

Carmarthenshire County Council **Air Quality Action Plan**

In fulfilment of Part IV of the Environment Act 1995
Local Air Quality Management

2025



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Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of our statutory duties required by the Local Air Quality Management framework. It outlines the action we will take to improve air quality in Carmarthenshire County Council between 2025 and 2030.

This action plan combines two previous action plans which ran from 2019 to 2025 in Llanelli and Carmarthen and 2014 to 2025 for Llandeilo.

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas^{1,2}.

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion³. Carmarthenshire County Council is committed to reducing the exposure of people in Carmarthenshire to poor air quality in order to improve health.

We have developed actions that can be considered under 9 broad topics:

- Alternatives to private vehicle use
- Freight and delivery management
- Policy guidance and development control
- Promoting low emission transport

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

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

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

- Promoting travel alternatives
- Public information
- Transport planning and infrastructure
- Traffic management
- Vehicle fleet efficiency

Our priorities are to improve traffic management and infrastructure in order to reduce congestion and emissions. Improve cycle routes and pedestrianised footways in order to promote travel alternatives and we aim to investigate methods to raise public awareness to help encourage behavioural change. We want to promote the uptake of electric vehicles and therefore it will be a priority to provide additional electric vehicle charging points within Carmarthen and Llanelli alongside other main towns across the County.

We also recognise the importance that new developments bring to a strong economy and the balance that needs to be addressed, between measures to reduce traffic without discouraging visitors into the Town centres. Therefore, every effort will be taken to improve air quality wherever possible, through the development process using planning policy and guidance.

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

Responsibilities and Commitment

This AQAP was prepared by the Environmental Protection Division of Carmarthenshire County Council with the support and agreement with the following Officers and departments:

- Transport Strategy and Infrastructure Manager, Environment

Carmarthenshire County Council

- Highways and Transportation Manager, Environment
- Planning Officers, Developmental Control
- Forward Planning Officers, Environment
- Road Safety and Traffic Manager, Transport and Engineering
- Assistant Area Engineer West, South Wales Trunk Road Agent

This AQAP has been adopted by Members of Carmarthenshire's County Council's Environment and Public Protection Scrutiny Committee.

This AQAP will be subject to an annual review, appraisal of progress and reporting to the Environmental and Public Protection Scrutiny Committee. Progress each year will be reported to Welsh Government in the Annual Progress Reports (APRs) produced Carmarthenshire County Council as part of our statutory Local Air Quality Management duties.

If you have any comments on this AQAP please send them to Lisa Jones at:

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1. Introduction

This report outlines the actions that Carmarthenshire County Council will deliver between 2025 – 2030 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 Towns of Llandeilo, Carmarthen and Llanelli in Carmarthenshire.

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

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

As Cabinet Member for Climate Change, Decarbonisation and Sustainability, I am pleased to introduce Carmarthenshire's Air Quality Plan. Clean air is essential to our health and wellbeing – not just for today, but for the generations to come. In recent years, we have seen encouraging improvements in air quality across the county, thanks to the hard work of our dedicated team and the strong partnerships we've built with local communities, organisations, and public bodies. Together, we've delivered meaningful reductions in air pollution, creating a healthier environment for all. This plan sets out our continued commitment to cleaner air, safer streets, and a more sustainable future. Let's keep moving forward – for our families, our communities, and the planet we all share.

Aled Vaughan Owen



2. Summary of Current Air Quality in Carmarthenshire County Council

Carmarthenshire County Council has 3 designated Air Quality Management Areas (AQMAs).

- Llandeilo
- Carmarthen
- Llanelli

These areas have been designated due to elevated levels of nitrogen dioxide (NO₂), primarily caused by road traffic emissions. This Air Quality Action Plan (AQAP) consolidates strategies from previous reports to present a unified approach to improving air quality across these areas. The plan aims to outline the sources of pollution, assess their impact, and propose mitigation measures.

Carmarthenshire's Air Quality Management Areas (AQMAs) have observed a continued improvement in NO₂ levels over the last 5-7 years. Carmarthenshire County Council Annual Progress Reports have shown that prevailing air quality continues to show improvements year on year. However, this data will have been impacted by the COVID-19 pandemic and may not be representative of long-term trends.

Appendix A Illustrates data for 3 AQMAs in the last five years and the trend of each hot spot since its AQMA designation

The annual average concentration of nitrogen dioxide for all diffusion tubes at residential receptors in Carmarthenshire for 2023 stayed below the air quality objective of 40µg/m³. This is consistent with what has been observed since 2020 across all monitoring locations and may represent the start of a sustained compliance journey which would end with the revocation of its AQMAs.

Figures 2-1 – 2-3 below shows the observed nitrogen dioxide annual averages for the highest level tube locations between 2019 and 2024.

Figure 2-1 - Six Year Trend in Llanelli AQMA (Highest NO₂ results)

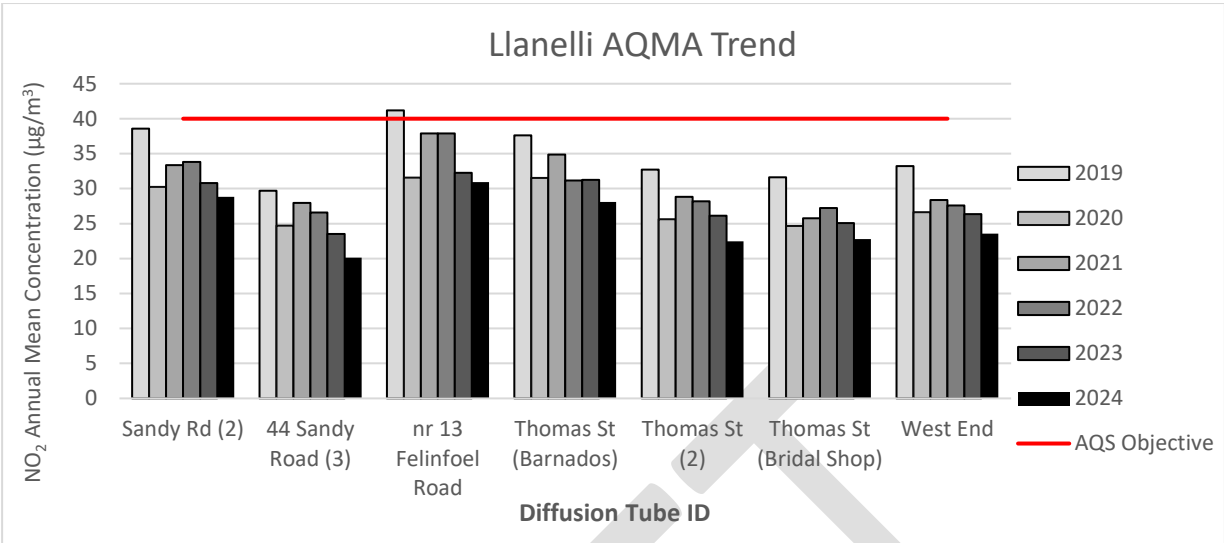
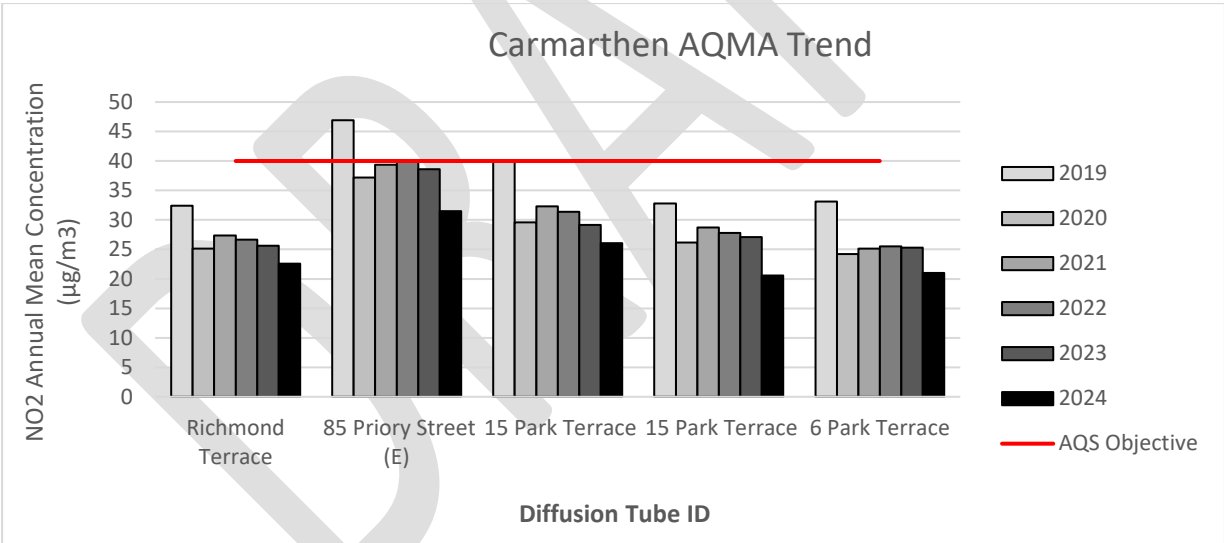
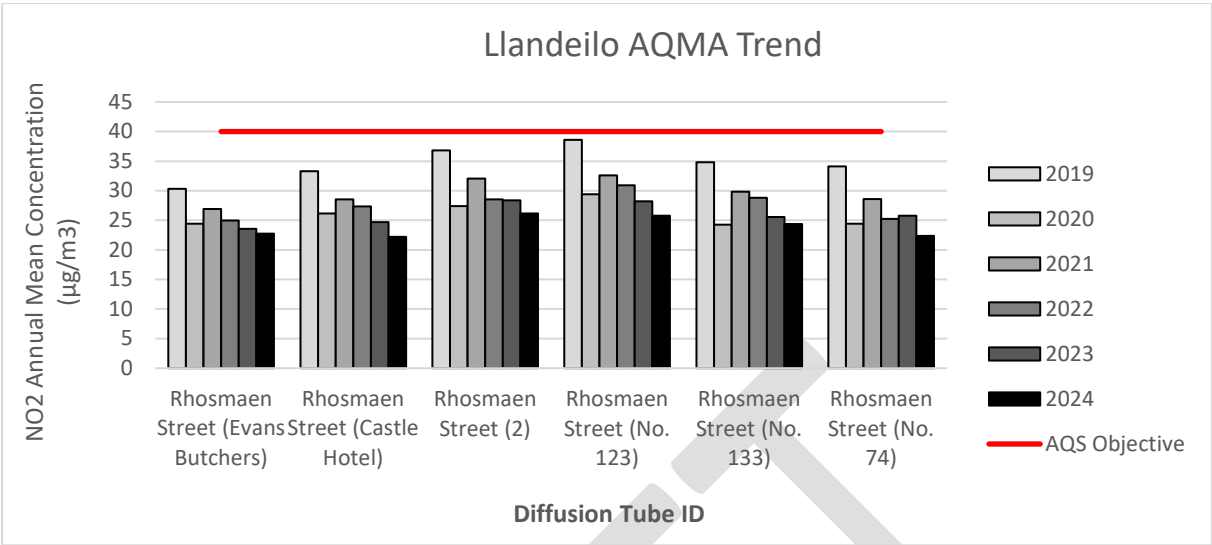


