

Air Quality Update November 2022

The main air quality pollutant relevant to Carmarthenshire is Nitrogen Dioxide (NO₂) and the main source of NO₂ emissions in the County is road traffic. We have developed a monitoring network that follows some of our busiest roads and most congested streets to enable us observe trends in NO₂ concentrations and assess the effectiveness of any changes made in attempt to improve air quality in those areas.

Carmarthenshire currently has three Air Quality Management Areas (AQMA) in Llandeilo, Carmarthen and Llanelli. This is an update report about Nitrogen Dioxide (NO₂) monitoring across Carmarthenshire with results compared to previous years. An update on our progress with the Air Quality Delivery Plan is also included.

The Nitrogen Dioxide trends observed during 2021 have increased in comparison to 2020 however the annual averages have remained lower than results observed during 2018 and 2019. For the second year running no sites within the Carmarthen Air Quality Management Area exceeded the Air Quality Objective (AQO) for 2021. The Air Quality Objective is an annual average of 40µg/m³.

Two sites, however provided a borderline reading, being marginally compliant of exceeding the Air Quality Objective. This includes one site which is based in Felinfoel Road, Llanelli and a second site which is based in Priory Street, Carmarthen. This is a great improvement from 2019 where it was reported that one site had exceeded the AQO in the County and three further sites remained marginally compliant. No exceedances have been reported in the Llandeilo AQMA for the last three years.

This trend is promising, however there are many factors that may be influencing these results year on year, including the weather and vehicles generally getting cleaner as older ones are replaced. More significantly for 2020, the COVID19 Pandemic resulted in many travel restrictions during the lockdowns, which limited non-essential travel for a period of time and restricted the distance and reasons to travel. There were also long periods where schools were closed and working from home arrangements continued to be encouraged where it was possible, even after other restrictions had eased.

2021 also experienced a 'COVID lockdown' during the first couple of months of the year, with a phased return of shops and schools opening between March and April 2021, and it was not until August that all restrictions fully ended, so we certainly observed a reduction in traffic levels during last year. 2022 however, has seen traffic levels largely return, yet many businesses along with this Council, continued to allow home working and hybrid working arrangements. This helps to discourage unnecessary travel through the County, and is a positive contribution within our own Authority, given that many of our offices are located within the Air Quality Management Areas (AQMA's). The Welsh Government is also promoting hybrid working.

Although we are observing a marginal downward trend, year on year, with a significant improvement observed in the last two years. When excluding the impact of the COVID pandemic, it is difficult to suggest that there has been such a significant reduction identified over the last three years that it should warrant changes at this time, to the AQMA's. Similarly, it is too early to propose any changes to the action plan at this

stage, the delivery plan however will need to be revisited next year as there is more certainty around economic impacts, the continued changes to vehicle technology and climatic conditions.

As mentioned, the influence of the weather can also play a significant part. Wind and rain can help to disperse pollutants more readily, and increased sunshine can also reduce the levels of Nitrogen Dioxide in the air through chemical reactions.

Although the start of 2021 was colder than average, overall, 2021 was warmer than average giving the 5th warmest July and 3rd warmest Autumn since 1884, it was also sunnier than average, particularly during April, June and July. Despite experiencing heavy rainfall during May, rainfall was average for the year. This type of climate will have some influence over the results that we are observing, and therefore it is important to continue to compare future years in case weather patterns change significantly.

It was expected that we would see a much greater reduction during 2020 -2021 given the reduced travel at periods during those years. However, this will not reflect the typical travel behaviours pre-COVID-19 and so it is important we continue to monitor the AQMA's beyond the pandemic period. It is not predicted that we will observe much decrease in levels of Nitrogen Dioxide during 2022 in comparison to the last two years, following a return of the more typical travel behaviours. Nonetheless, the trend for 2022 so far, is mostly lower than pre-pandemic levels across the County.

It is too early to determine if there will be any exceedances for 2022, because 2022 did experience a warm and sunny summer period providing some lower monthly readings of NO₂ than in 2021. Depending on the results we observe in the upcoming winter, it could indicate that we will again observe an increase in levels of NO₂ during 2022 compared to 2021. However, hopefully the overall downward trend will continue compared to pre-pandemic years. The site with the greatest risk of reporting an exceedance for 2022 is near 85 Priory Street, Carmarthen. This area continues to provide the highest readings in the County.

