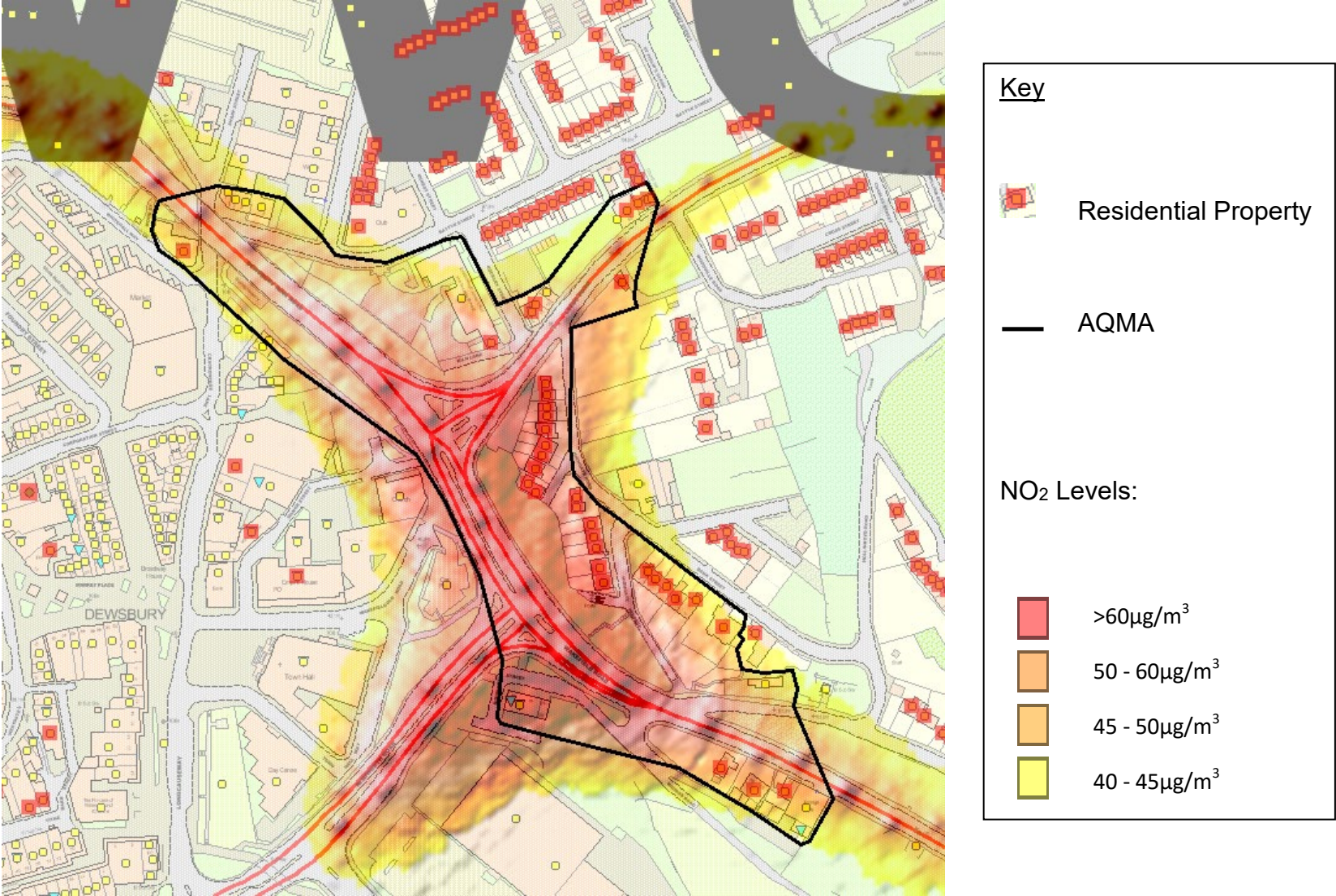


The statistical analysis carried out at the validation stage shows that the model accuracy is average and the fractional bias indicates that the model in the most part is underestimating.

Figure D.3.1 graphs the correlation between the monitored and modelled data. It is clear to see that trend line is close to the mid-point and all points fall within the +/- 20% region

Map D.3 was constructed using the correction factor of 1.22. The yellow and red areas indicate the areas of exceedance and how NO₂ diffuses around the Eastborough assessment area

Map D.3 Eastborough AQMA



D.4 Edgerton Detailed Assessment

Kirklees Council has modelled the annual mean NO_x for 2015 in the area of Edgerton. This modelling was conducted to determine the boundaries of the AQMA.

Kirklees Council has used Atmospheric Dispersion Modelling System for Urban areas (ADMS Urban) to create this model and validated it against the 2015 automatic monitoring data.

Meteorological Data for the model has been taken from Huddersfield Civic 3 Weather Station. The weather data for 2004 has been selected as the weather patterns in that year are representative of the usual weather conditions in the district.

The Traffic Figures have been obtained from the Department of Transport for 2015 count points in close proximity to the assessment areas. Traffic counts and average speeds were entered into the Emission Factor Toolkit 2014

Background figures for the model have been taken from the 2015 based background maps (DEFRA).

The topography and road layout was obtained from Kirklees Council GIS data and ordinance survey records.

Kirklees conducted a statistical procedure as set out in TG(09) to determine the model uncertainty and performance. Table D.4.1 indicates the results at diffusion tube sites and the results of the statistical analysis are contained within Table D.4.2 and Figure D4.1.

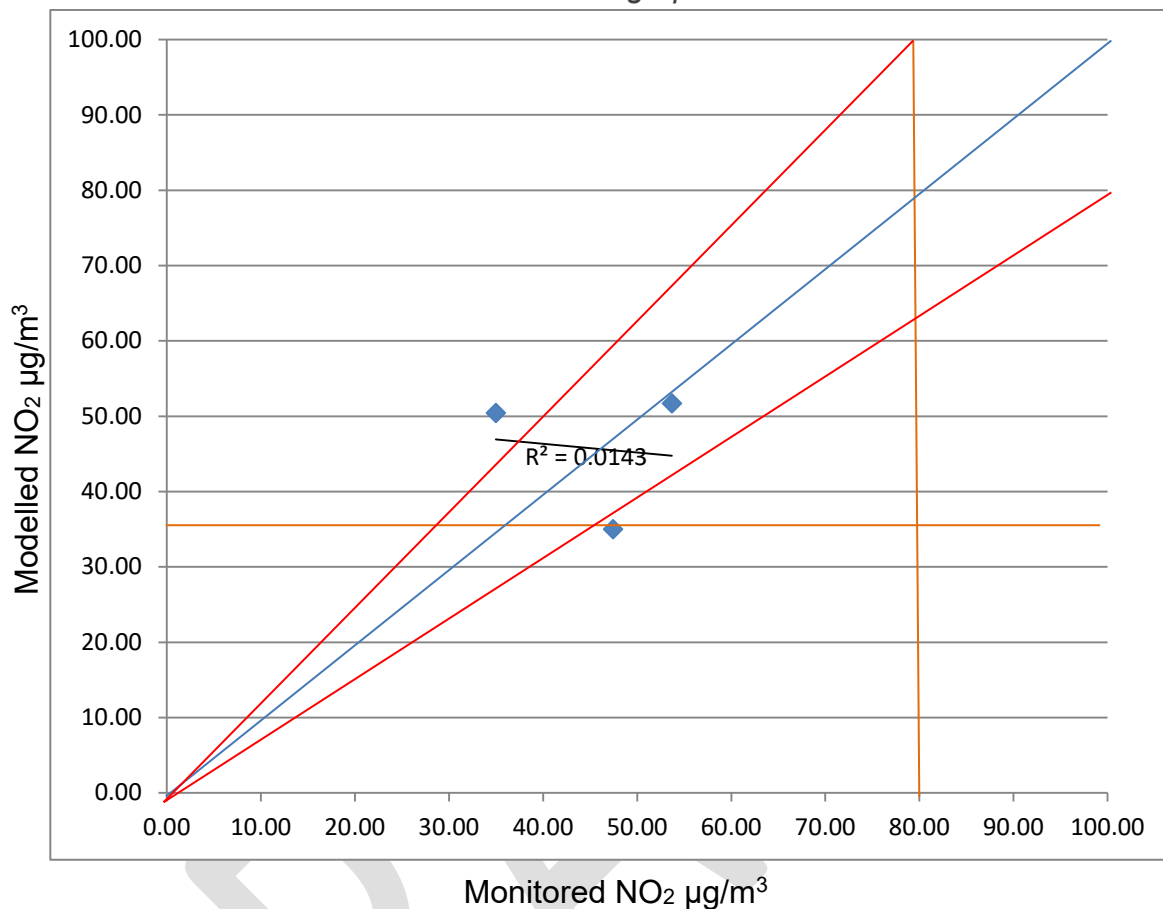
Table D.4.1 Results of Run at diffusion tube sites and statistical analysis of model

	Tube result (µg/m ³)	Modelled increment NO _x (µg/m ³)	Calculated NO ₂ from NO _x (µg/m ³)	% Difference	Correction Factor
Tube 3	53.70	73.10	51.72	-4	1.04
Tube 31	34.96	69.30	50.45	44	0.69
Tube 32	47.42	28.39	35.04	-26	1.35

Table D.4.2 Statistical analysis of the corrected data

Edgerton Run - 2015	
RMSE	8.14
Fractional Bias	-0.01

Figure D4.1 NO₂ Monitored / Modelled scatter graph

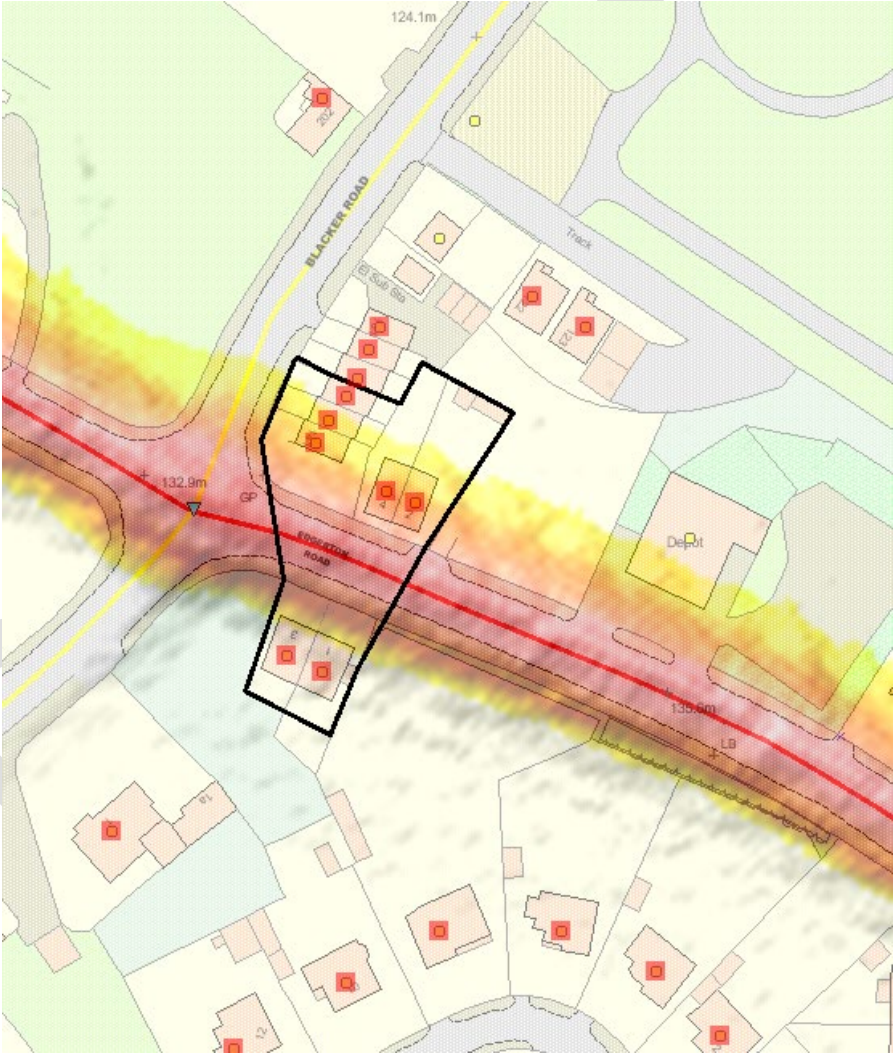


The statistical analysis carried out at the validation stage shows that the model accuracy is average and the fractional bias indicates that the model is overestimating.