Figure 2-2 Six Year Trend in Carmarthen AQMA (Highest NO₂ results)




Similarly, to Llanelli, most sites within Carmarthen AQMA, experienced a reduction in NO₂ compared to previous years and 2023 appeared to be most comparable to results observed during 2020. 2019 was the first year that has observed all monitoring locations in Llandeilo AQMA to fall below the Annual Air Quality Objective and has maintained this decrease furthermore into 2023.

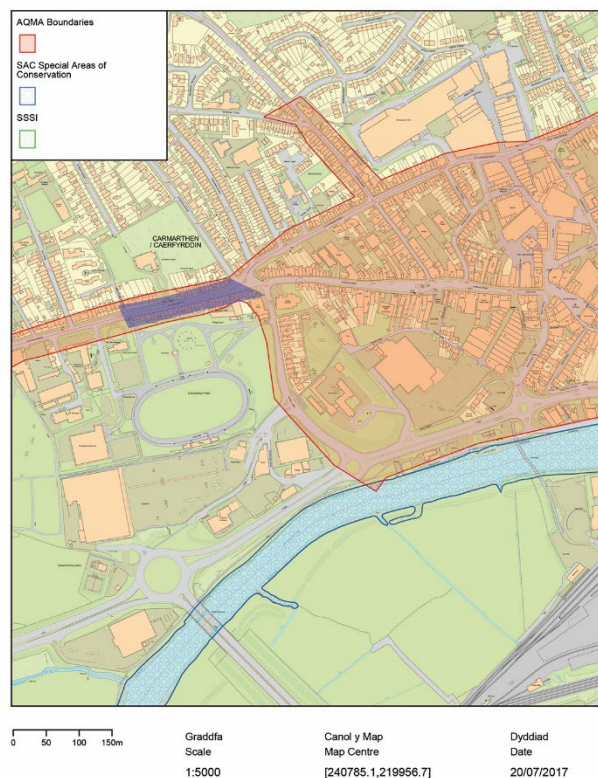
Figure 2-3: Six Year Trend in Llandeilo AQMA (Highest NO₂ results)



The AQMA boundary map areas for Llandeilo, Carmarthen and Llanelli are shown in Appendix B. They cover a much wider area than the actual areas of exceedance. This is because any interventions aimed at improving the area of exceedance may simply move the problem, or the means to make any improvement requires action over a far greater area than the actual area of exceedance itself. Figures 2-4, 2-5 and 2-6 below identify (in blue shading) the actual areas of previous exceedance for both towns. They remain hot spots for the AQMA's because they continue to report elevated levels of NO₂ compared to other sites, although they do not exceed the Air Quality Objective.


Figure 2-4 Carmarthen West

 Carmarthen AQMA Hot Spot (West)



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Figure 2-5 Carmarthen East

 Carmarthen AQMA Hot Spot (East)



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The hot spot areas identified by the blue shaded sections on the maps in Figures 2-4 and 2-5 above are small geographical areas with various constraints, (such as narrow pavements and buildings close to the highway) that greatly restrict any significant interventions that would contribute towards achieving NO₂ reductions of the scale required. Both lengths of road are gradients that have roundabouts at their lower section and pedestrian crossings at the higher end of road section. The use of alternative routes for several of the journeys made along these road sections would help improve the situation. To the West of Carmarthen the Western link road was opened in March 2019.

The hot spot area identified by the blue shaded area on the map in Figure 2-6 below encompasses the bottom of Felinfoel Road meeting Thomas Street and the junction at Gelli Onn. This is a small geographical area with various constraints (such as

narrow pavements and buildings close to the highway) along with being the main intersection junction for routes that cross the town from east to west and north to south. The use of alternative routes for many of the journeys made along these road sections would also help improve the situation.

Figure 2-6 Llanelli Hot spot

Cyngor Sir Gâr
Carmarthenshire
County Council

Llanelli Hotspot



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Figure 2-7 Sandy Road

Cyngor Sir Gâr
Carmarthenshire
County Council

Sandy Road



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Figure 2-7 shows Sandy Road, Llanelli which is also included within the AQMA boundary for Llanelli, this length of road is not only the main trunk road leading from Pembrey and Burry Port into Llanelli, it comprises of a length of terraced houses with a set of traffic lights located in the centre. Improvement works are proposed for this road to help relieve congestion and improve pedestrian safety. Careful consideration is given to developments that may increase travel through this area.

The hot spots areas have largely remained the same since the AQMA's were designated, although the reported levels of NO₂ have significantly improved.

Figures 2-8 and 2-9 below show how Llandeilo has changed, in 2014 the hot spot area in red was in exceedance of the objectives, and in 2023 all sites were compliant, still the elevated levels are largely contained to the area in blue.

Figure 2-8 Llandeilo hot spots 2014

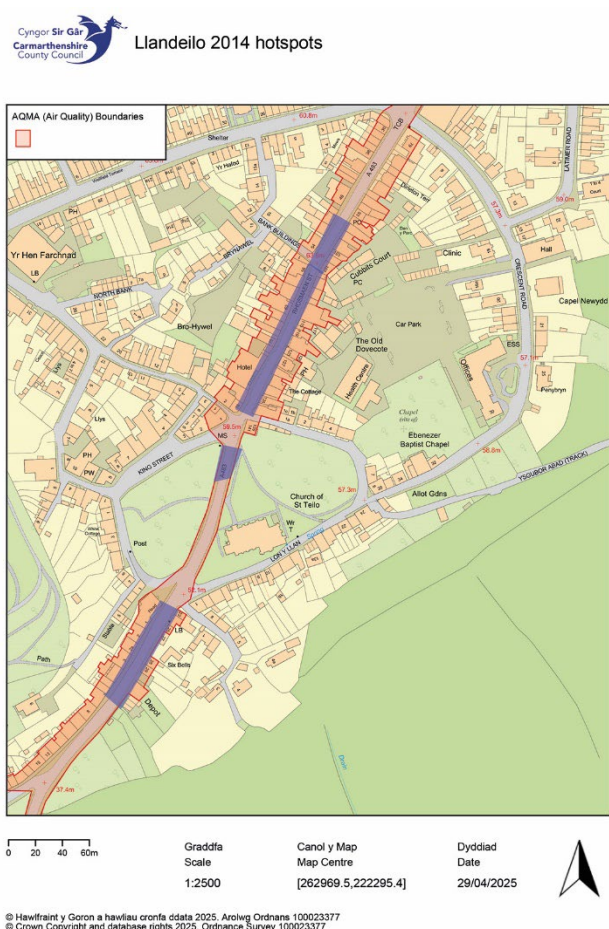


Figure 2-9 Llandeilo hot spot 2024



2.2 Community Context

Carmarthenshire has a diverse range of communities living within its boundary and this is also reflected within the AQMAs it has.

AQMAs in Carmarthenshire include the least deprived and most deprived communities in the County; and as such the council's treatment of air quality needs to be inclusive of all communities within AQMAs. It is recognised that air quality issues in Carmarthenshire are not limited by a geographic boundary or deprivation status. The implication being that where resources are limited there may be a case for tackling issues in the most deprived areas first; however, the aim of the AQAP is that all of the measures to reduce emissions that are currently in place and those which can be implemented have as wide an impact across all AQMAs as possible e.g. electric bus services.

School communities represent some of the most vulnerable receptors to poor air quality and Carmarthenshire County Council are committed to developing air quality interventions under the theme of Education & Awareness. We as an authority have been successful with the Welsh Government Local Air Quality Management Fund for 2023 and 2024. Projects delivered in the last two years through the LAQM fund has included the following -:

- Installation of real time Air Quality monitors outside 8 schools. This has enabled over 2000 pupils to access real time air quality data in the vicinity of their schools, which has enabled them to do some local project work around air quality.
- Provide informative talks to primary schools to raise awareness to pupils on air quality and its impact on health
- Provided access to the WoW Travel Tracker for 2500 pupils. This encourages primary school pupils to actively travel to and from school.
- Abbie Ayre and the Shed of Science which was an interactive air quality education programme aimed at year 5 pupils. This was delivered to 789 students over 20 different primary schools.