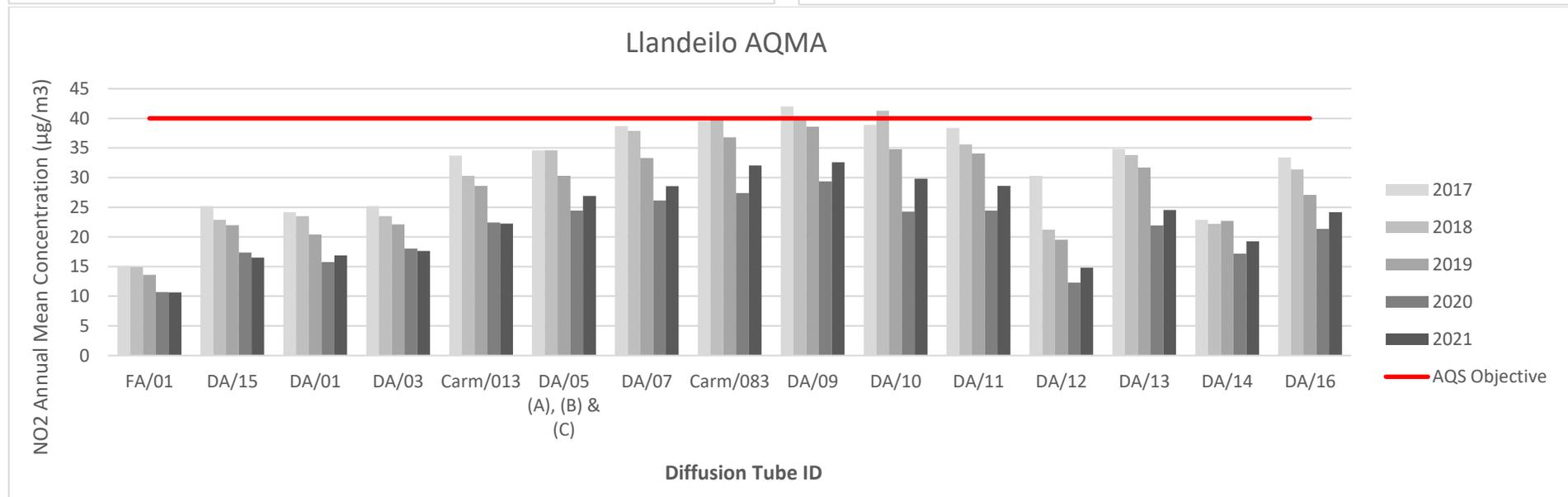
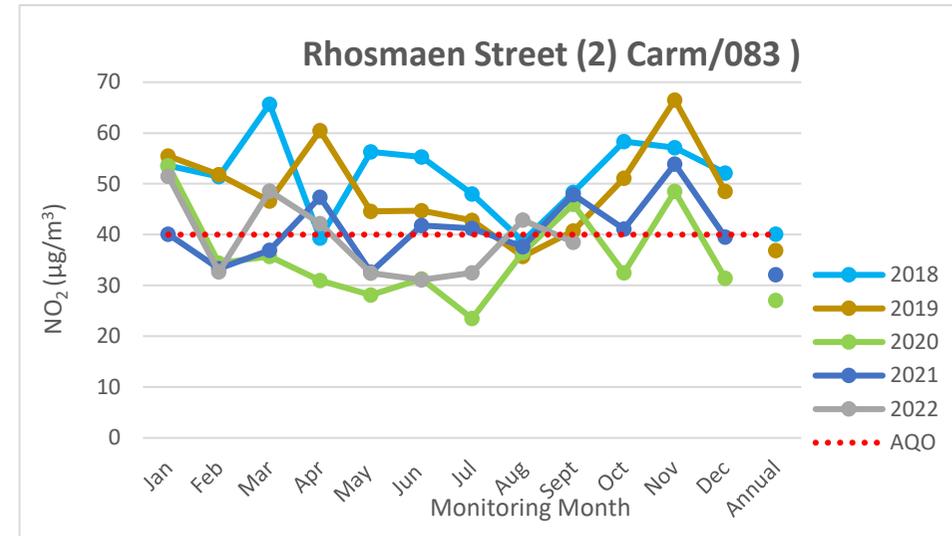
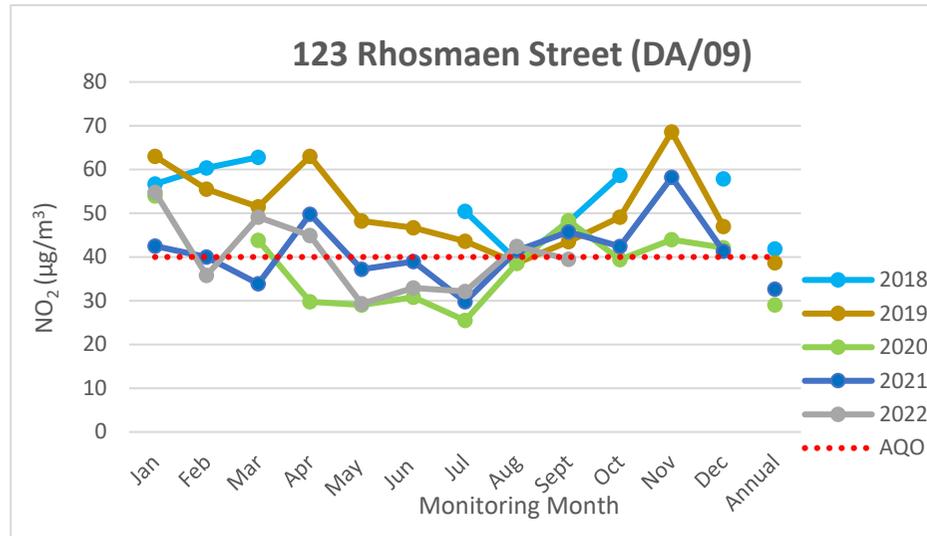
Work will continue in partnership to improve air quality under our Air Quality Delivery Plan. We continue to work closely with our partners to manage local air quality in Carmarthenshire, including Natural Resources Wales, the Planning Authority, the Highways Authority, SWTRA and local schools. The economy is in the stage of recovery, but uncertainty prevails in terms of the length of the recovery period given recent geopolitical and other influences. The Bank of England is also forecasting a two-year recession, so this may pose additional challenges.