Figure D.4.1 graphs the correlation between the monitored and modelled data. It is clear to see that trend line is close to the mid-point and all points fall within the +/- 20% region

Map D.4 was constructed without a correction factor. The yellow and red areas indicate the areas of exceedance and how NO₂ diffuses around the Edgerton assessment area

Map D.4 Edgerton AQMA



Key

- Residential Property
- AQMA

NO₂ Levels:

- >60µg/m³
- 50 - 60µg/m³
- 45 - 50µg/m³
- 40 - 45µg/m³

D.5 Heckmondwike Detailed Assessment

Kirklees Council has modelled the annual mean NO_x for 2015 in the area of Heckmondwike. This modelling was conducted to determine the boundaries of the AQMA.

Kirklees Council has used Atmospheric Dispersion Modelling System for Urban areas (ADMS Urban) to create this model and validated it against the 2015 automatic monitoring data.

Meteorological Data for the model has been taken from Huddersfield Civic 3 Weather Station. The weather data for 2004 has been selected as the weather patterns in that year are representative of the usual weather conditions in the district.

The Traffic Figures have been obtained from the Department of Transport for 2015 count points in close proximity to the assessment areas.

Traffic counts and average speeds were entered into the Emission Factor Toolkit 2014

Background figures for the model have been taken from the *2015 based background maps* (DEFRA).

The topography and road layout was obtained from Kirklees Council GIS data and ordinance survey records.

Kirklees conducted a statistical procedure as set out in TG(09) to determine the model uncertainty and performance. Table D.5.1 indicates the results at diffusion tube sites and the results of the statistical analysis are contained within Table D.5.2 and Figure D.5.1.

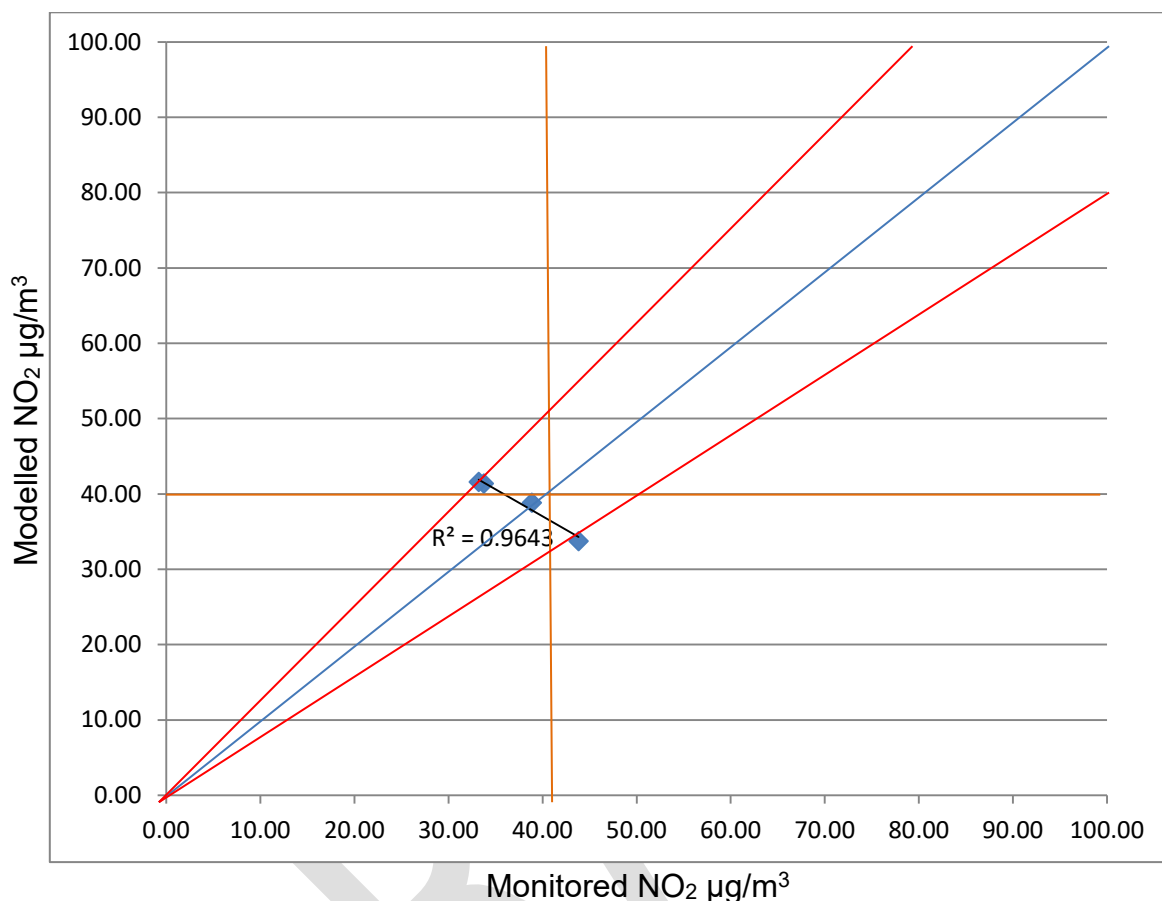
Table D.5.1 Results of Run at diffusion tube sites and statistical analysis of model

	Tube result (µg/m ³)	Modelled increment NO _x (µg/m ³)	Calculated NO ₂ from NO _x (µg/m ³)	% Difference	Correction Factor
Tube 33	33.75	44.12	41.38	23	0.82
Tube 34	33.21	44.64	41.58	25	0.80
Tube 35	38.86	37.67	38.85	0	1.00
Tube 48	43.82	25.33	33.74	-23	1.30

Table D.5.2 Statistical analysis of the corrected data

Heckmondwike Run - 2015	
RMSE	5.73
Fractional Bias	-0.04

Figure D5.1 NO₂ Monitored / Modelled scatter graph

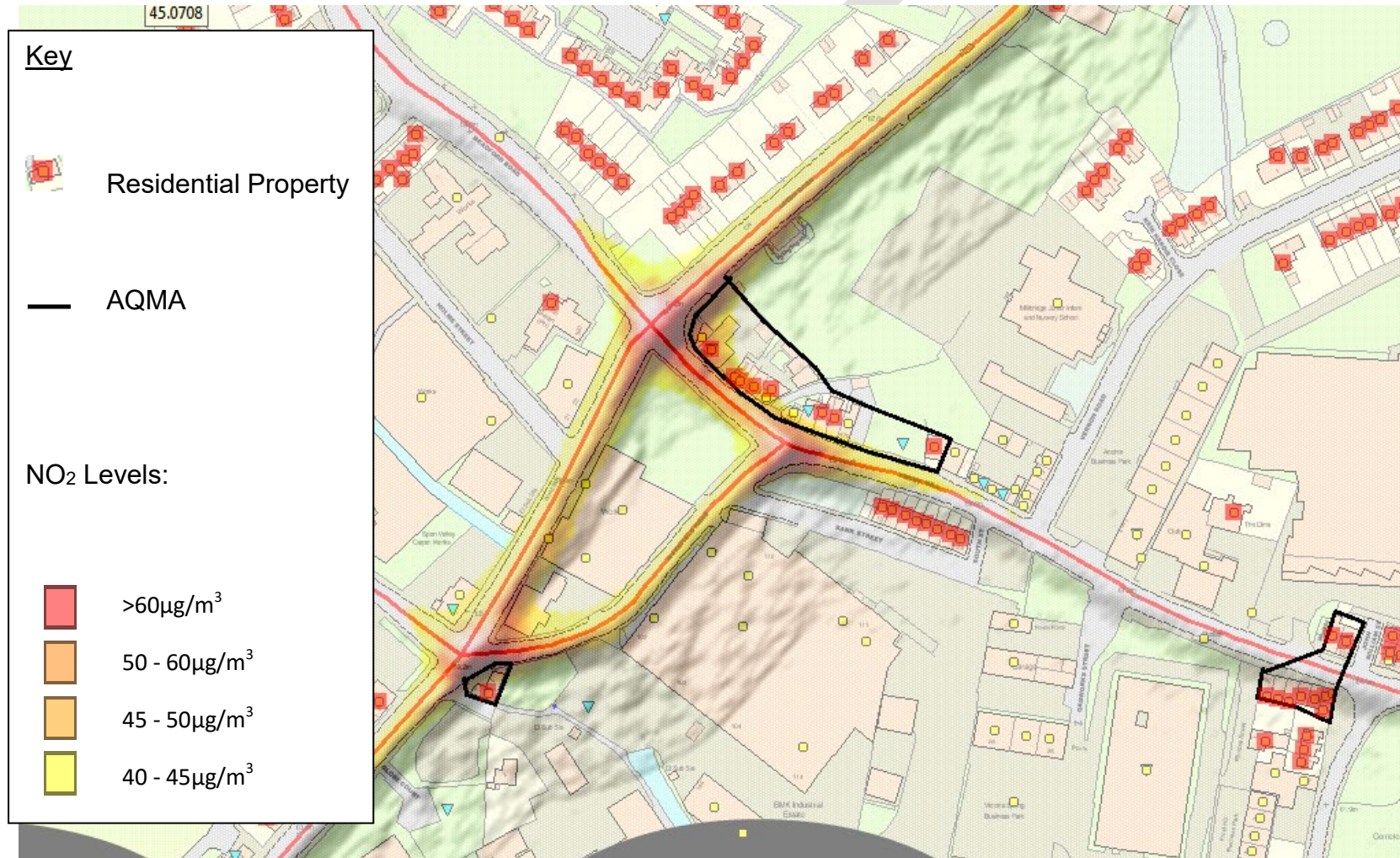


The statistical analysis carried out at the validation stage shows that the model accuracy is average and the fractional bias indicates that the model average distribution of results is similar to the monitoring results.

Figure D.5.1 graphs the correlation between the monitored and modelled data. It is clear to see that trend line is close to the mid-point and all points fall within the +/- 20% region

Map D.5 was constructed using the correction factor of 0.98. The yellow and red areas indicate the areas of exceedance and how NO₂ diffuses around the Heckmondwike assessment area

Map D.5 Heckmondwike AQMA



D.6 Huddersfield Town Centre Detailed Assessment

Kirklees Council has modelled the annual mean NO_x for 2015 in the area of Heckmondwike. This modelling was conducted to determine the boundaries of the AQMA.

Kirklees Council has used Atmospheric Dispersion Modelling System for Urban areas (ADMS Urban) to create this model and validated it against the 2015 automatic monitoring data.

Meteorological Data for the model has been taken from Huddersfield Civic 3 Weather Station. The weather data for 2004 has been selected as the weather patterns in that year are representative of the usual weather conditions in the district.

The Traffic Figures have been obtained from the Department of Transport for 2015 count points in close proximity to the assessment areas.

Traffic counts and average speeds were entered into the Emission Factor Toolkit 2014

Background figures for the model have been taken from the *2015 based background maps* (DEFRA).

The topography and road layout was obtained from Kirklees Council GIS data and ordinance survey records.

Kirklees conducted a statistical procedure as set out in TG(09) to determine the model uncertainty and performance. Table D.6.1 indicates the results at diffusion tube sites and the results of the statistical analysis are contained within Table D.6.2 and Figure D.6.1.