3. Carmarthenshire County Council Air Quality Priorities

3.1 Public Health Context

In 2019 The World Health Organisation (WHO) described air pollution as the largest environmental risk to our global health, and increasing evidence indicates that poor air quality significantly contributes towards several preventable illnesses and early deaths. Air pollution threatens all ages and particularly the vulnerable such as older people, children, pregnant women and those with existing medical conditions. 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 Wales, the estimated burden of poor air quality on early deaths is in an equivalent range of between 1,000 and 1,400 deaths each year and DEFRA has estimated that Nitrogen Dioxide (NO₂) contributes to shortening lives by an average of around 5 months. Targeting effective air quality management also requires an understanding of the relationship between air pollution and the wider health determinants, as evidence suggests that poor air quality is often linked to wider socio-economic factors.

Following work undertaken to formulate [Carmarthenshire's Well-being Assessment](#), the Public Services Board produced Carmarthenshire's [Well-being plan for 2023 - 2028](#). This is very much based on the 7 well-being goals and five ways of working (Wellbeing of Future Generations (Wales) Act 2015). In 2022 The Air Quality indicator for Carmarthenshire scored 5 for NO₂, which is good compared to the national average of 8 for Wales.

Carmarthenshire County Council's [Corporate Strategy 2022-2027](#) further sets out its Well-being objectives which seeks to continuously improve economic, environmental, social and cultural well-being in the County. This was updated in 2022 following a consultation in summer of 2022.

Carmarthenshire's Corporate Strategy 2022-27 includes its Well-being Objectives for the period. Air Quality impacts on three of the four well-being objectives that have been identified,

Well-being Objective 1 (Start Well) -Enabling children and young people to have the best possible start in life,

Well-being Objective 2 (Live and Age Well) - Enabling our residents to live and age well and

Well-being Objective 3 (Prosperous communities) –Enabling our communities and environment to be healthy, safe and prosperous.

Table 3-1 Well Being Objective and Air Quality Impact

WBO	AQ Impact	Our Actions
WBO1- Start Well	We recognise the impact that poor air quality can have on children's development, cognitive abilities, and health. Children are specifically vulnerable, even from foetal development as their lungs, organs and brains are developing.	<ul style="list-style-type: none"> • Liaise with schools and the Healthy School's Initiative to promote active travel campaigns such as walk/cycle to school days and the National Clean Air Day; • continue to study air quality around the school yard in our Air Quality Management Areas, raising awareness, encouraging active travel to school and promoting anti-idling at the school gates. We don't want traffic around the school gate, enforcement activity is in place to discourage parents/carers from contravening TRO's at school gate; • Encourage people to walk to school by developing behavioural change programme and work with communities to develop bids for infrastructure funding to develop safe routes to school. • Promote the use of school travel plans.
WBO2 (Live and Age Well)	Sustainable communities support people to live healthy lives and improved pedestrian connectivity can support active travel options to reduce traffic pollution. Good health is a key factor to aging well. Older people are	<ul style="list-style-type: none"> • Continue to monitor air quality (nitrogen dioxide) for the residents and visitors in the County. This will be carried out by regular assessments and where necessary, sampling programmes; • Promote sustainable placemaking through the development process and our Local Development Plan; 7

	<p>vulnerable to more severe ill-health conditions associated with air pollution as it can cause lung and heart disease, and emerging evidence suggests that areas with very poor air quality can increase the risk of dementia.</p>	<ul style="list-style-type: none"> • Continue to improve Walking and Cycling Linkages; • Provide Safer Routes in communities to encourage and support active travel as above; and • Create low emission options by providing electric bike hire schemes and increasing access the electric vehicle charging points across the County. We will also continue to develop infrastructure to support the growth of electric cars • Take a preventative approach to support health and well-being in the County; and • Through regular reviews and assessment of our transport routes, industry and developing communities, monitor air quality risks to minimise long term exposure to pollutants that may adversely impact health
WBO 3 (Prosperous communities)	<p>Air pollution has direct impacts on the natural environment, contributing to climate change, reducing crop yields, and polluting oceans. Cleaner air will directly benefit animals and habitats as well as creating a better environment for everyone to live, work and thrive in. Good quality, energy efficient</p>	<ul style="list-style-type: none"> • Through the planning process, promote sustainable places with good pedestrian linkages, green infrastructure, travel plans and sustainable transport options; • Protect our environment and ecological habitats from industry under the environmental permitting regime; • Assess the impacts of development on local air quality and natural habitats from both the construction and operational phases;

	<p>homes can also have a significant effect on reducing fuel use polluting the atmosphere. Highway Infrastructure can influence air pollution by lowering speed limits, reducing congestion, promoting active travel with safe cycle and footways. Access to electric vehicle charging points across the County can also support the uptake of lower emission vehicles</p>	<ul style="list-style-type: none"> • Monitor Nitrogen Dioxide in our Air Quality Management Areas some of our busiest roads and assess other potential impacts; • Utilise policy guidance and developmental control to minimise pollution impacts and improve air quality where possible; and Improve the cycle network adopt public cycle hire schemes; • Expand our active travel routes and continue to provide safer routes for communities; • Continue to work with Welsh Government to help deliver at Llandeilo Bypass to improve air quality and road safety in Llandeilo town; • Continue to work with Regional local Authority Partners to develop the plans for a South Wales Metro; • Reduce speed limits improve pedestrian safety around schools and residential areas with 20mph zones; • Work with South Wales Trunk Road Agency to deliver Strategic Highways Improvements; • • Seek to improve emissions from our own fleet; and • Increase the provision of electric vehicle charging points across the County
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3.2 Planning and Policy Context

Air Quality Planning Policy Clear guidance in respect of a range of Environmental Protection matters are contained within Planning Policy Wales (PPW) Edition 12 (2024), to maximise health and well-being through sustainable development, whilst tackling climate change and making places more resilient. In relation to the impact of development on Air Quality Management Areas; minimising exposure to air pollution by incorporating good design and mitigation. The Sustainable Transport hierarchy has been adopted in this Air Quality delivery plan to reduce the need to travel and prioritise active and sustainable transport through the planning process. PPW and the National Development Framework can be used directly in the decision-making process where an LDP is silent or out of date on an issue.

Wherever possible, Carmarthenshire County Council will take opportunities to improve air quality through the development process and make every effort to prevent significant impacts on air quality arising from new development. This will be delivered in support of Welsh Government Policy guidance 'Local Air Quality Management in Wales' June 2017, Planning Policy Wales (12th Edition) and Carmarthenshire's Local Development Plan (LDP), of which the most notable LDP policy in relation to Air Quality is EP2: Pollution. Actions will also be taken to ensure that new developments proposed within the Air Quality Management Area's do not contravene this action plan or render any of the measures unworkable.



Currently Carmarthenshire County Council does not have any Supplementary Planning Guidance (SPG) relating to Air Quality. However, as part of this consultation we aim to propose that an SPG for Air Quality is implemented for Carmarthenshire Council.

3.3. Local / Regional Air Quality Strategy

Carmarthenshire County Council has not developed a specific Local Air Quality Strategy. The air quality work is based on the National Strategies for monitoring of air quality, and this has been used as the county's Air Quality Plan. The air quality work is constantly being reviewed to ensure it remains relevant and appropriate. The designation of the AQMA's in Llandeilo, Llanelli and Carmarthen and the setting up of the Steering and Action Planning Groups has helped to forge the links with internal stakeholders.

Having more internal links has helped to raise the profile of the air quality work such that there is greater collaboration between departments, leading to improved communications and working arrangements.

3.4 Local Transport Plans and Strategies

Historically, the authority produced a Local Transport Plan (LTP), which was later incorporated into a Regional Transport Plan (RTP) under the direction of the Welsh Government. This regional plan covered unitary authorities of Neath Port Talbot, Swansea, Carmarthenshire, and Pembrokeshire, which collectively formed the South West Wales Integrated Transport Consortium (SWWITCH).

However, following the removal of funding for SWWITCH, the Regional Transport Plan ceased to be utilised in the same way. Despite this, the partnership arrangement between the authorities remained, leading to the development of a

combined Local Transport Plan for the Swansea Bay City Region (2015–2020). More information on this plan can be found [Joint LTP 300115](#) .

3.5 Air Quality and Active Travel

The Local Air Quality Management work that previously fed into the Regional Transport Plan continues to be considered within the Local Transport Plan. Policies and infrastructure interventions are designed to improve air quality and minimise pollution from transport sources.

Carmarthenshire recognises NO₂ from road traffic as a primary concern. As a result, active travel initiatives are strongly encouraged. The Active Travel (Wales) Act 2013 requires local authorities to identify and enhance walking and cycling routes, including publishing maps to connect key locations such as workplaces and education centres. Carmarthenshire County Council has published its integrated network maps, available <https://cyclewalkcarms.engaged.space/>. This aligns with the Council's long-term ambition to become the Cycling Hub of Wales.

Further information can be found here on the [Carmarthenshire's cycling strategy](#) and [cycling tourism](#).