We can see that much more work is needed to promote a sustainable modal shift, as NO₂ levels can quickly return with increased traffic. The Welsh Government aspirations for Southwest Wales Metro and the need for investment to deliver modal shift to both Active Travel and Public Transport along with the development of the Regional Transport plans next year will also have a major influence on modal shift.

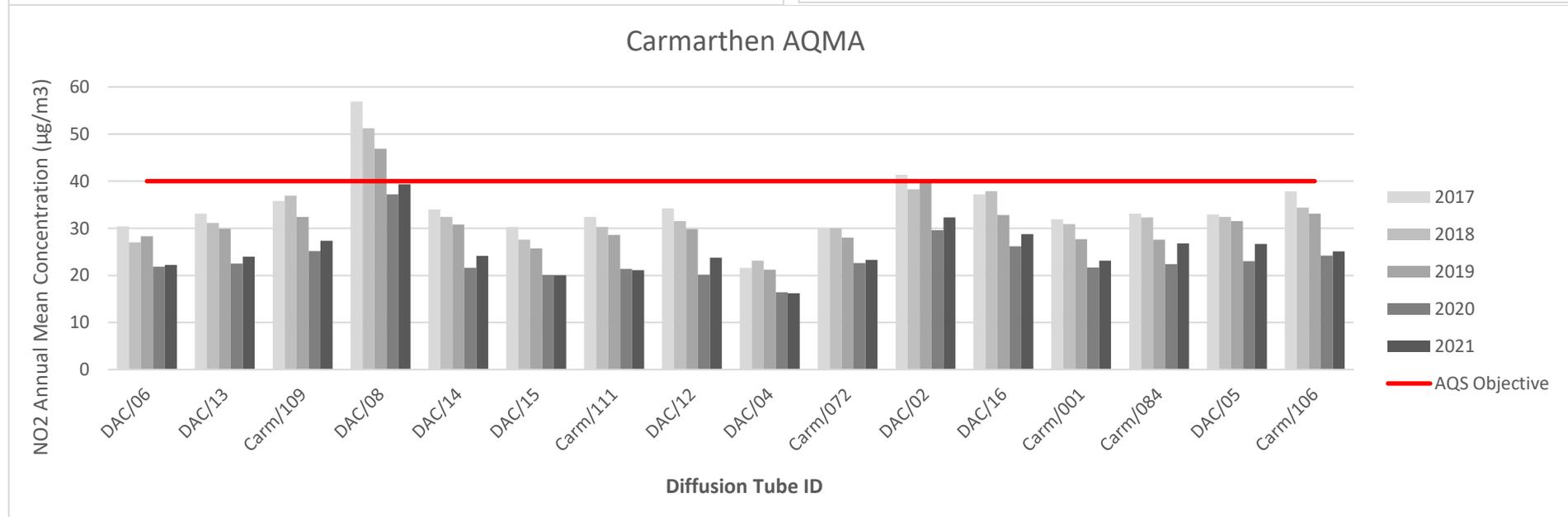
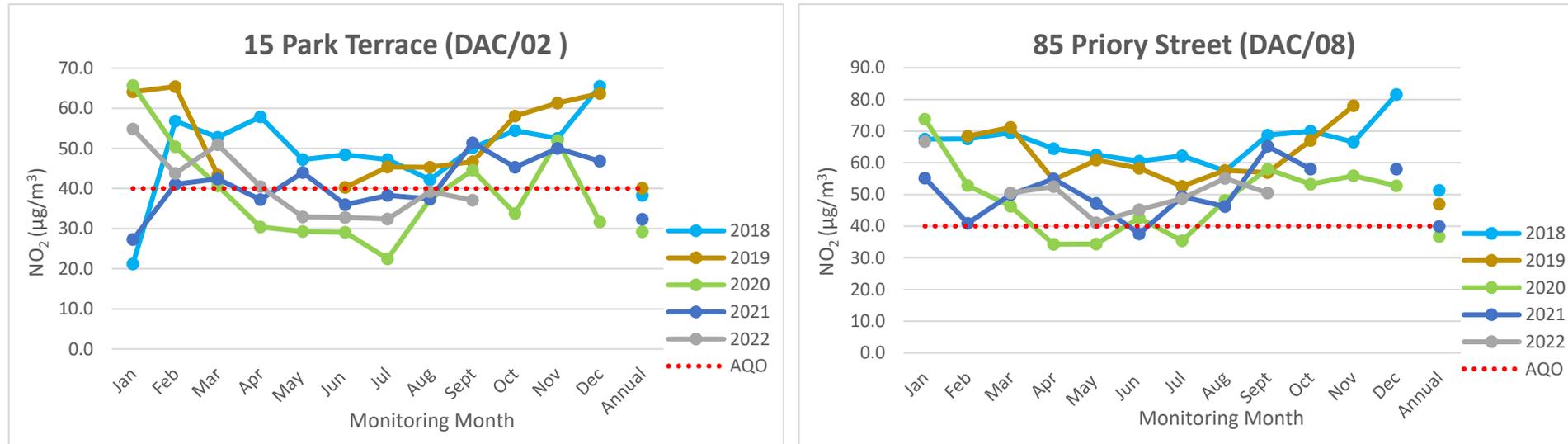
Whilst Local Authorities are not in control of the levers to effect modal shift, a substantial amount of work has been undertaken in developing Active Travel infrastructure and behavioural change interventions in the County and every major town has an active Travel Master Plan. Further details of our work and progress can be found from page 8 onwards of this report.