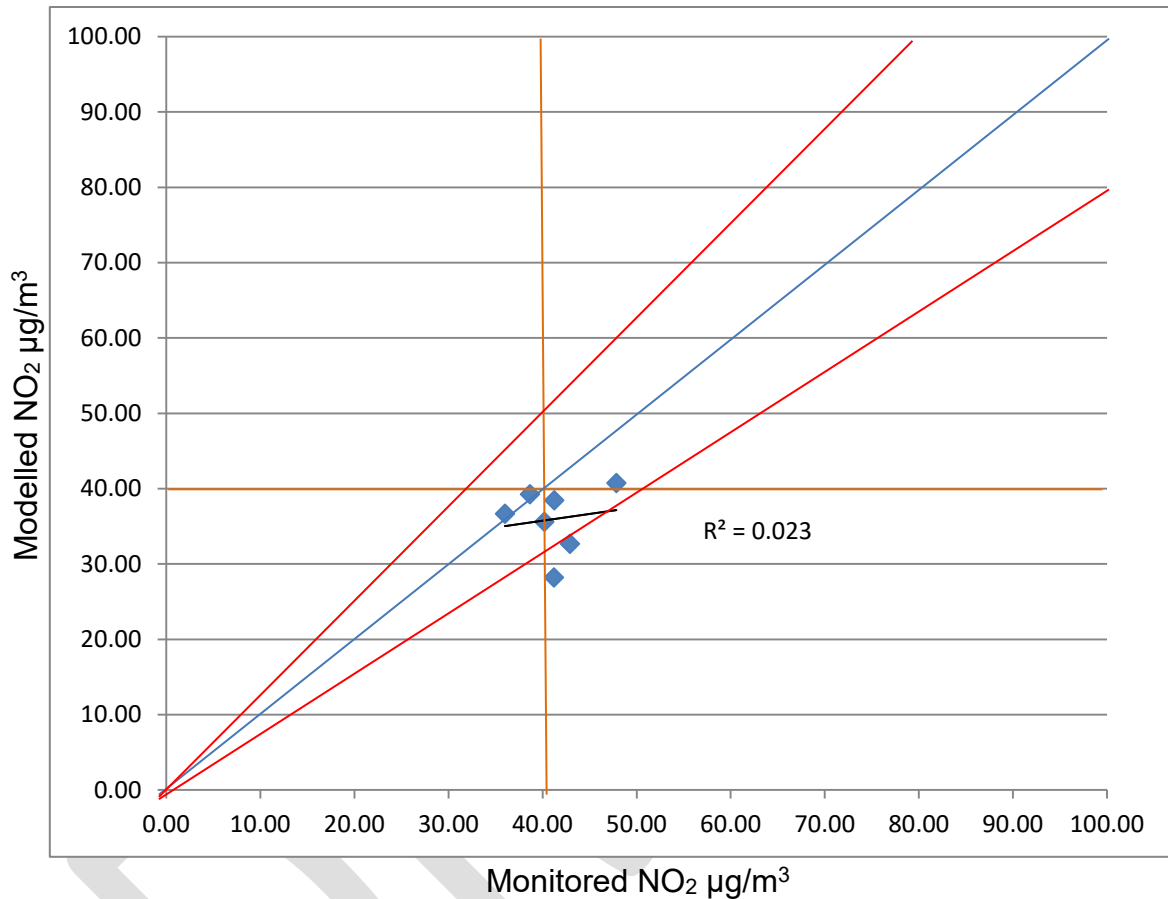
Table D.6.1 Results of Run at diffusion tube sites and statistical analysis of model

	Tube result (µg/m ³)	Modelled increment NO _x (µg/m ³)	Calculated NO ₂ from NO _x (µg/m ³)	% Difference	Correction Factor
Roadside 3	36.00	32.31	36.68	2	0.98
Tube 16	41.19	12.92	28.22	-31	1.46
Tube 17	41.25	36.70	38.46	-7	1.07
Tube 20	40.17	29.79	35.63	-11	1.13
Tube 33	47.85	42.46	40.74	-15	1.17
Tube 13	38.64	38.74	39.28	2	0.98
Tube 54	42.90	22.85	32.67	-24	1.31

Table D.6.2 Statistical analysis of the corrected data

Town Centre Run - 2015	
RMSE	7.10
Fractional Bias	0.13

Figure D.6.1 NO₂ Monitored / Modelled scatter graph

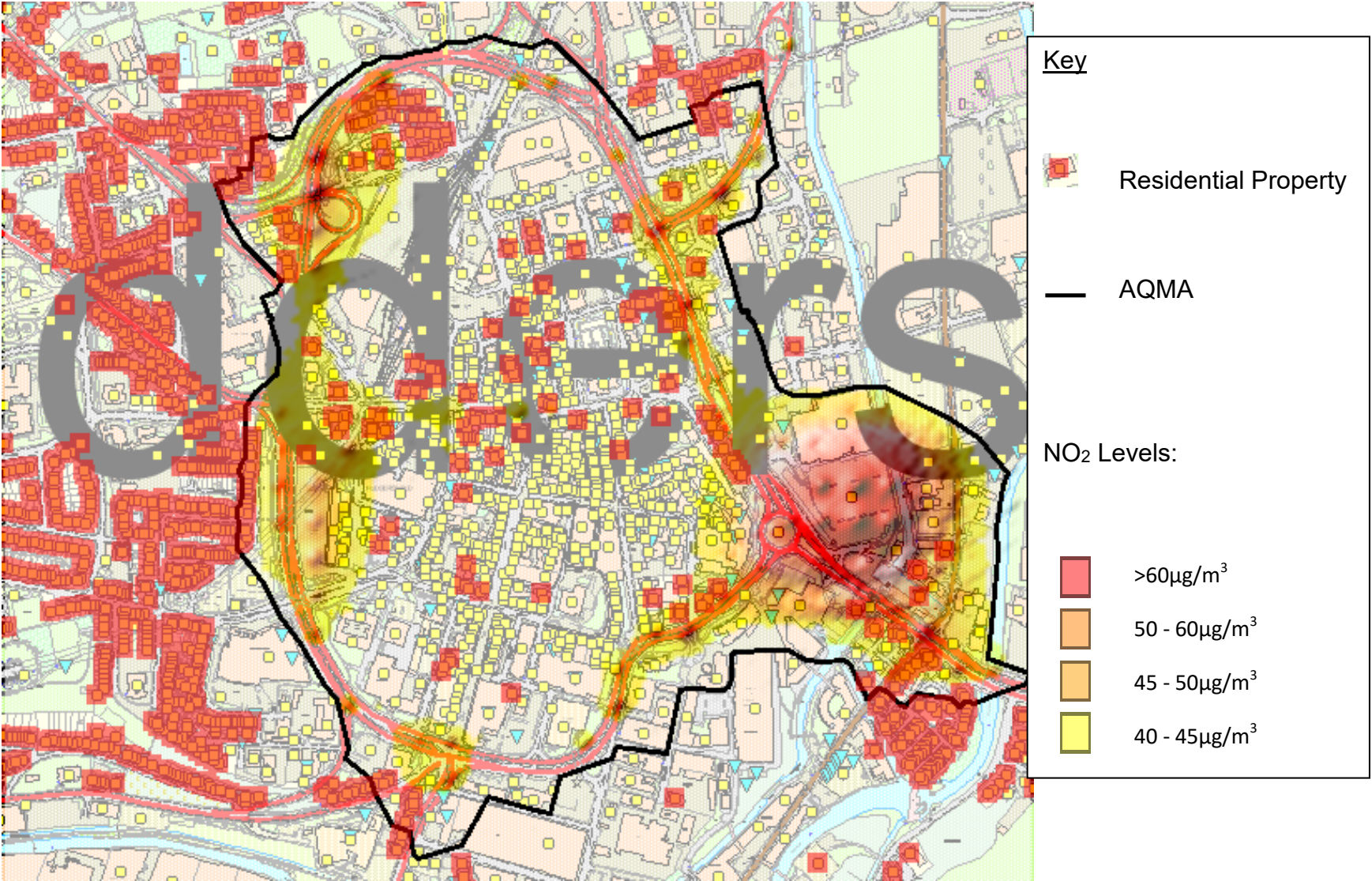


The statistical analysis carried out at the validation stage shows that the model accuracy is average and the fractional bias indicates that the model average distribution of results is similar to the monitoring results.

Figure D.6.1 graphs the correlation between the monitored and modelled data. It is clear to see that trend line is close to the mid-point and all points fall within the +/- 20% region

Map D.6 was constructed using the correction factor of 0.95. The yellow and red areas indicate the areas of exceedance and how NO₂ diffuses around the Huddersfield Town Centre assessment area

Map D.6 Huddersfield Town Centre AQMA



D.7 Outlane Detailed Assessment

Kirklees Council has modelled the annual mean NO_x for 2015 in the area of Outlane. This modelling was conducted to determine the boundaries of the AQMA.

Kirklees Council has used Atmospheric Dispersion Modelling System for Urban areas (ADMS Urban) to create this model and validated it against the 2015 automatic monitoring data.

Meteorological Data for the model has been taken from Huddersfield Civic 3 Weather Station. The weather data for 2004 has been selected as the weather patterns in that year are representative of the usual weather conditions in the district.

The Traffic Figures have been obtained from the Department of Transport for 2015 count points in close proximity to the assessment areas.

Traffic counts and average speeds were entered into the Emission Factor Toolkit 2014

Background figures for the model have been taken from the *2015 based background maps* (DEFRA).

The topography and road layout was obtained from Kirklees Council GIS data and ordinance survey records.

Kirklees conducted a statistical procedure as set out in TG(09) to determine the model uncertainty and performance. Table D.7.1 indicates the results at diffusion tube sites and the results of the statistical analysis are contained within Table D.7.2 and Figure D.7.1.

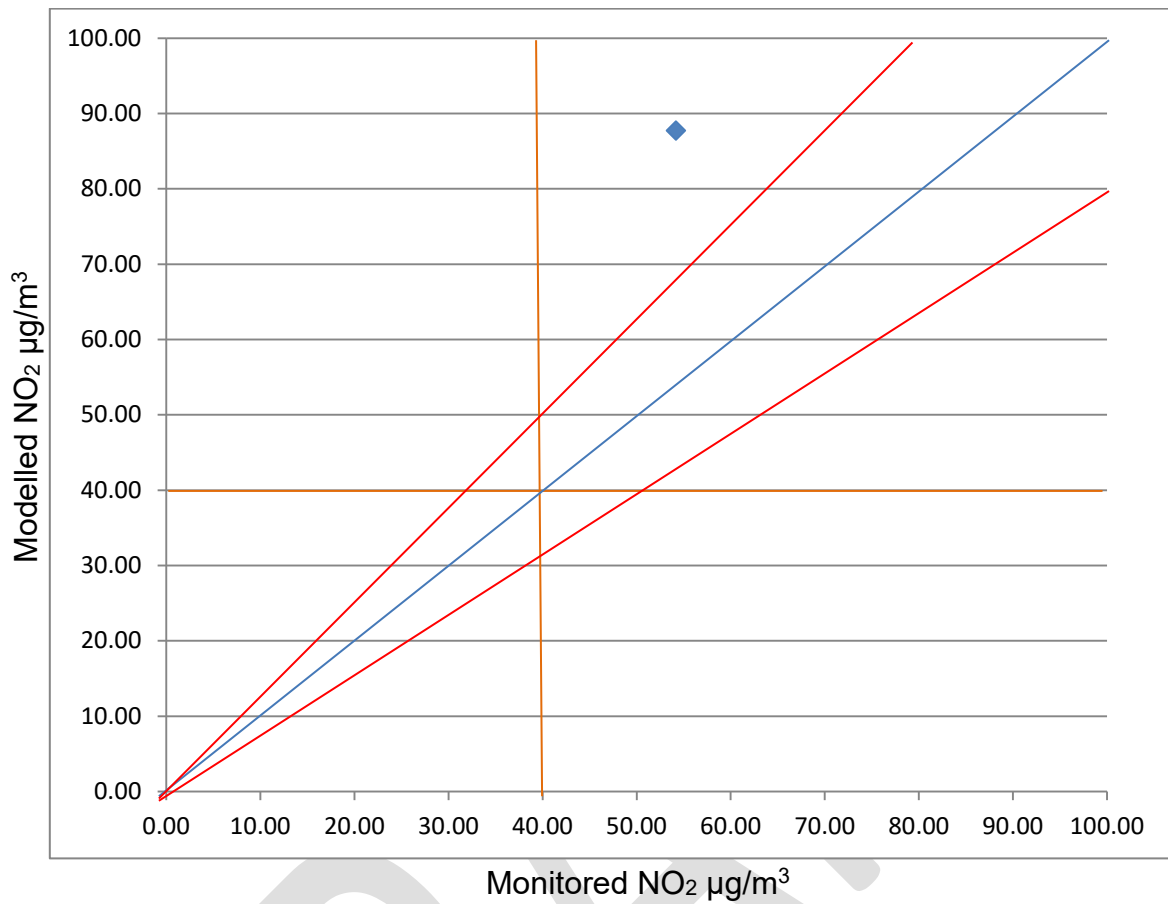
Table D.7.1 Results of Run at diffusion tube sites and statistical analysis of model

	Tube result (µg/m ³)	Modelled increment NO _x (µg/m ³)	Calculated NO ₂ from NO _x (µg/m ³)	% Difference	Correction Factor
Tube 47	54.16	226.83	87.75	62	0.62