3.6 Future Regional Transport Plan

In January 2022, a new Corporate Joint Committee (CJC) was formed to oversee regional collaboration. As part of this, the CJC is preparing a new Regional Transport Plan (RTP) for Carmarthenshire, Neath Port Talbot, Pembrokeshire, and Swansea. Consultation began in 2024, and once adopted, this new RTP will replace the 2015 Joint Local Transport Plan. [Consultation](#)

3.7 Active Travel Plans and Strategies

It is acknowledged that NO₂ from road traffic is the primary cause for concern for Carmarthenshire. Any measures that can encourage and facilitate alternative means of transport are therefore to be welcomed. The Active Travel (Wales) Act 2013 places a statutory requirement on Local Authorities to identify and improve routes for walking and cycling, which includes the publication of maps to identify suitable routes, and to provide links within key locations, such as places of work, education etc

Carmarthenshire County Council has published its integrated network maps, which can be found here: <https://www.carmarthenshire.gov.wales/home/council-services/travel-roads-parking/active-travel/#.W832x-aot9B>

This ties in with the Council's long-term aim of becoming the Cycling Hub of Wales.

3.8 Green Infrastructure Plans and Strategies

A Green and Blue Infrastructure Strategy has been developed and can be found [here](#) in which all green infrastructure assets across the County have been mapped. This will help identify areas where tree planting schemes could be implemented and quantify in area (for monitoring and reporting purposes) green infrastructure across the County.

The Strategy builds on evidence on the cost-effectiveness and benefits of using nature-based solutions to tackle and solve a range of economic, social, environmental and well-being problems. Action plans have been developed to make improvements across eight key towns in the County.

The Council adopted a supplementary planning guidance in September 2016, 'Placemaking and Design' which encourages developers to adopt a green infrastructure approach to support policy GP1 of the Local Development Plan for 'Sustainability and High-Quality Design'.

An SPG for the integration of Green and Blue Infrastructure within new developments has also been drafted which will be subject an 8-week public consultation before its formally adopted to support the Local Development Plan in 2025.

3.9 Climate Change Strategies

There are measures contained within Carmarthenshire's [Corporate Strategy 2022-2027](#) that relate to Climate Change, specifically around the implementation and promotion of the increased use of renewable energy and reducing carbon outputs. In February 2019 Carmarthenshire County Council adopted a zero-carbon motion to become carbon neutral by 2030 in support of well-being objective 12 'Improve the Environment for now and the future'. We have since been the first local authority in Wales to publish a net zero carbon action plan, which was endorsed by full Council in February 2020, which outlines our route towards becoming a Net Zero Carbon Local Authority by 2030.

The responsibility of delivering such improvements requires a collaborative approach with several internal and external partners, because there are many factors that can influence the delivery of clean air in Carmarthenshire. The main themes are summarised below:



Each theme in the plan acts as a framework for the creation of policies, projects and schemes, to invite flexible, co-beneficial solutions to address a spectrum of issues. Each theme can deliver contributions towards improving air quality but collectively those impacts can be significant. It may not always be possible to quantify emission reductions directly attributed to certain actions, as many influencing factors can play their part. Nevertheless, our aim is to reduce pollution emanating from transport, whilst enabling and supporting our residents to choose more sustainable modes of transport and increase their active travel.

Ultimately, our goal is to reduce Nitrogen Dioxide levels within our AQMA Towns, not only to meet the national air quality objectives but to enhance air quality within the County for both residents and visitors. Our efforts must be sustainable to continue the trend for future generations. In turn, we will thereby help reduce the risk of ill-health cause by air pollution and support our Well-being objectives.

3.10 Source Apportionment

The AQAP measures presented in this report are intended to be targeted towards the predominant sources of emissions within Carmarthenshire County Council's area, namely Transport. Source apportionment is where the contribution of each polluting source (e.g. class of vehicle) is estimated. Traffic source apportionment exercises have been carried out by Carmarthenshire County Council, in line with LAQM.TG (22).

A source apportionment exercise has been conducted for each AQMA where the most elevated NO₂ readings (hot spots) have been reported in Llandeilo, Carmarthen and Llanelli. This exercise helps identify the main sources of traffic related NO_x to help focus our actions. The pie charts in Figures 3-1 to 3-3 below illustrate the relative contributions of traffic emissions and show quite a different picture in each area. In Felinfoel Road most NO_x is likely from HGV's, whereas in Priory Street and Rhosmaen Street the main sources is cars.

Figure 3-1 Source apportionment at Felinfoel Road, Llanelli

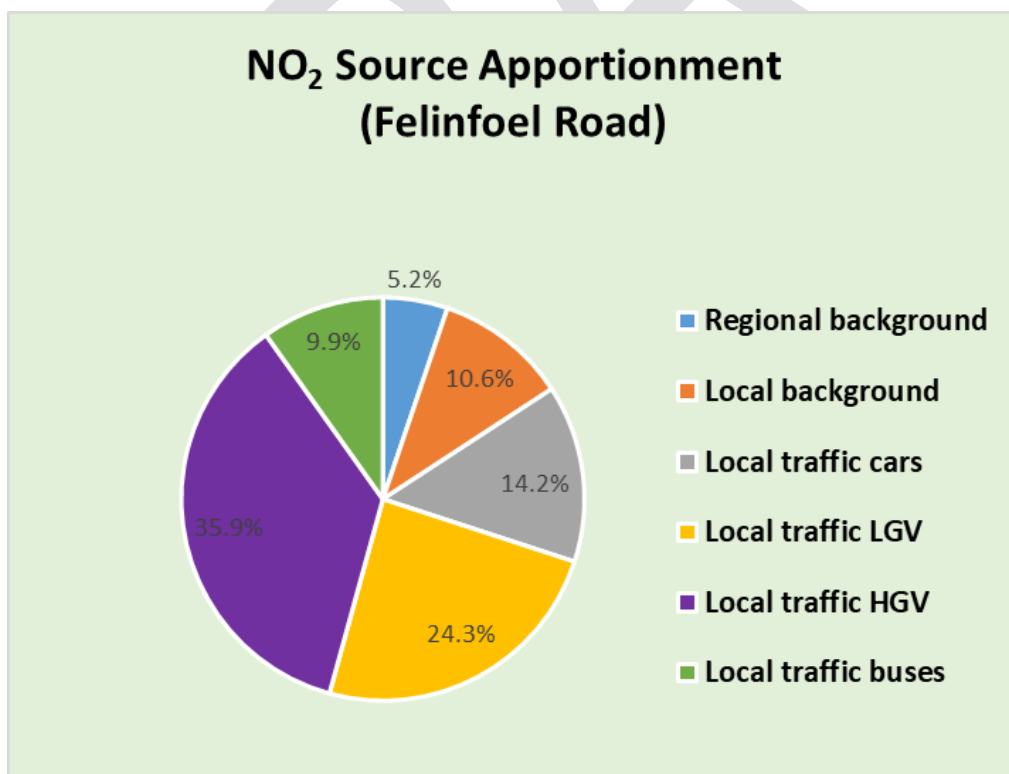
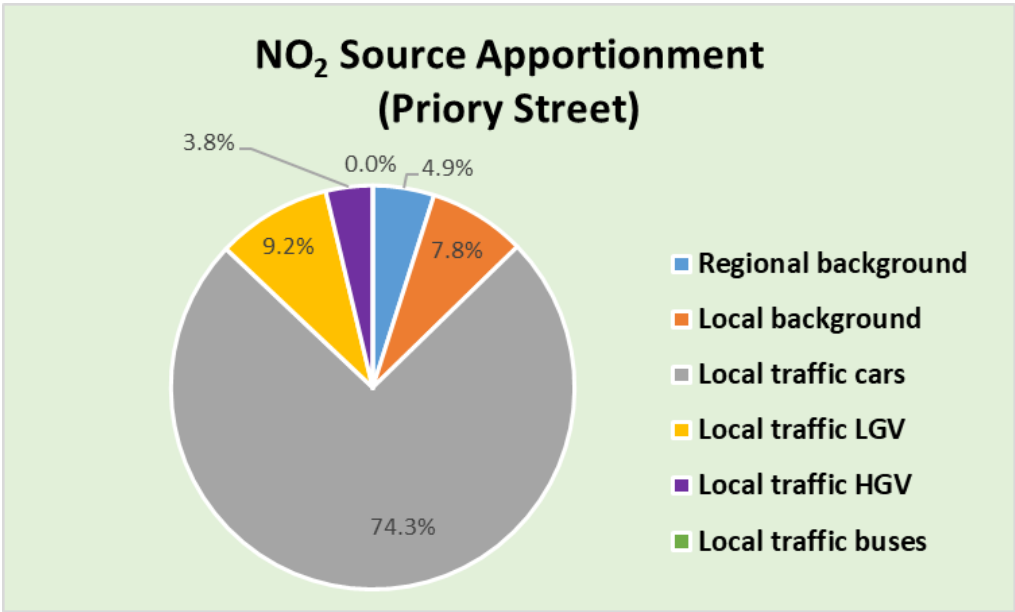
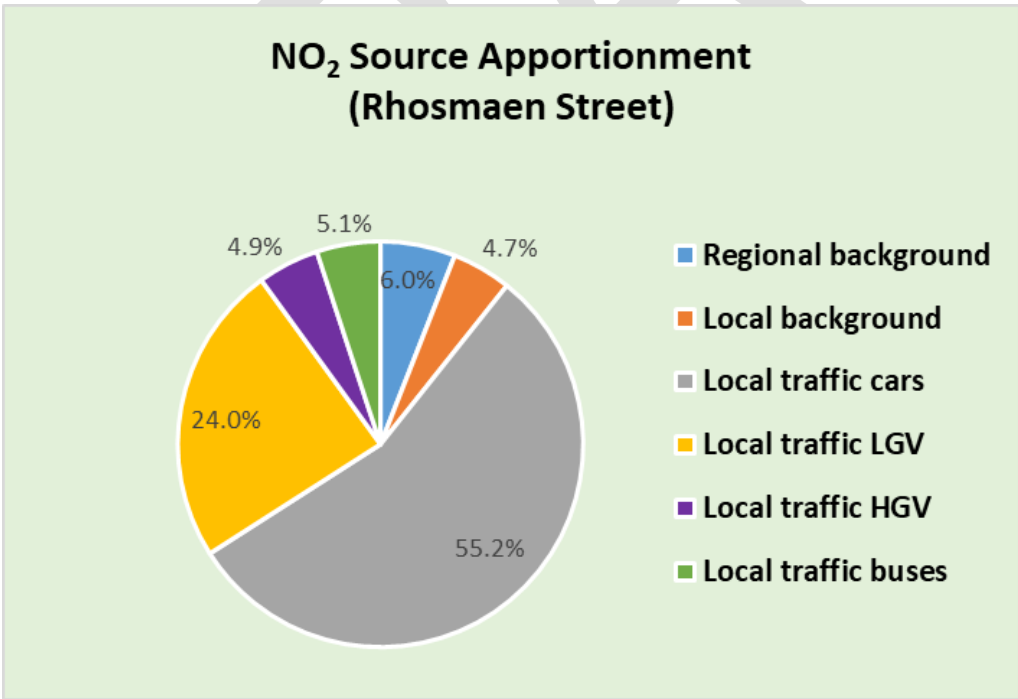