The following graphs illustrate results of Nitrogen Dioxide (NO₂) monitoring across our Air Quality Management Areas and 'other areas' in Carmarthenshire during 2021 in comparison to the previous four years. There are also two graphs for each of the AQMA's, presenting a comparison of the monthly results by year, for the purposes of comparing 2022 data received to date.

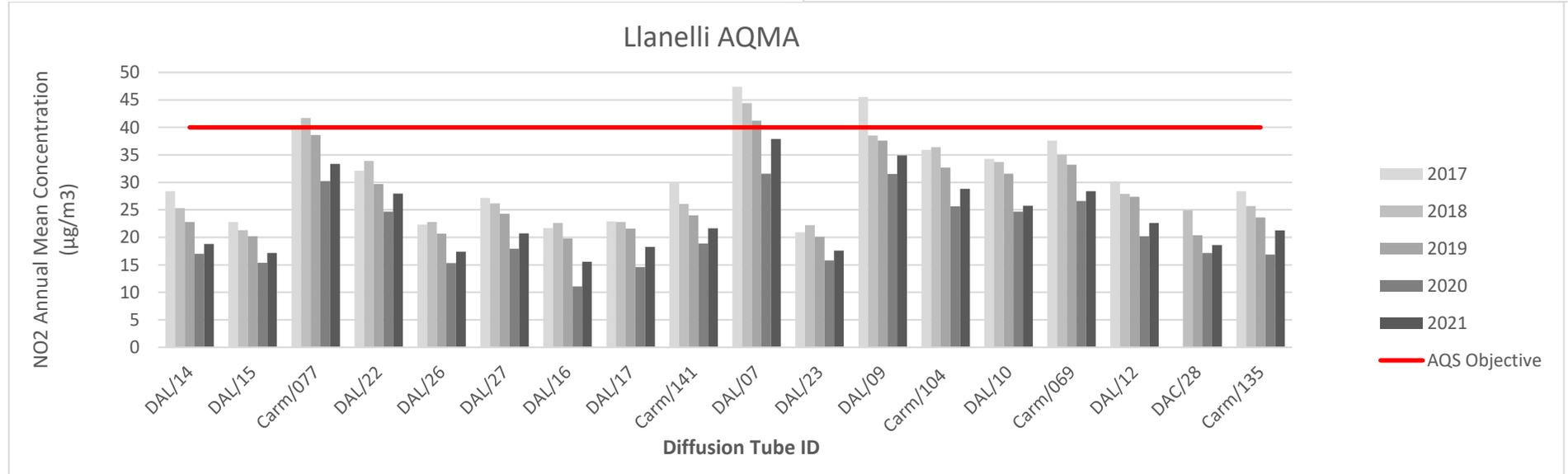
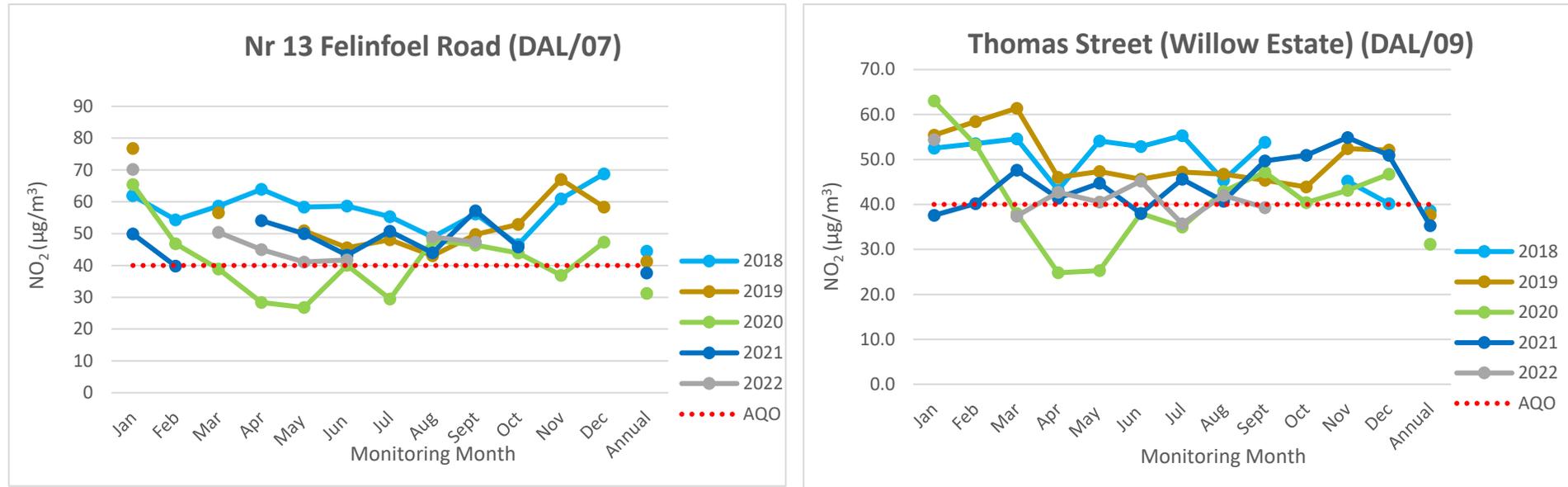
Llandeilo