Table D.7.2 Statistical analysis of the corrected data

Outlane Run - 2015	
RMSE	16.80
Fractional Bias	-0.47

Figure D.7.1 NO₂ Monitored / Modelled scatter graph

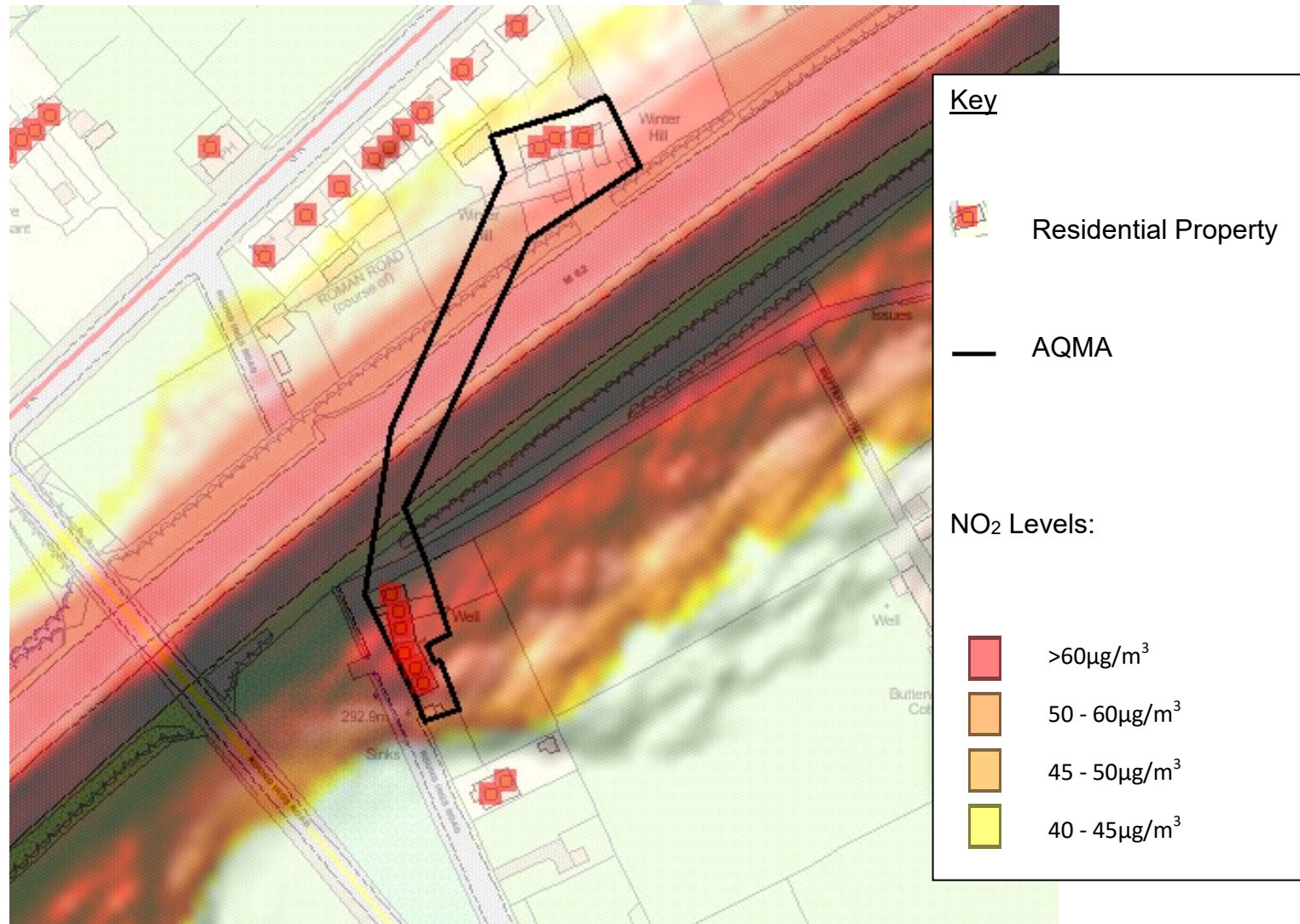


The statistical analysis carried out at the validation stage shows that the model is over predicting.

Figure D.7.1 graphs the correlation between the monitored and modelled data.

Map D.7 was constructed using the correction factor of 0.62. The yellow and red areas indicate the areas of exceedance and how NO₂ diffuses around the Huddersfield Town Centre assessment area

Map D.7 Outlane AQMA



D.8 AQMA1 Detailed Assessment

Kirklees Council has modelled the annual mean NO_x for 2015 in the area of Outlane. This modelling was conducted to determine the boundaries of the AQMA.

Kirklees Council has used Atmospheric Dispersion Modelling System for Urban areas (ADMS Urban) to create this model and validated it against the 2015 automatic monitoring data.

Meteorological Data for the model has been taken from Huddersfield Civic 3 Weather Station. The weather data for 2004 has been selected as the weather patterns in that year are representative of the usual weather conditions in the district.

The Traffic Figures have been obtained from the Department of Transport for 2015 count points in close proximity to the assessment areas.

Traffic counts and average speeds were entered into the Emission Factor Toolkit 2014

Background figures for the model have been taken from the 2015 based background maps (DEFRA).

The topography and road layout was obtained from Kirklees Council GIS data and ordinance survey records.

Kirklees conducted a statistical procedure as set out in TG(09) to determine the model uncertainty and performance. Table D.8.1 indicates the results at diffusion tube sites and the results of the statistical analysis are contained within Table D.8.2 and Figure D.8.1.

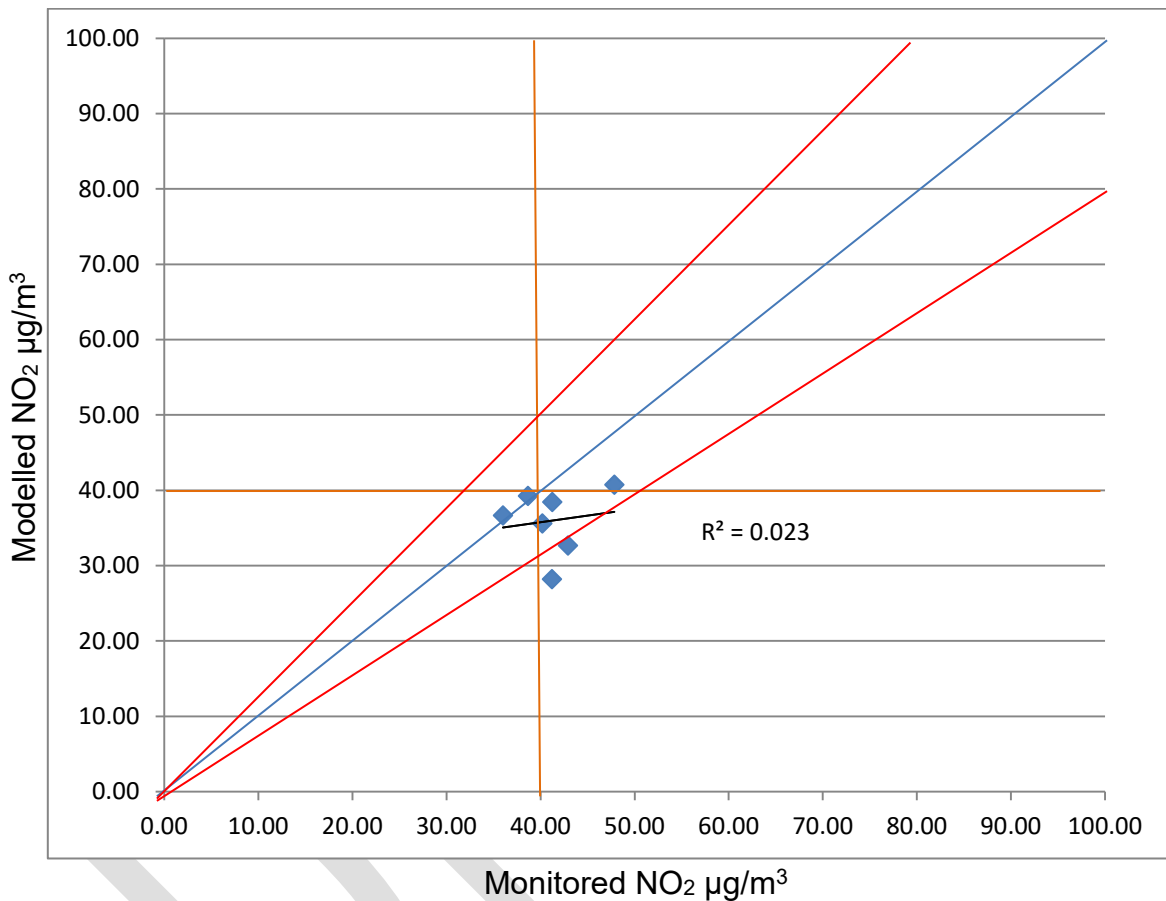
Table D.8.1 Results of Run at diffusion tube sites and statistical analysis of model

	Tube result (µg/m ³)	Modelled increment NO _x (µg/m ³)	Calculated NO ₂ from NO _x (µg/m ³)	% Difference	Correction Factor
Roadside 3	36.00	32.31	36.68	2	0.98
Tube 16	41.19	12.92	28.22	-31	1.46
Tube 17	41.25	36.70	38.46	-7	1.07
Tube 20	40.17	29.79	35.63	-11	1.13
Tube 33	47.85	42.46	40.74	-15	1.17
Tube 13	38.64	38.74	39.28	2	0.98
Tube 54	42.90	22.85	32.67	-24	1.31