Figure 3-2 Source apportionment at Priory Street, Carmarthen



*Local Buses were included as HGV for this count

Figure 3-3 Source apportionment at Rhosmaen Street, Llandeilo



3.11 Required Reduction in Emissions

Historically there has been a requirement to identify the reduction needed in NO₂ to achieve the objective level of 40µg/m³, as an annual mean. However, latest policy guidance issued by Welsh Government in 2017 goes further and places a requirement for us to look at reducing pollution levels wherever possible (and not just within designated AQMA's). Rather than simply fixating on achievement of the Air Quality Objective. The source apportionment work will also be used to help inform potential interventions that may result in improvement across the AQMA's and beyond. Additional traffic counts have already begun that will assist with further source apportionment work, the results of which will feed into the assessment of the proposed interventions.

The required reduction in emissions in order to meet the NO₂ National Air Quality Objective of 40µg/m³ within our hot spot areas has been calculated in line with Chapter 7 of Technical Guidance LAQM.TG22. No further reductions are required to comply with the current national objectives, because there are no exceedances. However, it is aimed to ensure that this compliance and downward trajectory of Nitrogen Dioxide levels continues to help us achieve any new stricter targets which are likely in the forthcoming future.

3.12 WHO air quality guideline values and current National air quality objectives.

The national air quality objectives for Wales represent pragmatic thresholds above which the Welsh Government considers the health risks associated with air pollution to be unacceptable. However, air just barely compliant with the objectives should not be considered 'clean' and still carries long-term health risks. The lower the concentration of pollutants such as nitrogen dioxide and particulate matter, the lower will be the risks of adverse health effects in the exposed population. Therefore, while compliance with the national air quality objectives is essential, it is desirable to keep levels of pollution as low as reasonably practicable.

There are plans for Welsh Government to review the Air Quality target objectives over the next coming years, and it is likely that due consideration will be given to the health-based recommended WHO air quality guidelines which were updated in 2021, upon setting standards. The 2021 update reflects improved evidence on how air pollution affects health, even at low levels, interim targets are also provided for consideration of introducing a phased improvement plan to reach goals.

Table 3-2 Current National Objective and WHO Targets

Pollutant ($\mu\text{g}/\text{m}^3$)	Measured as Averaging Time	2005 WHO AQGs	National Objective	WHO Interim Target			2021 WHO AQG level
				1	2	3	
Nitrogen dioxide (NO₂)	1-hour mean	200	200 (not to be exceeded more than 18 times a year)	-			200
	24-hour mean	-	-	120	50	-	25 *
	annual mean	40	40	40	30	20	10

Carmarthenshire has not exceeded the national annual objective of $40\mu\text{g}/\text{m}^3$ since 2020 and is also on a trajectory to comply with the WHO interim target 2 of $30\mu\text{g}/\text{m}^3$ for 2024. 2020 and 2021 were not considered representative years given the 'lockdown' period experienced during the COVID 19 Pandemic, as such these years have been discounted from the purpose of demonstrating at least three consecutive compliant years, and below 'borderline compliance' of $36\mu\text{g}/\text{m}^3$. There have been areas in the county that have remained borderline compliant in recent years; Priory

Street, Carmarthen 2020 to 2023, Felinfoel Road in Llanelli 2021 to 2022 and Rhosmaen Street, Llandeilo in 2019.

3.13 Key Priorities

The following areas of focus will be prioritised for action to deliver in order to deliver the largest reduction in NO₂.

We will aim to deliver the following four key objectives:

Table 3-3 Alignment of Objectives and Priorities

Objective	Aligned Priorities	Description of Priorities
Objective 1: Reducing Congestion Actions: robust enforcement of TROs, infrastructure improvements, promoting sustainable travel (car sharing, active travel, "walk the last mile").	Priority 1 - Traffic Management and Infrastructure Enhancements Priority 4a - Low Emission Transport (Congestion Focus)	Priority 1: Signal optimization, road layout redesign, bypass feasibility studies to improve flow and reduce idling/emissions. Priority 4a: Encouraging modern, low-emission vehicles (e.g., 100% eBus services), ECO Stars haulage accreditation, infrastructure projects that support congestion reduction.
Objective 2: Modal Shift Actions: promoting public transport (regional Metro), demand management (short-stay parking), active travel,	Priority 2 - Sustainable and Active Travel Promotion Priority 3 - Freight	Priority 2: Public transport improvements, active travel networks, park-and-ride schemes. Priority 3: HGV rerouting,

Objective	Aligned Priorities	Description of Priorities
safer routes to schools, sustainable transport planning.	and Delivery Management Priority 5 - Public Engagement and Awareness (Behavioural Change)	delivery time regulations to minimize peak congestion and create space for modal shift. Priority 5: Campaigns to promote sustainable transport behaviours and use of alternatives to car travel.
Objective 3: Improving Air Quality Actions: promotion of ULEVs, smoke controls (e.g., wood-burning stoves), green infrastructure initiatives.	Priority 4b - Low Emission Transport (Air Quality Focus) Priority 5 - Public Engagement and Awareness Priority 6 - Policy and Planning Integration	Priority 4b: EV charging infrastructure, fleet transition to electric/low-emission, incentives for EV adoption. Priority 5: Education and awareness campaigns on air pollution and reduction strategies. Priority 6: Planning conditions for low-emission strategies in new developments, construction site controls, sustainable urban development policies.
Objective 4: Monitoring, Data, and Governance Actions: robust data capture, air quality/transport modelling, Air Quality Action Planning Steering Group to oversee action delivery.	Priority 7 - Monitoring, Data, and Governance Priority 6 - Policy and Planning Integration (support role)	Priority 7: Air quality and traffic monitoring systems, real-time data dashboards, use of data to guide and adjust strategies. Priority 6 (support role): Ensuring policy decisions are informed by ongoing data

Objective	Aligned Priorities	Description of Priorities
		insights and modelling outcomes.

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4. Development and Implementation of Carmarthenshire County Council AQAP

4.1 Consultation and Stakeholder Engagement

In developing 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. In addition, we have undertaken the following stakeholder engagement:

- Advertised on Council Website
- Notifications on Social Media
- Articles in local newspaper

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

Table 4-1 – Consultation Undertaken

Consultee	Consultation Undertaken
Welsh Government (Air Section)	<Yes/No>
Natural Resources Wales	<Yes/No>
The highways authority	<Yes/No>
South Wales Trunk Road Agency	<Yes/No>
All neighbouring local authorities	<Yes/No>
Public Health Wales	<Yes/No>
Town and Local Councillors	<Yes/No>

Consultee	Consultation Undertaken
Bodies representing local business interests and other organisations as appropriate	<Yes/No>

4.2 Steering Group

The Action Plan Steering Group was formulated following the declaration of the AQMA's. It consists of members from

Transport and Highways	Strategy and Infrastructure Manager, Fleet Manager Transport Planner Strategic Integrated Transport Services Manager Modernising Transport Co-ordinator Strategic Highways & Network Infrastructure Manager Traffic and Road Safety Manager - Op Manager Passenger Transport - Highways and Transportation, Transport and Engineering
Waste Section	Waste Transformation - Waste Operations Manager

Development Control	Developmental Control,
Economic Development	Economic Development Manager Ammanford & Carmarthen Town Centre Co-ordinator Economic Development
Education	Education and Inclusion Services
Transformation Team	Transformation Manager
Strategic Policy & Placemaking	Forward Planning and Regeneration. Carbon Reduction Officer Biodiversity Officer Greening Carmarthenshire: Project Coordinator
Licensing Team	Licensing Officers
Public Health Wales	
Hywel Dda	

The Group agreed that a combined Action Plan would be beneficial for the 3 AQMAs in Carmarthenshire.

The AP Group performed a 'brain-storming' session to generate a list of potential interventions that may help improve air quality. The list was organised in those that were relevant for the 3 AQMAs.