Carmarthen

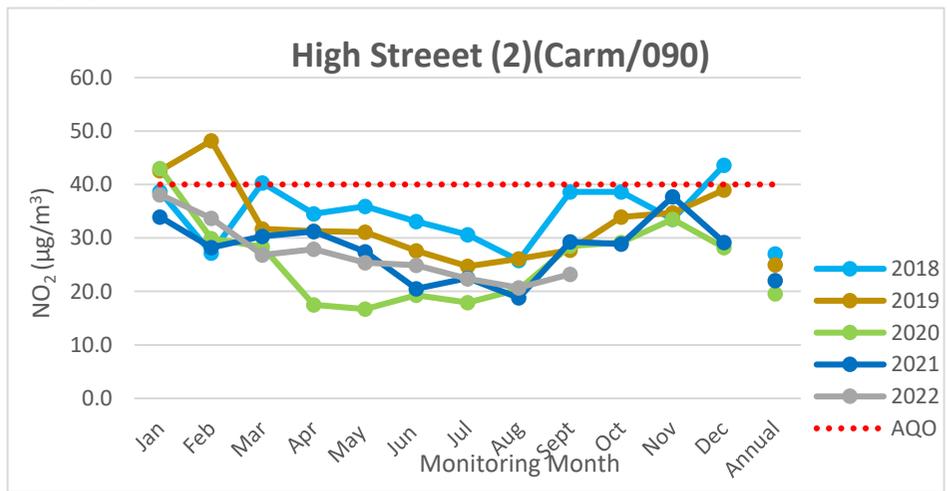
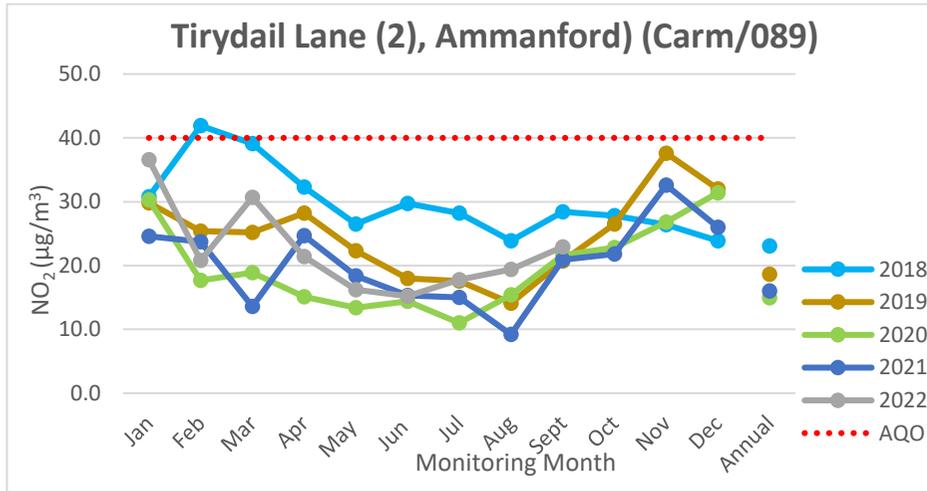