Table D.8.2 Statistical analysis of the corrected data

AQMA 1 Run - 2015	
RMSE	7.10
Fractional Bias	0.13

Figure D.8.1 NO₂ Monitored / Modelled scatter graph

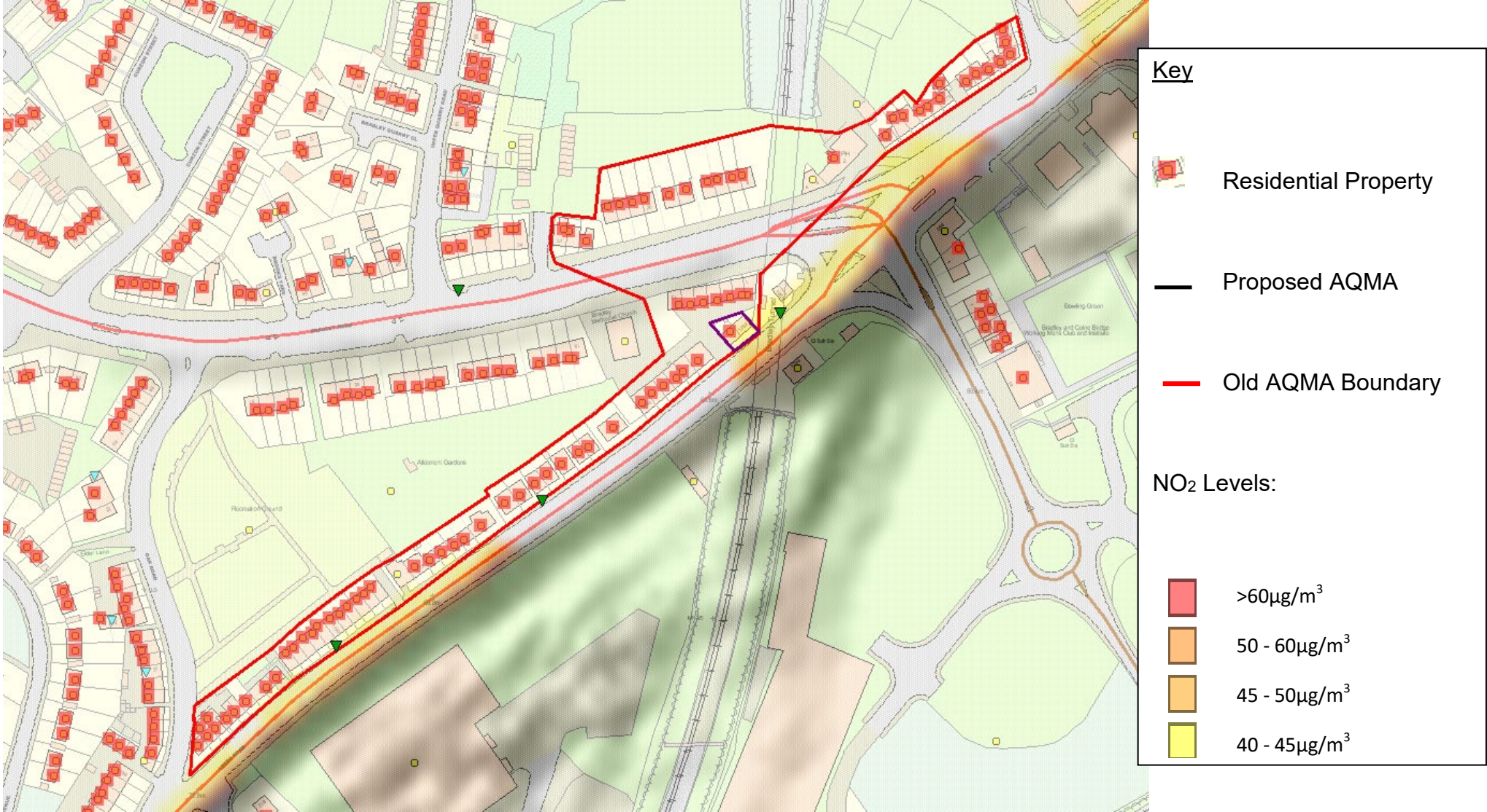


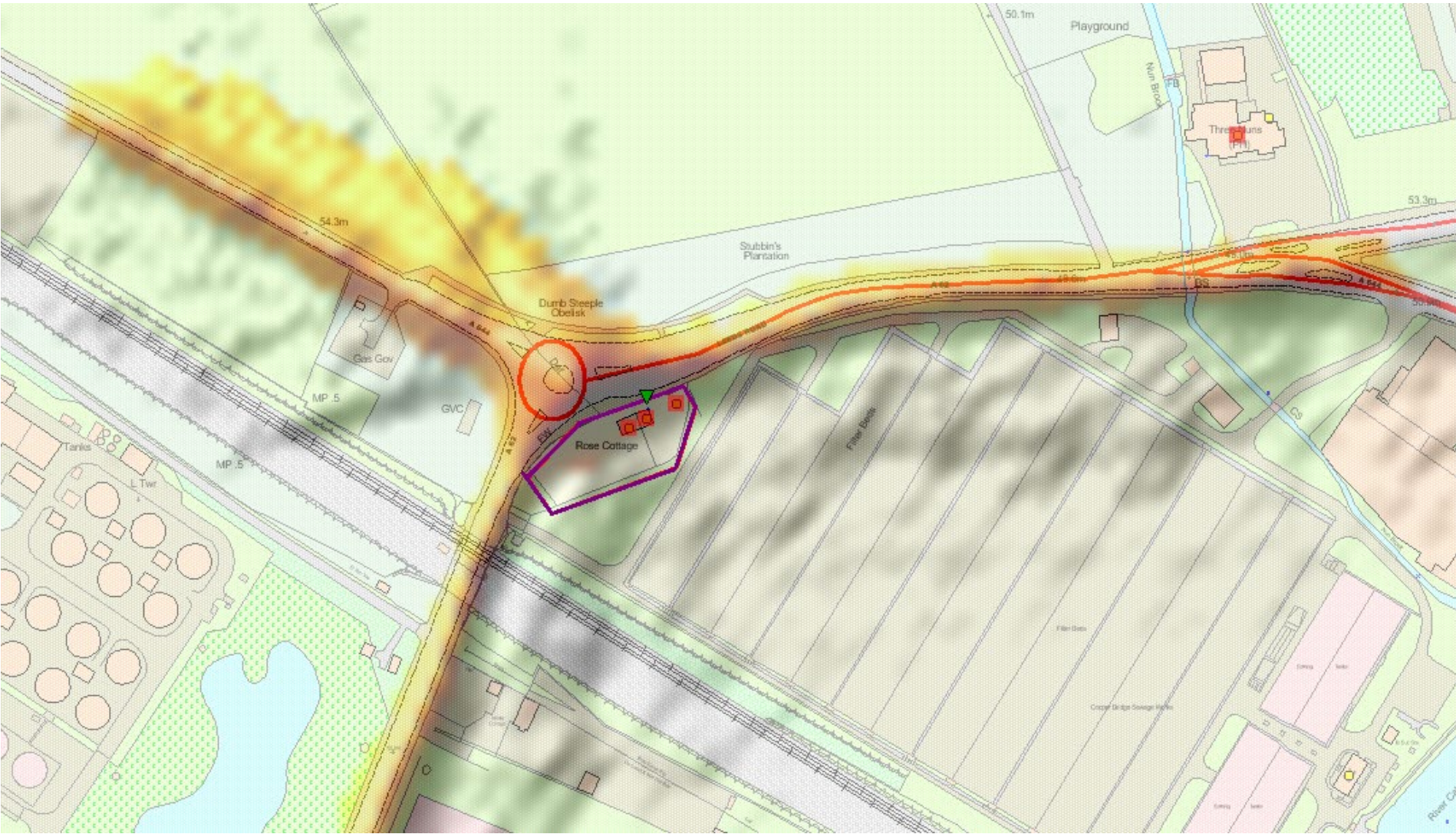
The statistical analysis carried out at the validation stage shows that the model accuracy is good and the fractional bias indicates that the model average distribution of results is similar to the monitoring results.

Figure D.8.1 graphs the correlation between the monitored and modelled data. It is clear to see that trend line is close to the mid-point and all points fall within the +/- 20% region

Map D.8 was constructed using the correction factor of 0.98. The Red line denotes the previous AQMA and the purple line indicates the new AQMA proposal in accordance with recent modelling study.

Map D.7 AQMA 1 Review





D.9 Thornton Lodge

Kirklees Council has modelled the annual mean NOx for 2017 in the along Lindley Moor Road. This modelling was conducted to determine the boundaries of the AQMA.

Kirklees Council has used Atmospheric Dispersion Modelling System for Urban areas (ADMS Urban) to create this model and validated it against the 2017 automatic monitoring data.

Meteorological Data for the model has been taken from Leeds / Bradford Airport Met Office Weather Station. The weather data for 2015 has been selected as the weather patterns in that year are representative of the usual weather conditions in the district.

The Traffic Figures have been obtained from the Department of Transport count points in close proximity to the assessment areas and expanded in accordance with national guidance for increase vehicle number.

Traffic counts and average speeds were entered into ADMS (Urban), which uses Emissions Factor Toolkit V8.0

Background figures for the model have been taken from the 2017 based background maps (DEFRA).

The topography and road layout was obtained from Kirklees Council GIS data and ordinance survey records.

Kirklees conducted a statistical procedure as set out in TG(09) to determine the model uncertainty and performance. Table D.9.1 indicates the results at diffusion tube sites and the results of the statistical analysis are contained within Table D.9.2 and Figure D.9.1.

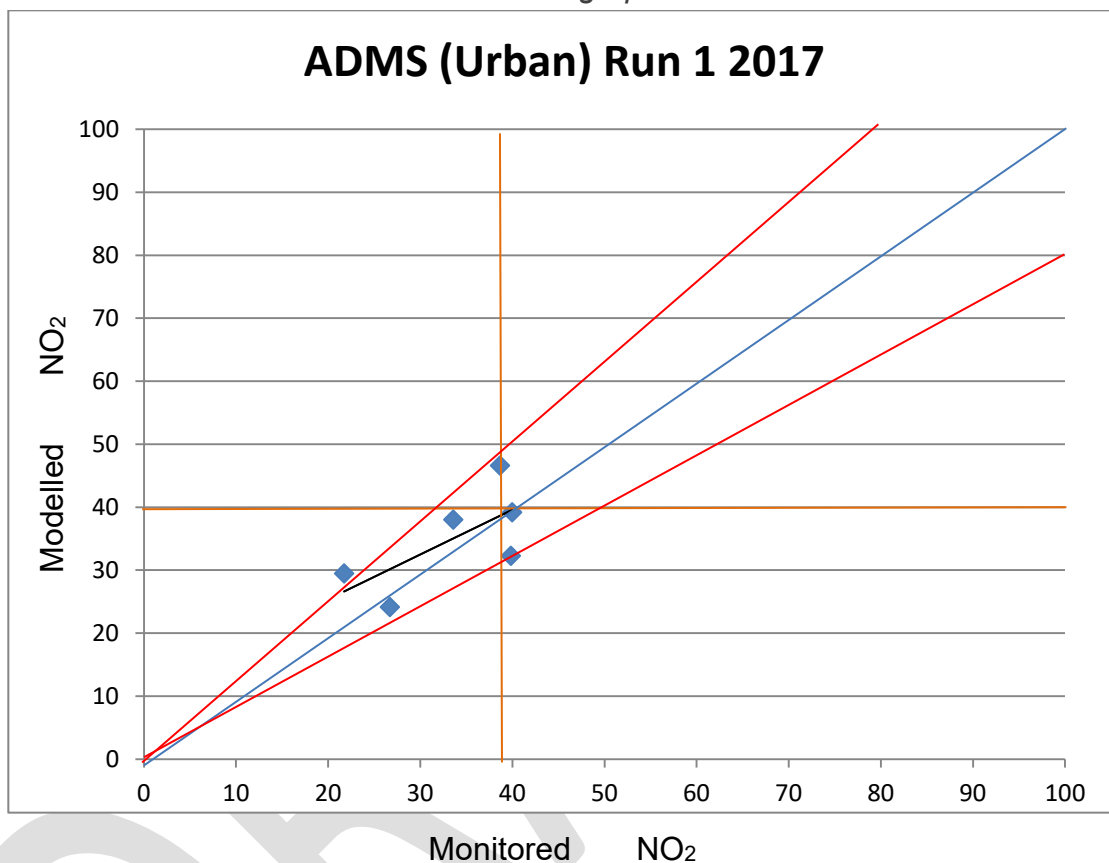
Table D.9.1 Results of Run at diffusion tube sites and statistical analysis of model

	Monitoring results (NO₂ µg/m³)	Model Road increment NO_x Prediction (µg/m³)	NO₂ Converted from predicted NO_x (µg/m³)	% Difference of Converted NO₂	Correction Factor
Tube 49	38	118.00358	61.08	61	0.62
Tube 50	39.19	161.33688	72.66	85	0.54
Tube 75	29.44	51.54768	39.49	34	0.75
Tube 76	32.25	160.39198	72.42	125	0.45
Tube 77	46.58	152.08848	70.29	51	0.66
Tube 78	24.15	77.00	48.54	101	0.50

Table D.9.2 Statistical analysis of the corrected data

RMSE	29.74
Fractional Bias	-0.67

Figure D.9.1 NO₂ Monitored / Modelled scatter graph

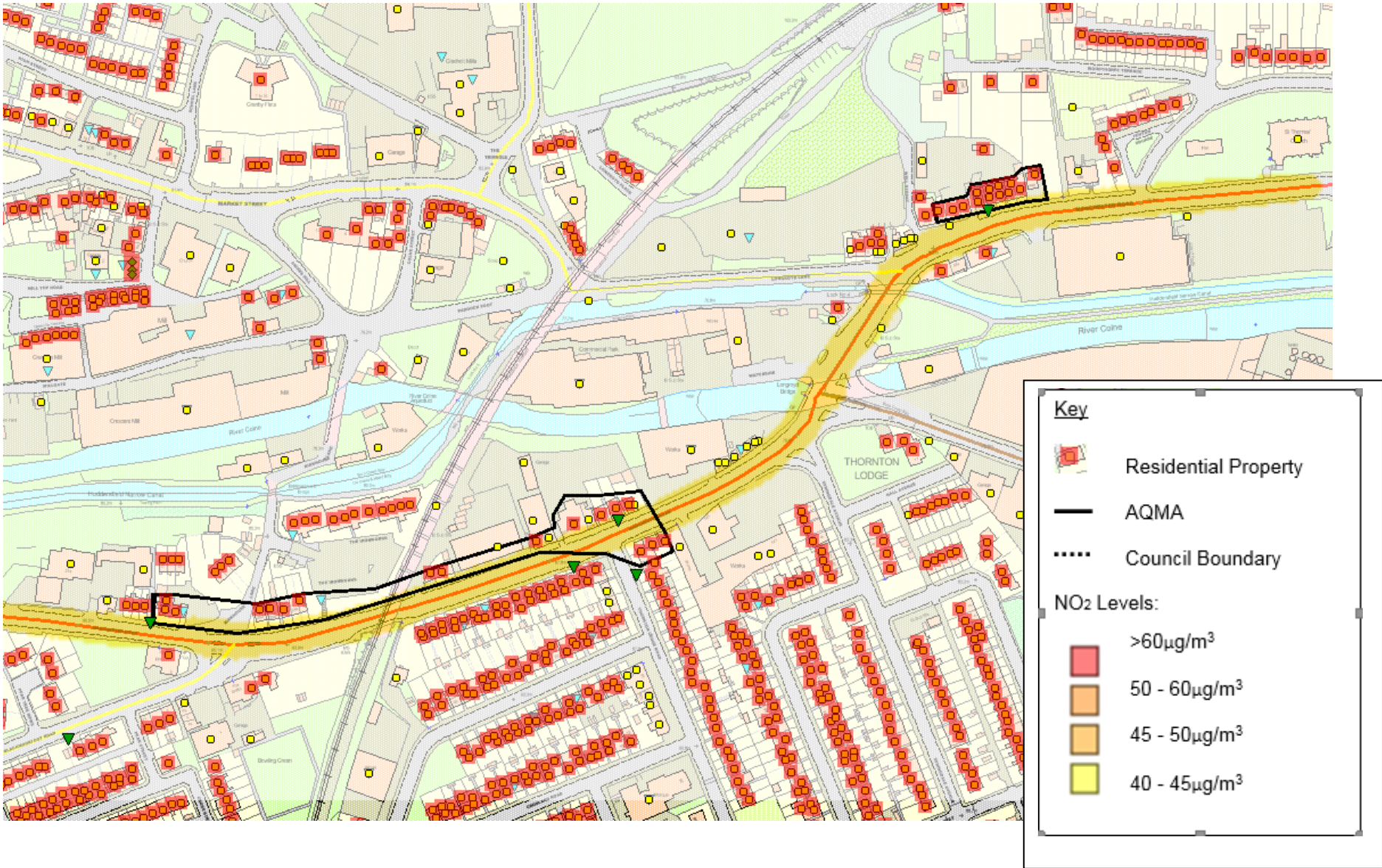


While statistical analysis carried out at the validation stage shows that the model is over estimating.