The comments and suggestions received through the consultation were assessed and, where possible, incorporated into the Action Plan. The consultation exercise

was valuable in teasing out suggestions that had not previously been considered and the Action Planning Steering group is very grateful to those who participated in the consultation. All proposals will be subject to careful consideration and investigation to ascertain whether it is feasible to implement. The outcome may mean that some will not be deliverable.

The Action Planning Steering Group will remain as an active working group that coordinates and oversees the implementation of the various Action Plan proposals. Key partners of the group have been identified for delivering or assessing actions corresponding to their role. The data gathered from implementation will be documented and reviewed by the Group to ascertain the benefits gained from each proposal, along with assessing whether there have been negative impacts. The Action Plans are deemed as 'live' documents, which are likely to evolve over time and therefore will be reviewed on a regular basis. It is proposed that the review will be carried out as part of the annual reporting requirements to Welsh Government under the LAQM process.

5. AQAP Measures

Table 5-1 shows the Carmarthenshire County Council AQAP measures. It contains:

- a list of the actions that form part of the plan
- the responsible individual and departments/organisations who will deliver this action
- estimated cost of implementing each action (overall cost and cost to the local authority)
- expected benefit in terms of pollutant emission and/or concentration reduction
- the timescale for implementation
- how progress will be monitored

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

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Table 5-1 – Air Quality Action Plan Measures

No	Measure	Priority	Category
1	Monitor progress of ULE vehicles in the public sector fleet	Priority 2 - Sustainable and Active Travel Promotion Priority 4 - Low Emission Transport Initiatives	Vehicle Fleet Efficiency
2	Develop a Green Infrastructure Strategy for the Local Authority	Priority 6 - Policy and Planning Integration	Policy guidance and Development Control
3	Implement green infrastructure or urban planting schemes	Priority 6 - Policy and Planning Integration	Policy guidance and Development Control
4	Monitor improvements of car parking issues at Glangwili Hospital.	Priority 2 - Sustainable and Active Travel Promotion	Traffic Management
5	Number of 'Car Club' facilitators within the County with EV vehicles	Priority 2 - Sustainable and Active Travel Promotion Priority 4 - Low Emission Transport Initiatives	Alternatives to private vehicle use
6	Promote Air Quality messages to road users.	Priority 5 - Public Engagement and Awareness	Public Information & Traffic management
7	Reduce Llandeilo town centre pollution and congestion by introducing a one-way system in combination with a relief road.	Priority 1 - Traffic Management and Infrastructure Enhancements Priority 3 - Freight and Delivery Management	Traffic Management
8	Assess the removal of parking bays along Rhosmaen Street and Bridge Street	Priority 1 - Traffic Management and Infrastructure Enhancements	Traffic Management
9	Rhosmaen Street Improvements -widening pavements, green infrastructure	Priority 1 - Traffic Management and Infrastructure Enhancements	Traffic Management

10	Introduce a bike hire scheme for Llandeilo Town	Priority 2 - Sustainable and Active Travel Promotion Priority 4 - Low Emission Transport Initiatives	Transport Planning and Infrastructure Promoting travel alternatives
11	Develop a SPG for Air Quality	Priority 6 - Policy and Planning Integration	Policy guidance and Development Control
12	Explore option of an Eco-Stars scheme for the County and promote uptake to fleet operators	Priority 4 - Low Emission Transport Initiatives	Vehicle Fleet Efficiency
13	Advertise offices that have facilities for cyclists.	Priority 2 - Sustainable and Active Travel Promotion Priority 4 - Low Emission Transport Initiatives	Promoting Travel Alternatives
14	Increase cycle parking provision across county & provide public cycle repair stations	Priority 2 - Sustainable and Active Travel Promotion Priority 4 - Low Emission Transport Initiatives	Promoting Travel Alternatives
15	Promote E-Bike Charging Stations	Priority 2 - Sustainable and Active Travel Promotion Priority 4 - Low Emission Transport Initiatives	Promoting Travel Alternatives
16	Enhanced active travelled routes (Walking and cycling)	Priority 2 - Sustainable and Active Travel Promotion Priority 4 - Low Emission Transport Initiatives	Promoting Travel Alternatives
17	Traffic modelling options for reducing traffic through Priory Street	Priority 1 - Traffic Management and Infrastructure Enhancements Priority 3 - Freight and Delivery Management	Traffic Management
18	Consider sustainable options to reduce congestion via A484, Llanelli West (Sandy Road Corridor) encouraging sustainable modal shifts	Priority 1 - Traffic Management and Infrastructure Enhancements	Traffic Management
19	Provide EV charging infrastructure within the County	Priority 2 - Sustainable and Active Travel Promotion	Promoting Low Emission Transport

		Priority 4 - Low Emission Transport Initiatives	
20	Promote cycling and walking to school more.	Priority 2 - Sustainable and Active Travel Promotion Priority 5 - Public Engagement and Awareness	
21	Where illegal parking that causes congestion, increase traffic enforcement / patrols		

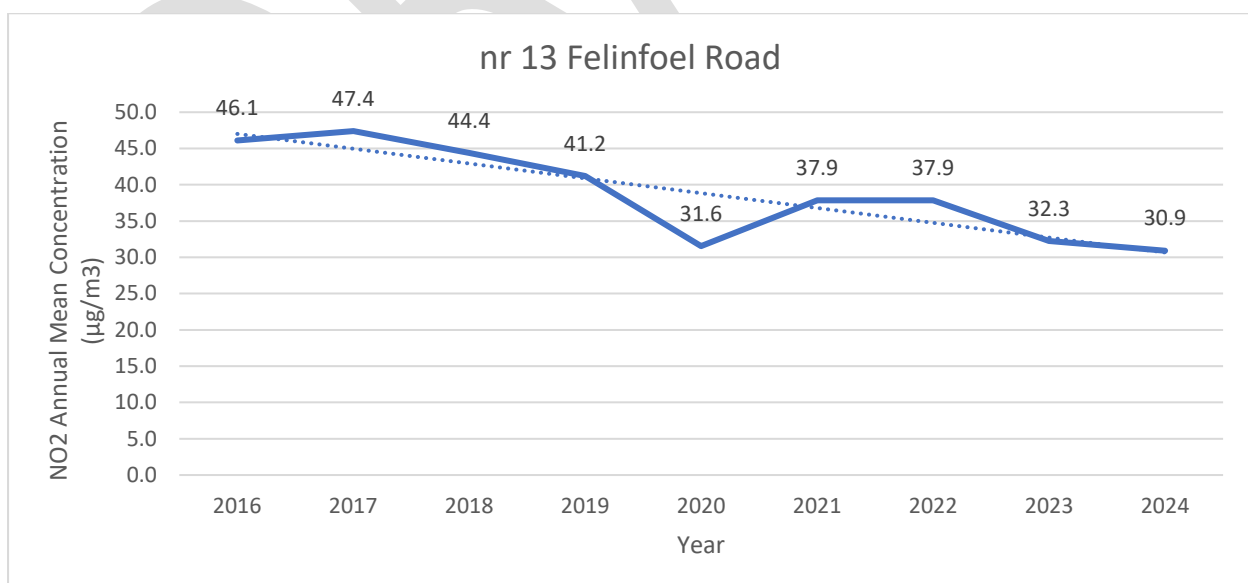
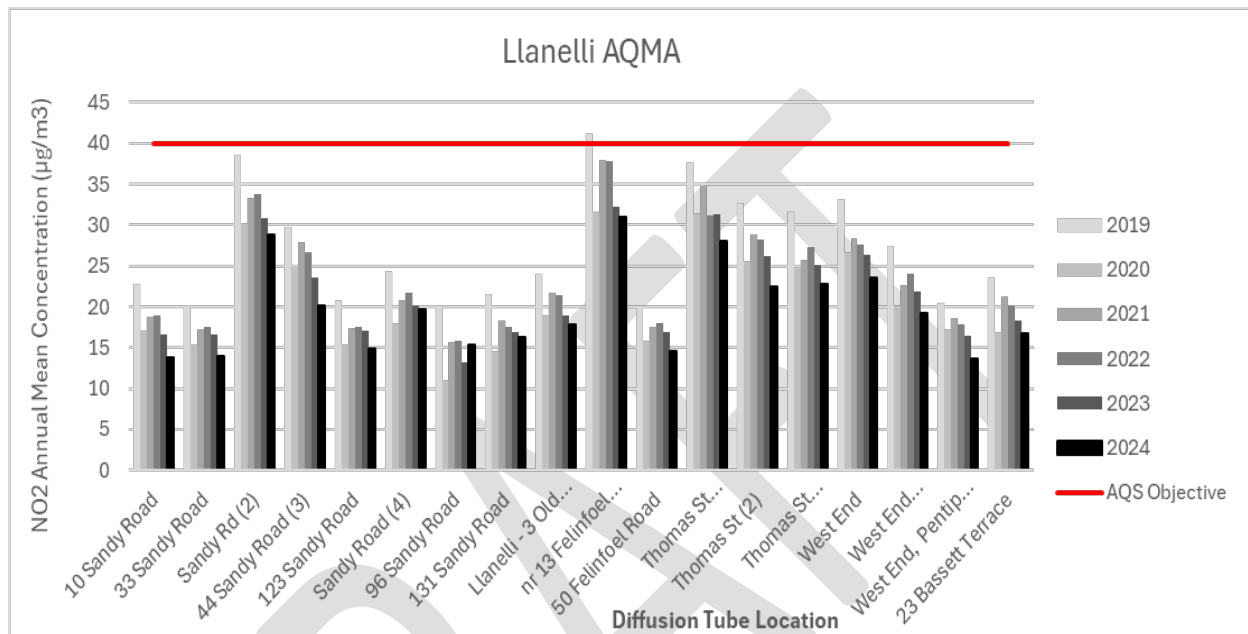
(**Internal Note**) When above measures have been agreed they will need to be inserted into Table layout below