Llanelli

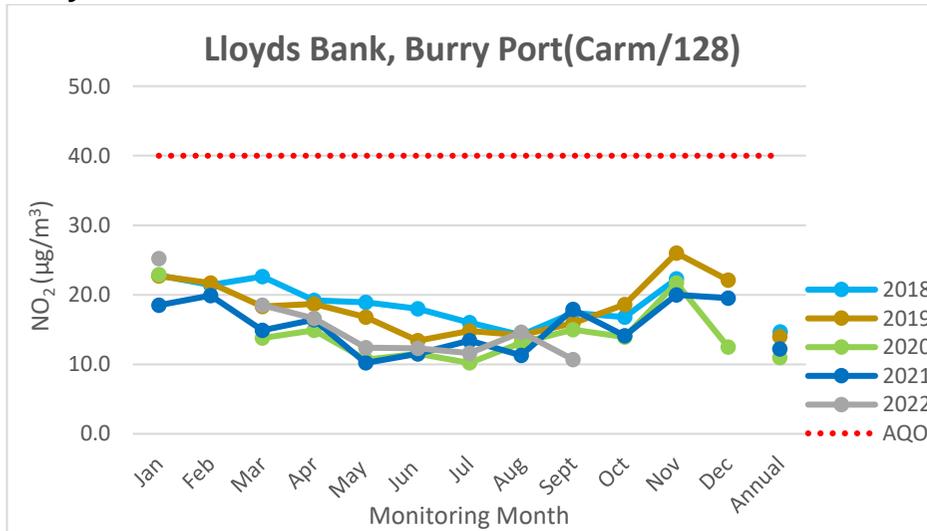


Non-AQMA Areas

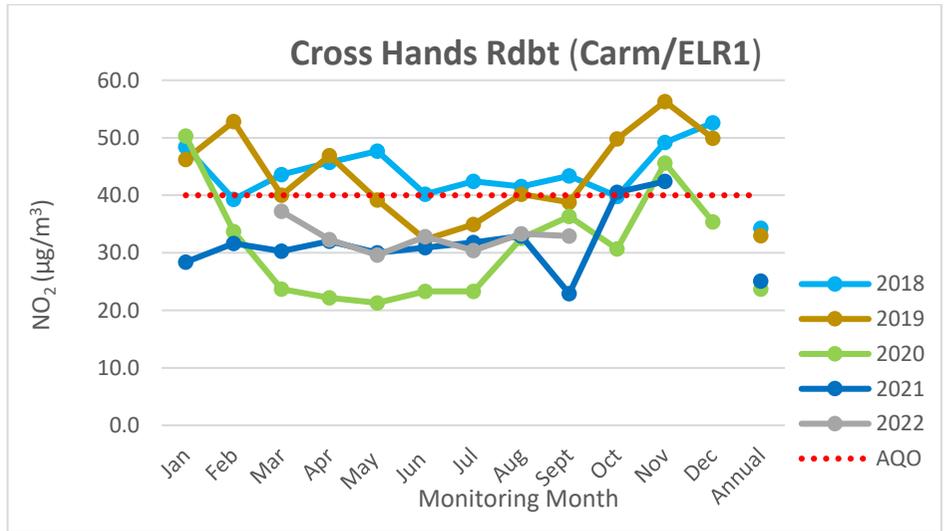
Ammanford



Burry Port



Cross Hands



Progress on the Air Quality Delivery Plan.

The green table below provides a summary of the work that been completed in support of the Air Quality Delivery Plan.

Action Ref	Action Category	Action Description	Progress	Completed
G1	Policy Guidance and Development Control	Produce an Electric Vehicle Infrastructure Strategy	The Electric Vehicle Infrastructure Strategy was developed in 2021 and adopted and published 2022. Can be found here	2022
G17	Promoting Low Emission Transport	Increase provision of EV charging infrastructure County	<p>EV charging infrastructure has and continues to be developed across the County at strategic locations prioritised around strategic routes, trip attractor/destinations and regeneration,</p> <p>43 charging points have been located in towns, visitor locations, leisure centres and on the strategic highway network.</p> <p>Charging infrastructure is currently being installed at key depots to support the transition to Ultra Low Emission Vehicles.</p> <p>Cross Hands Rapid Charging EV Hub opened to the public at the end of March 2022. To date (10/10/22) there have been 2,517 charging events with over 55,812 kWh of energy being used.</p>	March 2022
G24	Promoting travel Alternatives	Continue to encourage home / agile working with digital meetings/training where possible, to	<p>The interventions necessary during the Covid pandemic helped stimulate a change to the way we work through the use of technology. Post Covid the transition to agile working has continued to reduce the need for travel.</p> <p>The Council continues to develop its strategy for new ways of working to support agile working.</p>	Complete

		discourage non-essential travel	The Authority has an approved Agile working Policy. Wales Government is also promoting remote working.	
G27 & C2	Promoting travel Alternatives	Introduction of bike hire schemes within other parts of the County	Brompton Bike Hire scheme in Carmarthen Bus Station dock open, Burry Port and Llanelli. Actif Leisure continue to encourage and promote cycling and develop bike hire schemes as part of the Authority's Cycle Strategy.	Brompton Bike Hire complete. Further work continues to support the development of bike hire schemes.
G28	Promoting travel Alternatives	Provision of E-cargo Bikes	12 bikes purchased for load to support local businesses undertake deliveries. Bikes have been acquired and a Comms plan has been arranged to promote. A unit has been deployed through Llanelli BID.	2021 2022 This will be an ongoing area of work to stimulate uptake and support businesses through recovery.
G29	Promoting travel Alternatives	Provide E-Bike Charging Stations	Five E-Bike charging stands installed at the Beacon to support Active Travel journeys for people working out of the building. A further 8 E-bike Charging Stations will be installed across county. 4x sites are complete with 3x sites soon to follow with one to be installed at Pendine development when the project is complete.	Physical works completed 2022 March 2023