Figure D.9.1 graphs the correlation between the monitored and modelled data after correction factor of 0.55 has been applied. It is clear to see that trend line is close to the mid-point and all points fall well within the +/- 20% region

Map D.9 was constructed using the correction factor. The yellow and red areas indicate the areas of exceedance and how NO₂ diffuses around the Thornton Lodge assessment area

Map D.9 Thornton Lodge Assessment (AQMA 10)



DRAFT

Kirklees Council Air Quality Strategy 2019

- It is the Vision of Kirklees Council to ensure that children have the best start in life, people are as well as possible for as long as possible and experience a high quality, clean, sustainable and green environment through our shared outcomes.
- Kirklees Council will consider the impact Air Quality in all decision making and make decisions which improve air quality
- Kirklees Council is committed to supporting the increase in active travel (walking and cycling) in order to improve air quality and the health and wellbeing of the public
- Kirklees Council will work to accelerate the uptake of ultra-low emission vehicles, reduce emissions from all vehicles and increase low emission public transport use
- Kirklees Council has declared a Climate Emergency and is committed to reducing carbon emissions. Action to reduce carbon emissions will also reduce emissions of other air pollution and improve local air quality.

Forward by portfolio holders Cllr Mather and Cllr Khan

Clean air is one of the most basic requirements of a healthy environment. We need clean air in order to thrive – physically, mentally, socially and economically. Global, national and local directives, strategies and policies have led to massive improvements in air quality over the past 65 years. However, there is much more that we need to do – as a council, with our partners and as individuals. This Strategy is intended to be an overview of the background, current situation and future direction of the Council in terms of Air Quality

Within Kirklees we have 10 Air Quality Management Areas (AQMA's). These are 'hot spot' areas where pollution concentrations exceed health related limits. However, there are no safe levels of air pollution and we need to improve air quality across the district. Tackling the causes of air quality are complex – but there are things we can all do; improving the infrastructure of our roads, reducing congestion, improving the quality of our fleet vehicles to reduce emissions, working with business to control industrial emissions, educating the public on solid fuel use and supporting people to walk and cycle more. By working together across the council, with our partners, communities and individual residents we will continue to improve air quality for everyone.

We are passionate about improving air quality for the people who live, work and visit Kirklees. This strategy demonstrates our commitment to improving air quality and will outline the specific areas where we can all affect change for the benefit of Kirklees.

HOW THIS STRATEGY SHOULD BE READ

This Strategy is a summary of the situation and context in relation to Air Quality and Kirklees Council, it should be read in conjunction with Kirklees Council's Air Quality Action Plan and Annual Status Reports. The Action Plan and Annual Status Reports are technical documents required by law – this document is a narrative summary of the detailed contents of the technical documents.

INTRODUCTION TO KIRKLEES

Kirklees Council is a Metropolitan District Council in West Yorkshire. The district is made up of one large town, Huddersfield, with a number of smaller towns such as Dewsbury, Batley, Mirfield, Cleckheaton and Holmfirth as well as a number of larger and smaller villages. The total population is approximately 440,000 and is a mix of dense urban and spatially populated rural areas.

There are a number of transportation links crossing the district linking up our towns and villages, as well connecting our population to the surround towns and cities of Manchester, Leeds, Wakefield, Halifax, and Bradford. The District is bounded on two sides by the Strategic Road Network - the M62 passing through the Northern boundary of the area and the M1 to the East.

The landscape of the district is characterised by deep valleys containing the Calder, Colne, Holme and Spen rivers and transportation routes are contained within these valleys where there is limited space for highway capacity. Transportation routes concentrate around bridges across these rivers again limiting capacity.

The district is historically industrialised centred on the textile industry. The textile industry has been in decline over the past number of decades, however, some textile industry still exists and there is a sizable engineering industry present as well as some chemical industry, cement batching and production is centred on the South Dewsbury locality.

Domestic heating was predominantly reliant on solid fuel burning within the district up until the mid-20th century. Since that time there has been a shift towards gas central heating being the primary way to heat properties. Furthermore, Kirklees urban areas have been Smoke Control Areas since the 1950's and this was expanded to the rural areas in the 1990's. As such the whole of the Kirklees District is a Smoke Control Area.

THE WIDER DETERMINANTS OF CLEAN AIR

The ability to experience clean air is complex and dependent on a broad range of factors. This can be described as the wider determinants of health, and is shown below:



Individuals, families and communities should be enabled to live so that they are supported to make choices which improve air quality. This is affected by a range of things – for example, how our houses and communities are designed and planned, how the physical infrastructure supports people to walk and cycle, having access to local parks and green space to enjoy and a public transport network which is affordable and accessible.

THE IMPACT OF POOR AIR QUALITY

Clean air is fundamental to healthy living and a safe environment. Whilst air quality has improved over recent decades, there are still areas of Kirklees where air pollution is having a significant effect on human health.

Exposure to high levels of air pollution has both short and long-term effects on health. Air pollution is the ninth leading risk factor for premature death and disability in both England and Yorkshire and Humber. This ranks air pollution above many other preventable mortality indicators, such as road deaths, excess winter deaths and communicable diseases.

Short-term exposure is associated with exacerbation of asthma, effects on lung function, increases in hospital admissions and reduced life expectancy. Long-term exposure to air pollution reduces life expectancy by increasing deaths from lung, heart and circulatory conditions. Whilst the short and long-term effects of air pollution are interrelated, at a population level the effects of long-term exposure to air pollution are much greater.

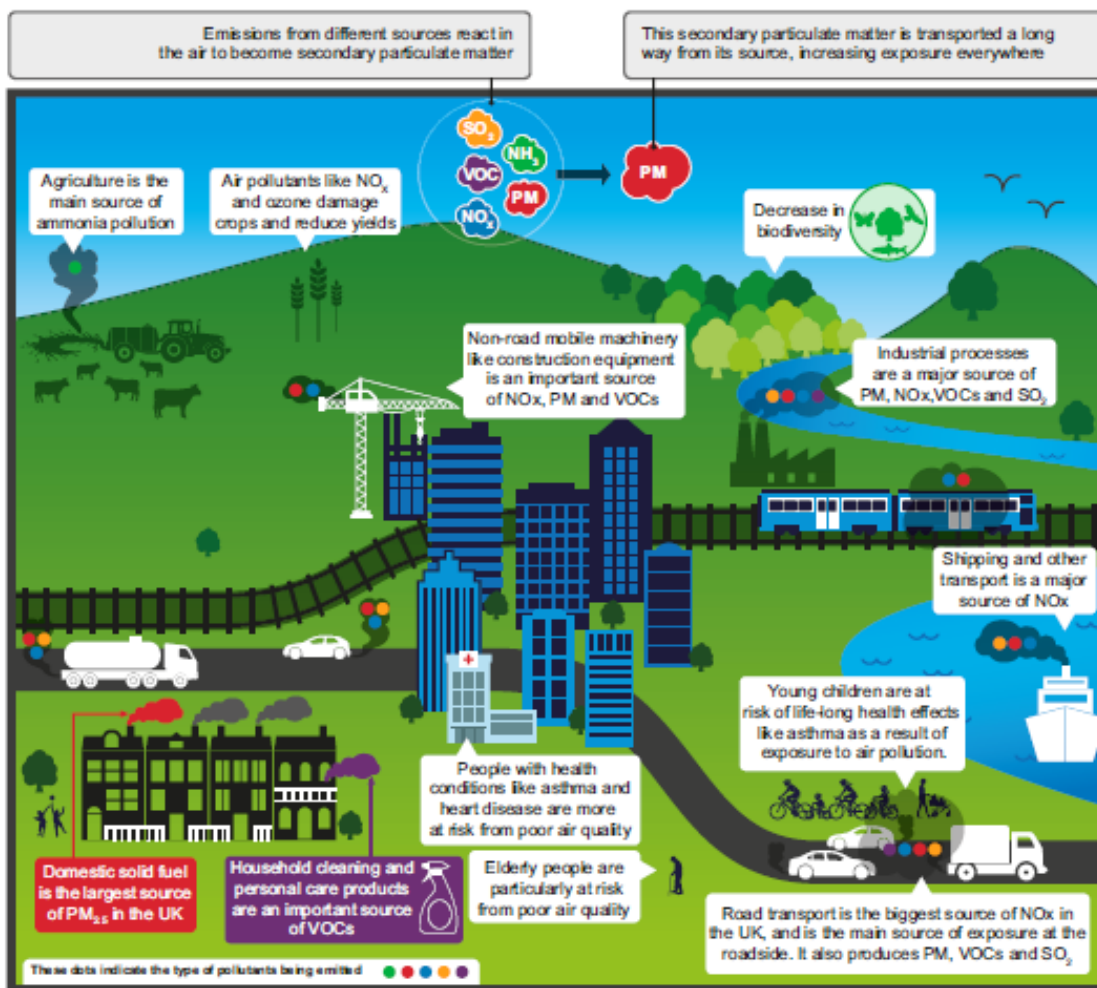
Our physical infrastructure and broader behaviours can also have an impact on air quality. Spatial planning, access to open and green space and the accessibility and confidence to walk and cycle all play a role in determining air quality.

WHAT IS IN AIR POLLUTION?

When we talk about air pollution in the UK we are generally talking about pollutants in the air we breathe which cause ill health in humans and are put into the air by human activity.

The most prominent air pollutants are Nitrogen Dioxide and Small Particulates (PM10, PM2.5 etc). The main sources of pollution are road transport, industrial emissions, domestic heating and agriculture.

The sources of air pollutants and their effects



Types of pollution	Ammonia (NH ₃)	Primary Particulate Matter (PM _{2.5})
Nitrogen oxides (NO _x)	Sulphur dioxide (SO ₂)	Volatile organic compounds (NMVOCs)

More information can be found on the web pages of the Department of the Environment, Food and Rural Affairs (DEFRA) uk-air.defra.gov.uk

LOCAL CONTEXT

This document should be read in conjunction with other Policies, Strategies, Action Plans, and Annual Status Reports available on the Council's Website under the [Air Quality](#) section.

The most significant linked documents are:

- **Kirklees Council Corporate Plan 2018/20**
Containing the objectives of the Council including the shared outcomes. The Clean and Green Shared Outcome contains a commitment to improve Air Quality
- **Kirklees Council's Five Year Air Quality Action Plan 2019**
This document is the Council's 5 year strategy for reducing pollutants district wide and within the AQMA's
- **Kirklees Council Annual Status Report (current year 2019)**
This document is the Council's annual return to DEFRA outlining current pollution conditions within the district and improvement actions taken within the reporting year
- **West Yorkshire Low Emission Strategy**
This document is a regionally adopted strategic document aimed to reduce emissions
- **Kirklees Council Local Plan**
This is the Council's development control plan for the next 20 years
- **Kirklees Health and Wellbeing Plan 2018 – 2023**
The plan brings together partners to focus on the people who live in Kirklees (adults and children) and how, working collectively, the health and wellbeing of the whole population can be improved.
- **Kirklees Joint Strategic Assessment – Air Quality**
A summary of the intelligence and evidence around Air Quality at a local level, the health impacts, vulnerable groups, assets and future considerations.
- **NICE guidance – Air pollution: Outdoor air quality and health.**
This guideline covers road-traffic-related air pollution and its links to ill health. It aims to improve air quality and so prevent a range of health conditions and deaths.

NATIONAL CONTEXT

As a District Council, Kirklees Council is bound by the **Environment Act 1995** and has a number of duties:

- To monitor the quality of the air in its district
- To report the results of monitoring to the Government annually
- To declare 'Air Quality Management Areas' (AQMA) when monitoring shows that the Government's Air Quality Objectives are not being met
- To produce 'Action Plans' to show how Air Quality will be improved when AQMAs are declared

The Air Quality Objectives are the pollution limits set by Government contained within **The Air Quality Standards Regulations 2010** and contain the maximum allowed concentration of air pollutants before action is needed.

Other legislation such as the **Clean Air Act 1993** deals with industrial and domestic smoke emissions from chimneys and 'dark smoke' from open burning on industrial sites. As of 2018 this legislation is currently being reviewed by Government as it is inadequate in dealing with the problems associated with these sources of air pollution.

Part III of the **Environmental Protection Act 1990** enables the Council to deal with smoke which is a nuisance or prejudicial to health, for example from bonfires. The Act does not prohibit burning in the open, however, provides a procedure to deal with the nuisance effects of the smoke.