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation

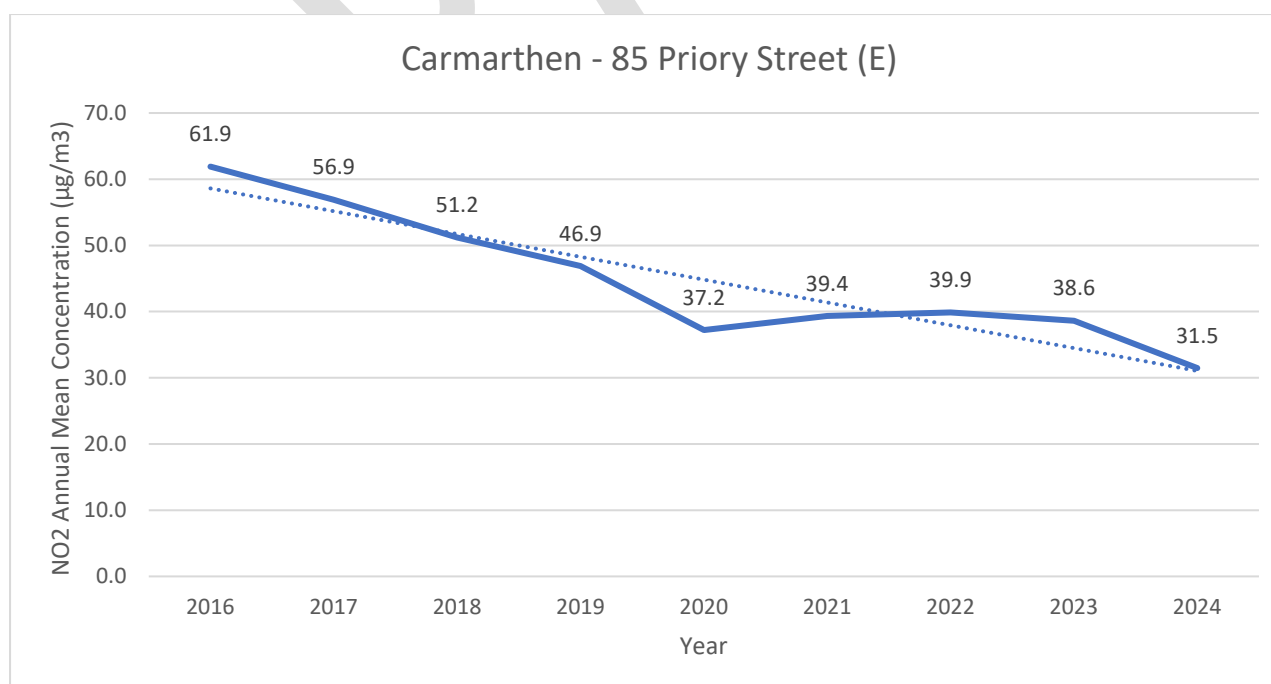
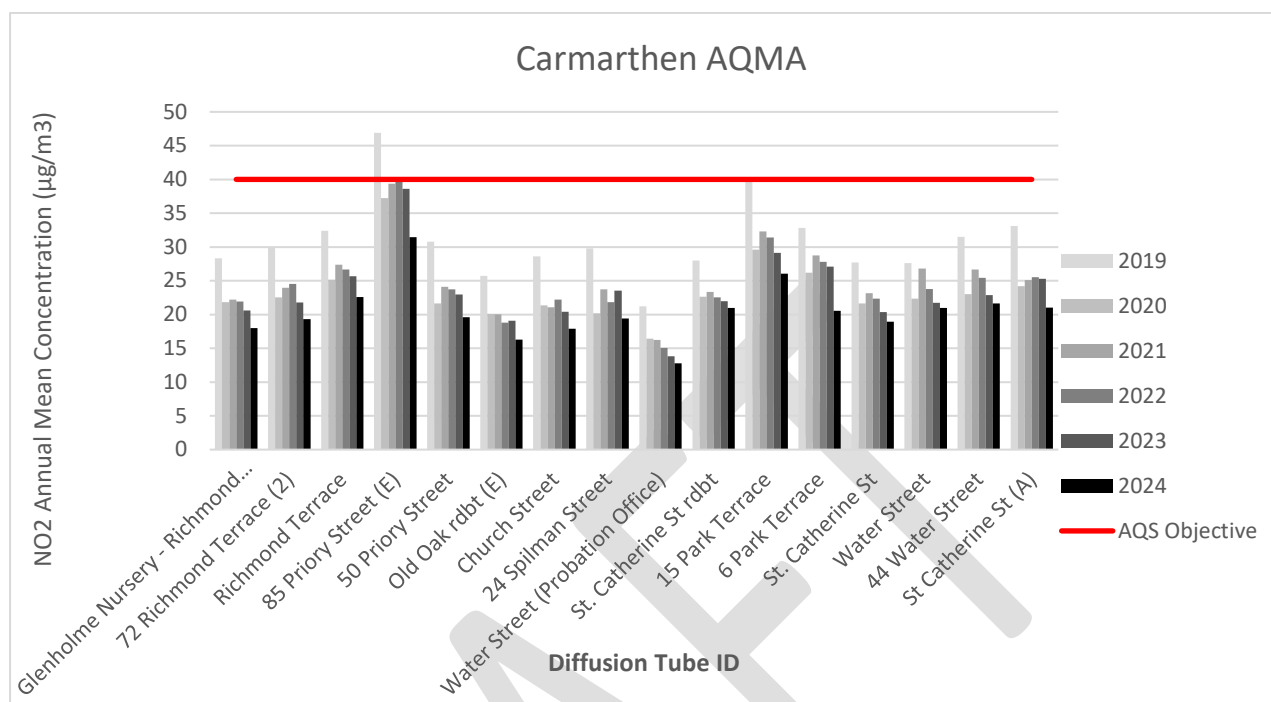
6. Appendix A:

Appendix A - Graphs illustrating air quality (NO₂) trends in the AQMAS and the sites with the highest results in each AQMA.

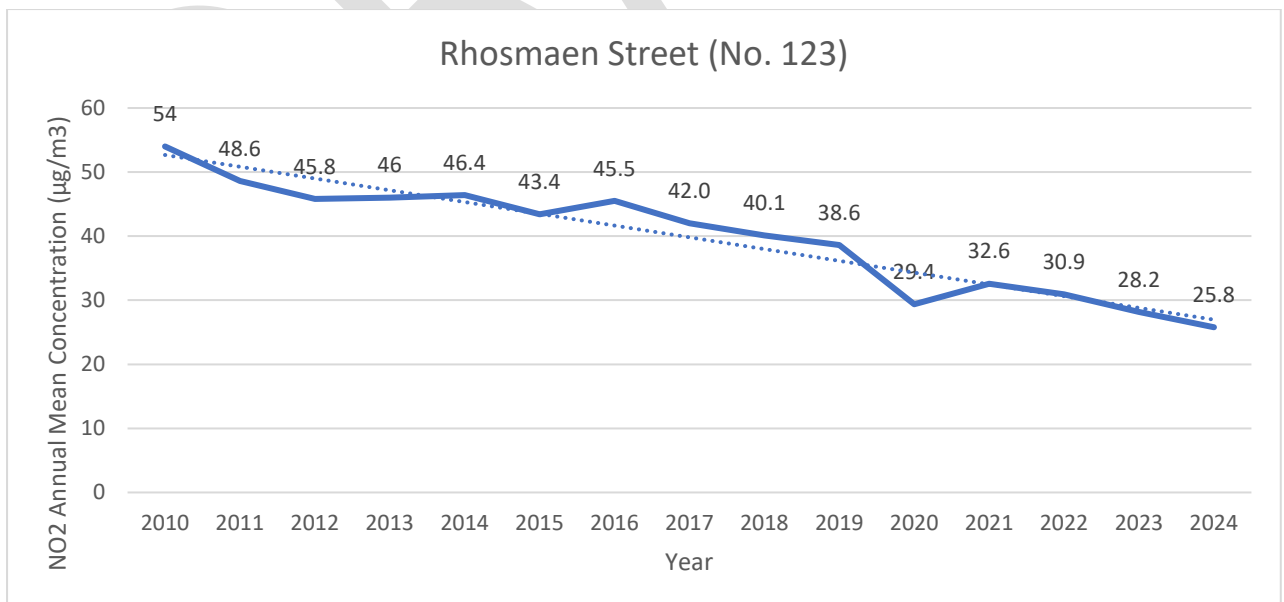
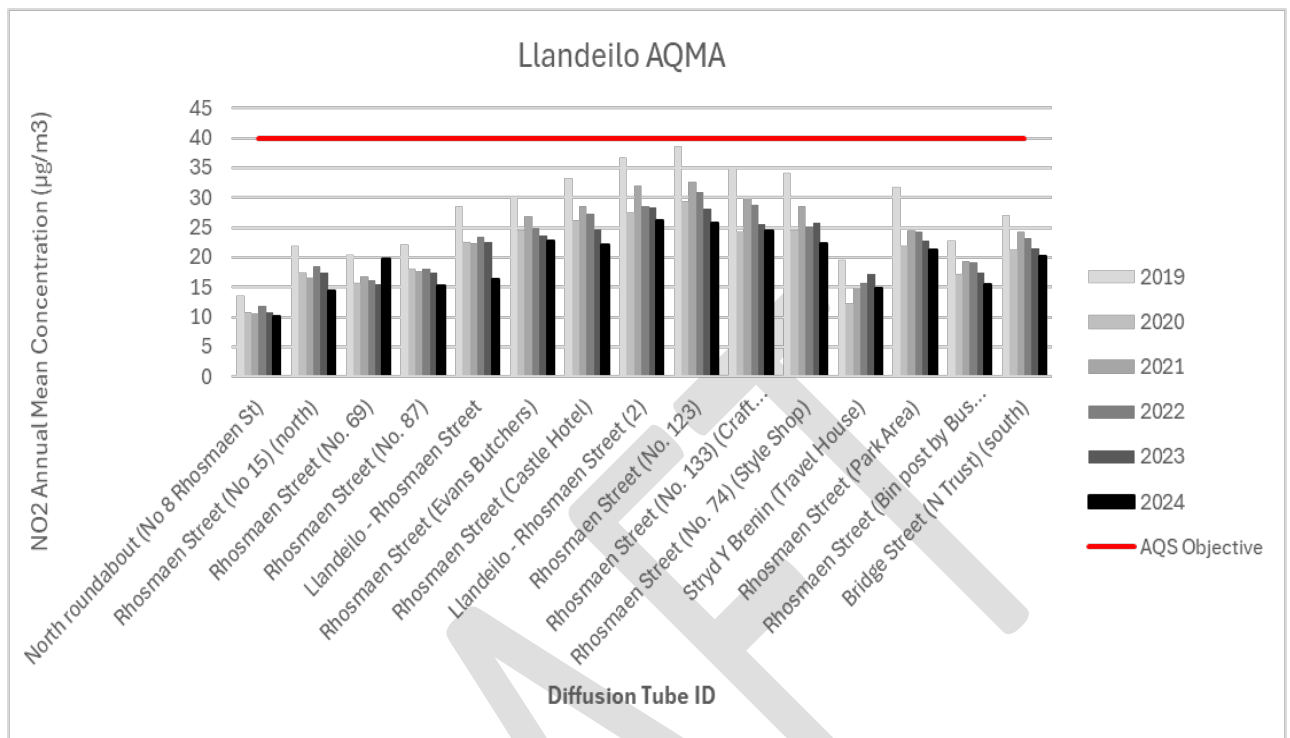
Llanelli