G31	Promoting travel Alternatives	Enhance walking routes.	<p>Our Active Travel Strategy includes an Active Travel Master Plan for infrastructure development for each principal towns. Infrastructure development will continue year on year subject to Welsh Government funding and where possible through planning development.</p> <p>Wayfinding signage is scheduled for installation across 13 towns providing direction to/from public transport stops and stations.</p>	Completion by March 2023
C13	Promoting travel Alternatives	Initiatives including School Travel Plans	<p>Transitioning from car dominated journeys to alternative more sustainable forms of travel will require behavioural change. Interventions to support behavioural change have included the development of Travel Plans for new school development. Officers are working with schools and colleges in the Llanelli area to encourage young people to make use of improved infrastructure to encourage walking and cycling.</p>	This work will continue and schools will continue to be supported
G35	Public Information	Advertise Cycle Paths	<p>Cycle routes are promoted on the internet and discovercarmarthenshire.com</p> <p>New wayfinding signage being installed across towns with walking/cycling journey times to key trip attractors from public transport stops/stations.</p>	Complete
C12	Public Information Alternatives to private vehicle use	Promote more car sharing	<p>Car share through Liftshare is promoted.</p>	The Agile Working policy supports reduced and more efficient travel.
C5	Traffic Management	Review pedestrianisation across town.	<p>Temporary Restrictions were introduced in Llanelli and Carmarthen Town Centre for the pandemic to support social distancing. This has since been reviewed and the measures were removed in 2021 following public consultation.</p> <p>Town Centre Regeneration plans are being developed to support recovery. The plans will explore opportunities and options for the</p>	<p>September 2021</p> <p>Regeneration plans are under development.</p>

			development of infrastructure in town centres to support Active Travel journeys.	
C4 & LLN2	Traffic Management	Introduce a 20mph speed limit in the town	<p>20mph zones introduced around schools and other areas within town centres</p> <p>Carmarthen and Llanelli completed, Blue St and Mansel St Carmarthen. Llanelli North</p> <p>Welsh Government legislation is being introduced in September 2023 which will reduce the speed limit on residential streets from 30mph to 20 mph. Preparations are currently underway for this change in legislation and implementation of a 20 mph default speed limit by September 2023.</p>	<p>2019 -2020</p> <p>2021- 2022</p> <p>September 2023</p>
LLN4	Traffic Management	Improvements to Thomas Street Junction at turning to Old Road	Improvements to bus stop, junction (moving traffic away from receptors) and reduce idling engines in this area. Pedestrian crossing also installed in lower Felinfoel Road to improve pedestrian safety and encourage more local journeys by foot.	Completed in August 2021
G10	Traffic Management	Introduce a School Street	Two school streets are being implemented and promoted at Elkington Park, Bury Port and Morfa School, Llanelli.	Bury Port is completed.
G9	Traffic Management	Reduce Idling outside of schools etc.	<p>Two School Zones are being introduced in Bury Port and Llanelli.</p> <p>School gate parking prohibitions have been improved in areas including Llanelli and Ammanford with further improvements continuing and enforcement being undertaken by camera car.</p> <p>A number of Traffic Orders prohibiting stopping outside the school gates at certain times imposed at several schools across the county.</p>	Orders were complete in 2021 Enforcement activity will be ongoing.

C1	Transport Planning and Infrastructure	Improve cycle routes in and around the town.	Works to a new path along Llansteffan Road, Picton Hill and Picton Terrace have been completed, this builds on the Active Travel routes developed for key linkages to Carmarthen Town Centre. A Carmarthen masterplan has been created to look at increasing the amount of active travel links throughout the town. Feasibility studies are underway.	2021 March 2024
G6	Transport Planning and Infrastructure	Improve access to M4 through Llangennech area.	Widening of A4138 to reduce congestion and provide shared foot/cycleway to encourage travel modal shift. Improves access on and off the M4 to reduce traffic congestion at peak times.	Completed December 2021

The blue table below provides a summary of the work that is in progress or ongoing, in support of the Air Quality Delivery Plan.