The **Environmental Permitting Act 1999** and its regulations control emissions to air from a number of prescribed industrial processes. Depending on the process, the Local Authority or the Environment Agency issue permits for these activities and control emissions via conditions and limits.

The **Town and County Planning Act 1990**. Regulations and guidance make air quality a material planning consideration.

PICTURE OF AIR QUALITY IN KIRKLEES

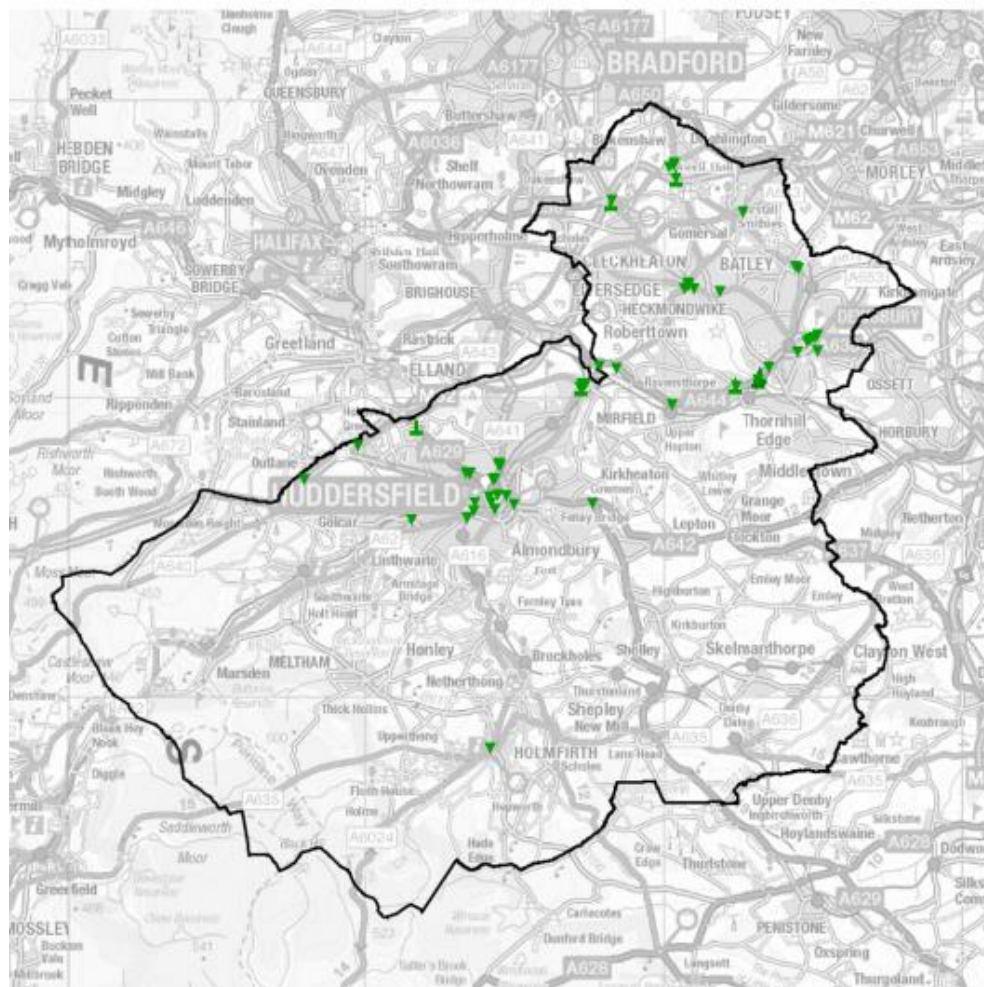
Poor air quality affects everyone but the health effects of air pollution are distributed unequally across the population. In general, levels of air pollution tend to be worse in more deprived communities because they are more likely to be close to busy polluted roads. Analysis by the Environment Agency into environmental quality and social deprivation looked at the social distribution of wards with the highest pollutant concentrations. This found that more than half of the most exposed 5% of the population lived in the 20% most deprived wards.

Children, older people, and people with chronic health problems are most at risk of the effects of air pollution. Where these groups live in more deprived communities located close to busy roads, the risk of health problems caused by exposure to air pollution will be further increased.

Monitoring

Kirklees Council currently monitors air pollution continuously at two road side locations. These air stations monitor for a range of pollutant, including Nitrogen Dioxide and Particulates and report this in real time i.e. every second. The number of real time monitors in Kirklees has decreased since 2008 due to the cost of maintaining and running these monitors.

In addition to this Kirklees Council has over 80 diffusion tubes which measure the average concentration of Nitrogen Oxides over a month. Diffusion Tubes are a cost effective way of measuring air pollution. These tubes are strategically located around the district at locations with heavy or relatively heavy road congestion. The number of diffusion tube locations has increased over recent years to reflect the need to monitor more widely across the district. Kirklees Council review their monitoring network on an annual basis and allocate resources where we anticipate pollutant levels may be elevated by using professional experience and modelling software.



Crown Copyright

Pollution Hot Spots / Air Quality Management Areas

In Kirklees, certain geographical areas are of concern due to high levels of air pollution. Historical measuring of Air Quality is reported in the Council's Annual Status Reports issued to, reviewed by and accepted by Government each year. These are summaries of the year's monitoring results and proposed actions by the local authority. If the pollution limits are breached in a location then this is a hot spot and an Air Quality Management Area (AQMA) must be declared. Kirklees has 10 AQMA's:

- | | |
|--------------------------------|------------------|
| • Bradley AQMA (2008) | Nitrogen Dioxide |
| • Scout Hill AQMA (2009) | Particulates |
| • Ainley Top, Huddersfield | Nitrogen Dioxide |
| • Birkenshaw, Bradford | Nitrogen Dioxide |
| • Eastborough, Dewsbury | Nitrogen Dioxide |
| • Edgerton, Huddersfield | Nitrogen Dioxide |
| • Liversedge | Nitrogen Dioxide |
| • Outlane, Huddersfield | Nitrogen Dioxide |
| • Huddersfield Town Centre | Nitrogen Dioxide |
| • Thornton Lodge, Huddersfield | Nitrogen Dioxide |

The full details of the AQMAs can be found at <http://www.kirklees.gov.uk/beta/crime-and-safety/air-pollution.aspx>.

WHAT ARE WE ALREADY DOING?

- **Planning Policy and Development Management** - Kirklees Council's Air Quality officers helped develop Kirklees Council's Draft Local Plan. Environmental Health also provide influence and input to new development proposals - proposals are assessed both on their exposure to air pollution and their impact on air quality. Officers will follow the Planning Technical Guide which is part of the West Yorkshire Low Emission Strategy.
- **ECOStars** - Kirklees Council is leading on the ECOStars freight recognition scheme, a West Yorkshire project in pursuance of WYLES. The project aims to cut emissions from heavy goods vehicles by fleet renewal, better driving and awareness.
- **West Yorkshire Strategic Electric Taxi Charge Point Project** – an Office for Low Emission Vehicles (OLEV) funded project which aims to deliver up to 88 dual taxi and public Electric Vehicles charge points throughout West Yorkshire – approximately 17 will be located in Kirklees.

- **West Yorkshire Clean Bus Project** – Kirklees is a partner in a West Yorkshire, Clean Bus Technology Fund funded project to improve emissions from buses throughout the region.
- **Bradley Traffic Light Rationalisation project**
An award winning project by Kirklees Urban Traffic Management and Control to add technology to existing traffic lights to improve the efficiency of the system and reduce pollution.
- **Kirklees Walking and Cycling Strategic Framework** – The framework outlines a range of outcomes and action areas which will work to ensure that Kirklees is recognised as a great place to walk and cycle, inspiring more people to walk and cycle more often as a mode of transport, for work, leisure or for sport.
- **Kirklees Walking and Cycling Infrastructure Plan (LCWIP)** – Kirklees Council wants to provide an infrastructure which will enable walking and cycling to be as easy as possible by developing the infrastructure of its streets, roads and highways.
- **Electric and Hybrid Vehicles in its fleet** Kirklees Council has invested in its fleet and invested in 20 electric pool cars, around 40 electric vans and 30 hybrid pool cars.

WHAT ELSE DO WE STILL NEED TO DO?

Kirklees Council recognises that there are significant challenges facing the local authority to protect the health of its residents and improve air quality.

By law once a local authority declares an AQMA it must publish an action plan showing how the pollution in that area will be reduced below legal limits. Kirklees Council is developing a new Five Year Action Plan which will cover all AQMAs.

A partnership approach is required both internally in the Authority and with external partner organisations and businesses. Key internal partners such as Public Health, Transportation Planners, Highways, Development Management are critical in reducing emissions. External partners such as NHS Organisations, local Universities all have their part to play.

Kirklees Council will aim to:

- Ensure that Air Quality is a consideration in all relevant council **decision making** and policy development.
- Complete its **Action Plan** required by law – this action plan will not only meet the minimum legislative requirements, but be an ambitious plan identifying project which may be possible if funding is available – this can be used as a shopping list of projects as and when funding becomes available.
- **Increase Resources** - Kirklees Council will aim to increase the number of FTE Air Quality Officers so capacity is present to meet the ongoing challenges. Capital funds is required to improve monitoring and fund project work.

- **Increase Monitoring** - Kirklees Council will review its monitoring network with a focus on increase its particulate monitoring.
- **Modal Shift** - Kirklees Council will aim to enable more people to use active travel in all parts of life.
- **Electric Vehicle Policy** - Kirklees Council will develop a strategy for the uptake of Electric Vehicles, through education, developing charging locations and fleet change both of the Council and the businesses of the district.
- **Improve Partnership working** – better partnership working between internal departments of the Council to imbed Air Quality in the planning and delivery of all aspects of Local Authority work. Develop and maintain good relationships with external organisations in Kirklees, particularly anchor institutions and local business.
- **Urban Traffic Management and Control** – build on the award winning and successful UTMC project at Bradley AQMA, where funding allows, to improve the technology on other UTMC junctions, prioritising AQMAs, to reduce emissions at junctions by improving flow, limit stop/start and heavy breaking and acceleration. This will also have economic benefits by reducing journey times.
- **Implement the WYLES** - Kirklees Council was successful in a Government funding bid to fund a Project Officer to deliver the WYLES throughout the region.
- **Identify and bid for external funding** – there are a number of Government funding opportunities - Kirklees Council – will identify and bid for appropriate opportunities.
- **Deliver the Electric Taxi Charge Point Network** - Kirklees Council will work with regional partners in the delivery of this project with the aim of increasing the number of electric vehicle and reduce emissions
- **EcoStars** – Continue to project manage this initiative on behalf of West Yorkshire authorises.
- **Improve Regional Working** - Kirklees Council through the WYLES delivery group will aim to improve the coordination of the regional authorities on Air Quality.
- **West Yorkshire Transport Fund + Highways development**
Air Quality will be considered at all stages of highway development projects. The aim of new project development will be to improve air quality
- **Kirklees Council Local Plan** the draft Local Plan includes Policies to protect the Public form Air Pollution. These Policies will be implemented in full and ensure that new development does not increase emissions and where possible improves reduces them. The development of Supplementary Planning Documents will include additional specific measure to improve Air Quality
- **Domestic Fuel** Kirklees will work with the Public to improve emissions from domestic heating, development of projects for district heating, education and enforcement to ensure that solid fuel use is in accordance with the law, and current best practice and gas boilers are maintained.

- **Government Consultations** – Kirklees will keep up the pressure on National Government to implement Policies which tackle Air Pollution on a National Scale and provide funding for local projects
- Kirklees will develop and deliver a **Communication Plan** either locally or regionally to communicate with residents and business of the district to promote emissions reduction, how to improve air quality, their health and protect the climate.

WHAT CAN THE PUBLIC DO TO IMPROVE AIR QUALITY?

The council wants to ensure that individuals and communities are enabled to make decisions which improve air quality. Whilst the council is working to ensure that this happens, there are also a range of measures that the Public can do to help to improve air quality.

Kirklees Council recognises that sometimes people have limited choices other than to use their car, for example to travel long distances or where public transport is not possible.