Carmarthen



Llandeilo



7. Appendix B: AQMA Boundary Maps

Figure B.1 – Llandeilo AQMA Boundary Map



Figure B.2 – Carmarthen AQMA Boundary Map

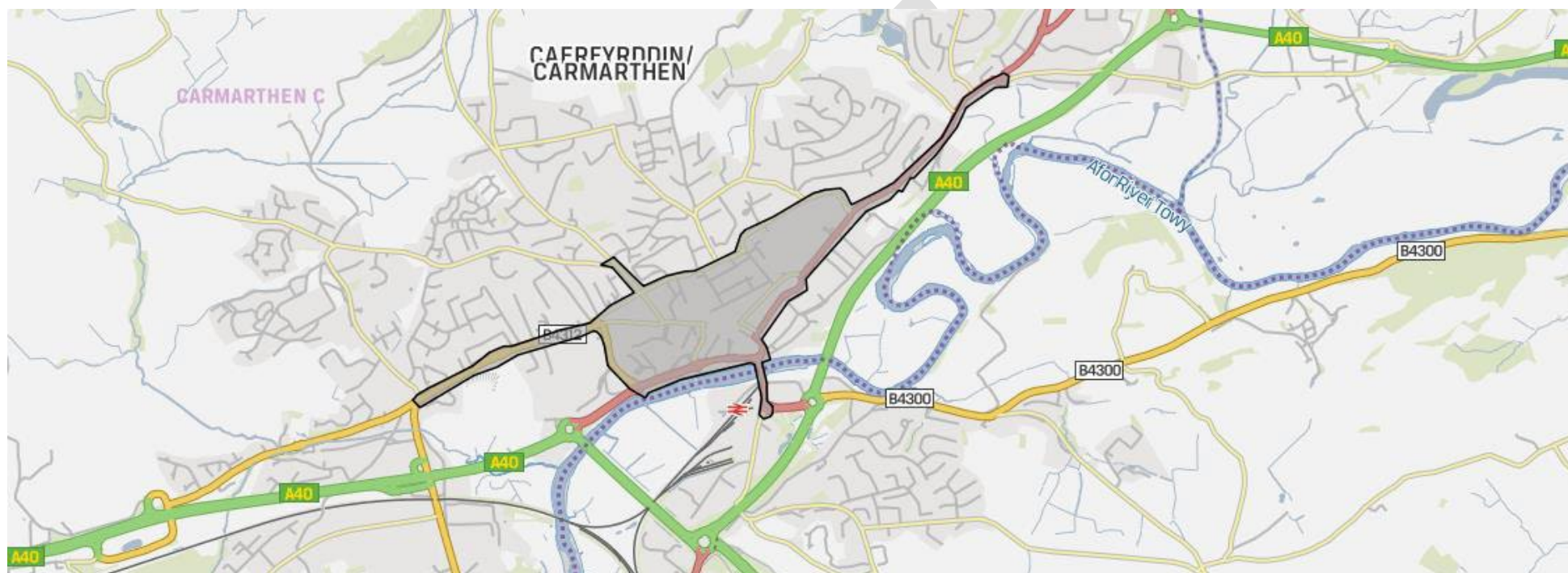
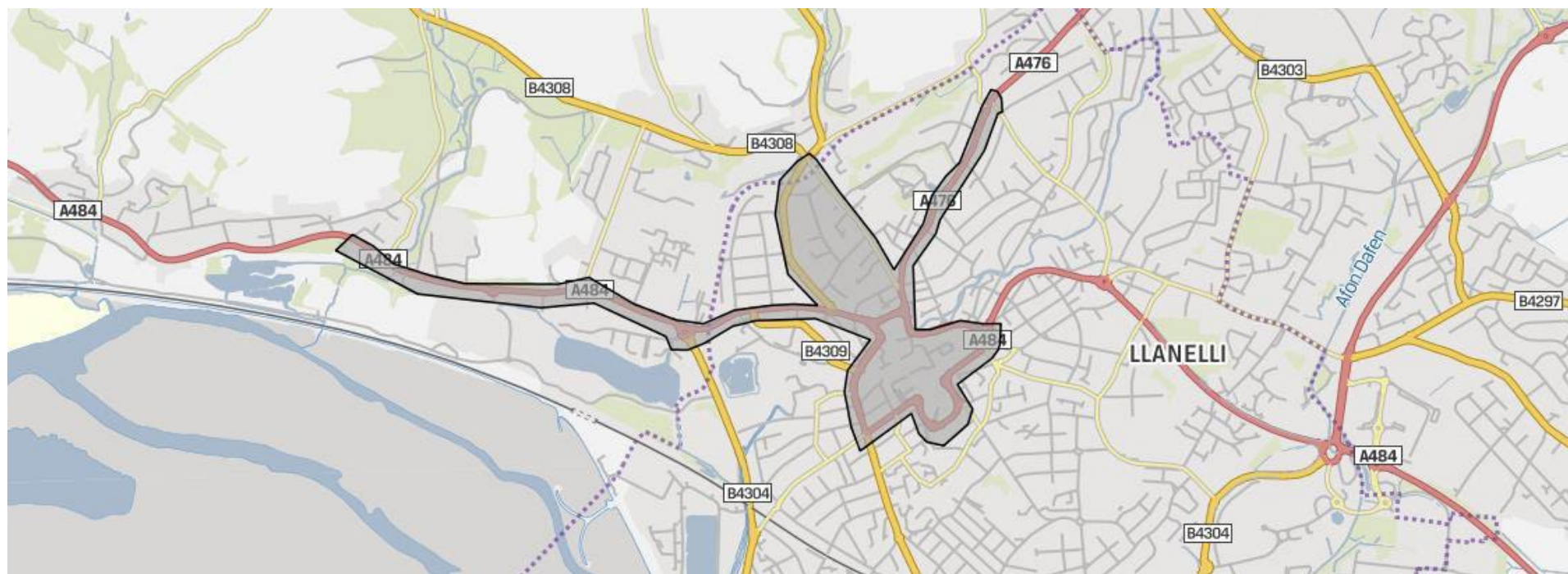


Figure B.3 – Llanelli AQMA Boundary Map



8. Appendix C Response to Consultation

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

Consultee	Category	Response
<Insert consultee e.g. Chamber of Commerce>	<Insert category e.g. Business>	<Insert text e.g. Disagree with plan to remove parking on High Street in favour of buses and cycles; consider it will harm business of members>

9. Appendix D: Reasons for Not Pursuing Action Plan Measures

Table D.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)
<Select from the categories in the blue instruction box above>	<Insert description of measure>	<Insert text here>

10. Appendix E: Add Additional Appendices as Required>

INSTRUCTIONS

The Council should add additional supporting appendices as required.

For example, where the selection of AQAP measures has been supported by further studies, e.g.

quantitative appraisal of action plan measures through dispersion modelling, or other feasibility studies, this work should be included here.

Delete this box when the document is finished

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
AQS	Air Quality Strategy
ASR	Air quality Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
EU	European Union
LAQM	Local Air Quality Management
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
PM ₁₀	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
PM _{2.5}	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less

References

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