- **Walking.** Walking short journeys instead of using the car is a good way to reduce car emissions and improve health. There are a range of walking opportunities available in Kirklees. Click [here](#) for more information.
- **Cycling.** There are a range of cycling opportunities available in Kirklees. For more information click [here](#).
- **Public Transport.** Using public transport instead of the car is one way to improve air quality. You can find your best journey options [here](#).
- **Reduce the use of your car.** Kirklees has a car share scheme, find out more [here](#).
- **Go electric.** If possible, driving an efficient low polluting vehicle e.g. electric/hybrid can help improve air quality.
- **Forget the garden bonfire – do not have bonfires at all.** Compost all garden waste and recycle rubbish rather than burn it. Find out more about how to get rid of garden waste [here](#).
- **Boilers.** Ensure that boilers are serviced regularly and kept in good working order. If a boiler needs replacing then purchase one that has a low NOx emission rating. Make your house more energy efficient so that you need to use your boiler less to heat your home. Find out more information [here](#).
- **Burn smokeless fuel and use the most efficient stove possible such as an EcoStove**

EIA STAGE 1 – SCREENING ASSESSMENT

PROJECT DETAILS

Name of project or policy: Kirklees Climate Emergency and Air Quality	
Directorate: Economy & Infrastructure	Senior Officer responsible for policy/service: Karl Battersby
Service: Major Projects/Public Protection	Lead Officer responsible for EIA: John Atkinson/Martin Wood
Specific Service Area/Policy: Air Quality & Climate Change	Date of EIA (Stage 1): 29/10/2019

Brief outline of proposal and the overall aims/purpose of making this change:

This assessment relates to the Council's proposed response to the Climate Emergency (declared by Council motion in 2019) and the Council's Air Quality Strategy and Action plan. The response to both these areas is being considered together at Cabinet and Council on 12th and 13th November 2019, respectively. This sets out a number of initial priority actions and proposes further detailed work to establish a Phase 2 programme for addressing the Climate Emergency.

ASSESSMENT SUMMARY

Theme	Calculated Scores						Stage 2 Assessment Required
	Proposal	Impact	P + I	Mitigation	Evidence	M + E	
Equalities	6	4	10	0	6	6	Yes
Environment		1.9	1.9	0	0	0	No

NATURE OF CHANGE

WHAT IS YOUR PROPOSAL?	Please select YES or NO
To introduce a service, activity or policy (i.e. start doing something)	YES
To remove a service, activity or policy (i.e. stop doing something)	NO
To reduce a service or activity (i.e. do less of something)	YES
To increase a service or activity (i.e. do more of something)	YES
To change a service, activity or policy (i.e. redesign it)	YES
To start charging for (or increase the charge for) a service or activity (i.e. ask people to pay for or to pay more for something)	NO

WHAT LEVEL OF IMPACT DO YOU THINK YOUR PROPOSAL WILL HAVE ON...	Level of Impact Please select from drop down
Kirklees employees within this service/directorate? (overall)	Positive
Kirklees residents living in a specific ward/local area?	Positive
Please tell us which area/ward will be affected:	Kirklees-wide
Residents across Kirklees? (i.e. most/all local people)	Positive
Existing service users ?	Positive

Each of the following groups?		Please select from drop down
(Think about how your proposal might affect, either positively or negatively, any individuals/communities. Please consider the impact for both employees and residents - within these protected characteristic groups).		
...age	What impact is there on Kirklees employees /internal working practices?	Positive
	What impact is there on Kirklees residents /external service delivery?	Positive
...disability	What impact is there on Kirklees employees /internal working practices?	Neutral
	What impact is there on Kirklees residents /external service delivery?	Neutral
...gender reassignment	What impact is there on Kirklees employees /internal working practices?	Neutral
	What impact is there on Kirklees residents /external service delivery?	Neutral
...marriage/ civil partnership	What impact is there on Kirklees employees /internal working practices?	Neutral
	What impact is there on Kirklees residents /external service delivery?	Neutral
...pregnancy & maternity	What impact is there on Kirklees employees /internal working practices?	Positive
	What impact is there on Kirklees residents /external service delivery?	Positive
...race	What impact is there on Kirklees employees /internal working practices?	Neutral
	What impact is there on Kirklees residents /external service delivery?	Neutral
...religion & belief	What impact is there on Kirklees employees /internal working practices?	Neutral
	What impact is there on Kirklees residents /external service delivery?	Neutral
...sex	What impact is there on Kirklees employees /internal working practices?	Neutral
	What impact is there on Kirklees residents /external service delivery?	Neutral
...sexual orientation	What impact is there on Kirklees employees /internal working practices?	Neutral
	What impact is there on Kirklees residents /external service delivery?	Neutral
...those in poverty or low-come	What impact is there on Kirklees employees /internal working practices?	Neutral
	What impact is there on Kirklees residents /external service delivery?	Neutral
...unpaid carers	What impact is there on Kirklees employees /internal working practices?	Neutral

...unpaid carers

What impact is there on Kirklees **residents**/external service delivery?

Neutral

WHAT LEVEL OF IMPACT DO YOU THINK YOUR PROPOSAL WILL HAVE ON...		Level of Impact	
		Please select from drop down	
Kirklees Council's internal practices ?		Very Positive	
Lifestyles of those who live and work in Kirklees?		Very Positive	
Practices of suppliers to Kirklees council?		Positive	
Practices of other partners of Kirklees council?		Positive	
Each of the following environmental themes ? (Please select from the drop down list)			
	People	Partners	Places
...clean air (including Climate Changing Gases)	Very Positive Score: 0	Very Positive Score: 0	Very Positive Score: 0
...Clean and plentiful water	Neutral Score: 2	Neutral Score: 2	Positive Score: 1
... Wildlife and habitats	Very Positive Score: 0	Very Positive Score: 0	Very Positive Score: 0
...Resilience to harm from environmental hazards	Very Positive Score: 0	Positive Score: 1	Very Positive Score: 0
... Sustainability and efficiency of use of resources from nature	Very Positive Score: 0	Positive Score: 1	Very Positive Score: 0
...Beauty, heritage and engagement with the natural environment	Positive Score: 1	Positive Score: 1	Positive Score: 1
... Resilience to the effects of climate change	Very Positive Score: 0	Positive Score: 1	Very Positive Score: 0
...Production, recycling or disposal of waste	Neutral Score: 2	Neutral Score: 2	Neutral Score: 2
... Exposure to chemicals	Neutral Score: 2	Neutral Score: 2	Neutral Score: 2

HOW ARE YOU USING ADVICE AND EVIDENCE/INTELLIGENCE TO HELP YOU?

Please select YES or NO

Equality Themes

Have you taken any specialist advice linked to your proposal? (Legal, HR etc)?	No
...employees?	No
Do you have any evidence/intelligence to support your assessment (in section 2) of the impact of your proposal on...	Yes
...Kirklees residents?	Yes
...service users?	No
...any protected characteristic groups?	Yes
<p>Please list your equalities evidence/intelligence here [you can include hyperlinks to files/research/websites]: Reference protectd characteristics groups (age/pregnancy/low income) re. AQ</p> <p>Kirklees Council primary data through air quality monitoring across the district. Government/Public Health England data and summary highlight the negative health impacts of air pollution. The affects of particulate pollution in particular appear to be amplified in vulnerable groups, including the young and elderly: UK Govt draft Clean Air Strategy: https://consult.defra.gov.uk/environmental-quality/clean-air-strategy-</p>	

	Please select from drop down
To what extent do you feel you are able to mitigate any potential negative impact of your proposal outlined on the different groups of people?	FULLY
To what extent do you feel you have considered your Public Sector Equality Duty?	FULLY

Environmental Themes

Have you taken any specialist advice linked to your proposal?	Yes
...Kirklees Council practices?	Yes
Do you have any evidence/intelligence to support your assessment (in section 2) of the impact of your proposal on...	Yes
...resident and worker lifestyles?	Yes
...Practices of Supplier to Kirklees Council?	Yes
...Practices of other Kirklees Council partners?	Yes
<p>Please list your environmental evidence/intelligence here [you can include hyperlinks to files/research/websites]: Tyndall Centre The Council's primary data from AQ monitoring regime across the district</p>	

	Please select from drop down
To what extent do you feel you are able to mitigate any potential negative impact of your proposal on the environmtenal issues identified?	FULLY

Integrated Impact Assessment – Stage 2 Assessment and Action Plan

Project Details

Name of project or policy:	
Kirklees Climate Emergency and Air Quality	
Directorate:	Senior Officer responsible for policy/service:
Economy & Infrastructure	Karl Battersby
Service:	Lead Officer responsible for EIA:
Major Projects/Public Protection	John Atkinson/Martin Wood
Specific Service Area/Policy:	Date of EIA (Stage 1):
Air Quality & Climate Change	29/10/19
EIA (Stage 1) reference number:	Date of EIA (Stage 2):
	31/10/19

Stage 1 Assessment Summary

Theme	Calculated Scores						Stage 2 Assessment Required
	Proposal	Impact	P + I	Mitigation	Evidence	Overall	
Equalities	6	4	10	0	6	6	Yes
Environment		1.9	1.9	0	0	0	No

A) Equalities Impact – Evidence from Engagement

CONSULTATION WITH KEY STAKEHOLDERS				COMPLETE THIS DETAIL WHEN YOU HAVE DONE YOUR CONSULTATION	
REF No.	Which key stakeholders have you/are you consulted/ing with?	Why have you/are you consulted/ing them (or not?) and what were you/are you looking to find out?	How did you/are you planning to consult them? Date and method of planned consultation	Actual Date of Consultation	Outcome of consultation What have you learned? Do you have actions to complete that will help mitigate any unnecessary negative impact on groups? [move to section B if you do]
1	<p>Young people are recognised as critical to how the Council approaches addressing the Climate Emergency.</p> <p>The Council's Climate Emergency Working Party (CEWP) included an invited observer from the Kirklees Youth Council.</p> <p>The Council will also take forward a key recommendation from the CEWP to develop and implement a Youth Summit in 2020, explicitly related to Climate Change.</p>	<p>Climate Change is an issue where the effects are likely to be experienced with increasing severity over the coming decades. Consequently, today's young people have a key stake in engaging with (and being consulted on) action to mitigate these effects. It is also important that young people are able to influence how we take these long-term actions.</p>	<p>A process of engagement has been agreed that will result in a Youth Summit in 2020. Prior to this will be a process of area/locality based engagement, in order to identify suitable representatives from all age groups, cumulating in the Youth Summit.</p>	<p>The date of the Youth Summit is to be confirmed.</p>	

<p>2</p>	<p>The Council is proposing to set-up and play a leading-role in a Kirklees 'Climate Commission', a body that will be designed to drive effective action on climate change across the district (and not just within the Council).</p> <p>To ensure equitable outcomes, this commission will be designed as an inclusive body and include representation from communities and the third sector, businesses and other public sector partners.</p>	<p>The Council will ensure that representations from protected characteristic groups will be taken into account in the set-up of the commission in 2020.</p>	<p>Consultation on the form and make-up of the commission will take place over the coming months.</p>	<p>Climate Commission to be set up in 2020.</p>	
<p>3</p>	<p>Currently, as set out in Stage 1, the Council's approach has identified that the majority of protected characteristic groups are regarded as 'neutral' in relation to the measures set out to address climate change and air quality (that is to say that the impacts and benefits are likely to affect all in an equivalent way that is not determined by the</p>	<p>To identify if the protected characteristic of the particular grouping increases vulnerability to the likely effects of a changing climate.</p>	<p>As above, this will take place as part of the consultation on the form and make-up of the commission. If there is a subsequent negative impact identified , the council will further consult with that particular group.</p>	<p>2020</p>	

	protected characteristics). Through subsequent communications and engagement work with representatives of these groups, the council will seek to confirm that this approach is correct.				
4					
5					

B) Equalities Impact – Action Planning

Equalities Impact - ACTION PLAN			Complete this section when you have actually carried out some actions		
REF.No [from section A]	What actions are you going to do as a result of carrying out your consultation?	What do you think these actions will achieve? Will they mitigate any adverse impact on protected groups? Will they foster good relations between people? Will they promote equality of opportunity?	What did you actually do?	When did you do this?	What was the actual outcome? Have you mitigated any negative impact? Have you ensured good relations exist? Have you promoted equality of opportunity?

C) Environmental Impact – Evidence from Engagement

CONSULTATION WITH KEY STAKEHOLDERS				COMPLETE THIS DETAIL WHEN YOU HAVE DONE YOUR CONSULTATION	
REF No.	Which key stakeholders have you/are you consulted/ing with?	Why have you/are you consulted/ing them (or not?) and what were you/are you looking to find out?	How did you/are you planning to consult them? Date and method of planned consultation	Actual Date of Consultation	Outcome of consultation What have you learned? Do you have actions to complete that will help mitigate any unnecessary negative impact on groups? [move to section D if you do]
1					
2					
3					
4					
5					

D) Environmental Impact – Action Planning

Environmental Impact - ACTION PLAN			Complete this section when you have actually carried out some actions		
REF.No [from section C]	What actions are you going to do as a result of carrying out your consultation?	What do you think these actions will achieve? Will they mitigate any adverse impact on protected groups? Will they foster good relations between people? Will they promote equality of opportunity?	What did you actually do?	When did you do this?	What was the actual outcome? Have you mitigated any negative impact? Have you ensured good relations exist? Have you promoted equality of opportunity?