	Action Category	Action Description	Progress	Comments
C8	Alternatives to private vehicle use	Bus based park and ride (Carmarthen)	The Service is currently under review. Patronage is low, with many of the users having access to alternative bus services. Ongoing driver shortages resulting in some lost journeys, with operator considering future ability to provide the service.	Service is reliant on revenue funding to sustain.
G11	Freight and Delivery Management	Review & improve timings of bin collections & road sweeping	The new routes have been routed in order to make them more efficient, move to zonal working, reducing the need for vehicles to be traveling across the whole county on any given day.	This action will be completed as the Waste Strategy moves forward in 2023.
G2	Policy Guidance and Development Control	Produce a green Infrastructure Strategy	The work is currently in progress with a Consultation hub on greening 8 towns in Carmarthenshire with 3 stakeholder events undertaken in November 2021.	

G18	Promoting Low Emission Transport	Consider option for low cost or priority parking for Low Emission Vehicles	Forty three electric charging points have been introduced in CCC owned car parks and their use is being monitored. A super-hub has also been introduced in Cross Hands.	Charger installations are completed. Work continues with the Wales Government on the development of charging infrastructure on the strategic highway network.
G19	Promoting Low Emission Transport	Review Taxi and private Hire conditions to move towards Ultra Low Emissions	Target of all taxis/PHVs being zero-emission at tailpipe by 2028 Baseline in 2021 – 1 Tesla Model 3 licensed 2022 – Total of 4 Electric Vehicles licensed	Ongoing
G25	Promoting travel Alternatives	Advertise offices that have facilities for cyclists. (Review provision to Increase number of offices/buildings providing cycle safe storage)	Work is in progress to research staff sustainable travel, parking provision and active Travel linkages at 11 key employment sites throughout the county. The aim is to see how travel behaviours can be improved and principles that embody good travel planning.	For completion by February 2023
G26	Promoting travel Alternatives	Increase cycle parking provision across county Provide public cycle repair stations	New cycle parking proposed at 27 locations in Llanelli, Carmarthen Ammanford and Leisure centres. 20 cycle repair Units to be installed across main towns of the County. Sheltered Cycle Parking to be installed at Carmarthen Leisure Centre, Carmarthen Market and Ammanford Quay Street in November.	April 2023
C9	Public Information	Promote uptake of Carmarthen P&R through carpark information boards	Direction signs already in place. The service continues to be promoted through Hywel Dda Board where there is the greatest opportunity for demand. The service is under review.	Ongoing, service review will be completed by March 2023.

		and improved signage before entering AQMA		
C10	Public Information	Promote use of Carmarthen by-pass.	Carmarthen Town Feasibility Study being prepared for the Town Centre Recovery Plan This work includes consideration of traffic signs.	The bypass is a trunk road, any signage review will be taken forward in partnership with the South Wales Trunk Road Agency and the Welsh Government.
LLN3	Traffic Management	Consider sustainable options to reduce congestion via A484, Llanelli West (Sandy Road Corridor) encouraging sustainable modal shifts	Comprehensive modelling work and feasibility studies have been undertaken to evaluate options to improve the A484 congestion. The options have been subject to consultation with stakeholders. Overall, there was support for infrastructure improvements. The work formed part of a wider study for infrastructure in Llanelli which was subject to the Roads Review. The outcome of the roads review is awaited, in the interim work has commenced to promote Active Travel with schools in the area. The interventions will support improved reliability of public transport.	Active Travel is recognised as only a part of much wider package. Extensive modelling and feasibility studies have clearly demonstrated that highway infrastructure improvements are required to realise improvements to traffic flow and air quality.
C6	Traffic Management	Traffic modelling options for reducing traffic through Priory Street	Real -time Air Quality monitor to be installed in Priory Street Nov 22, to link with traffic counts to help determine source apportionment and next steps.	Surveys needed to understand reasons for using the route to determine the correct interventions.
LLD4	Traffic Management	Build a bypass around Llandeilo	Carmarthenshire County Council has consistently maintained that a Bypass is the only viable solution to address the issues associated with A483 traffic travelling through Llandeilo Town Centre.	Welsh Government have indicated that the outcome of the WelTag stage 2 consultation will recommend a preferred

				option by the end of 2022.
LLD1	Transport Planning and Infrastructure	Improve Footpath/ cycle route connectivity for the Sandy Road area	<p>A new active travel bridge and connecting routes will be constructed in Llanelli over the A484 to enhance links between Halfway and Trostre as well as tying in with works completed in previous years leading to Coedcae and Stebonheath schools. The bridge will also form an important section of the Llanelli active travel spinal route that will eventually link Hendy with the Millennium Coastal Path via a number of key destinations such as Pentre Awel, Trostre Retail Park and Prince Phillip Hospital.</p> <p>An upgrade of a key Public Right of Way link to shared use status will also be delivered. This link connects the residents of Morfa (South Llanelli) with the Millennium Coastal path without having to travel around Machynys Golf Course.</p>	Adjoining works are also complimenting this by enhancing North/South links around the main pedestrian access into Trostre Retail Park. The works will also enable active travel users to better access the retail park safely and directly.
C1	Transport Planning and Infrastructure	Improve cycle routes in and around the town.	A Carmarthen masterplan has been created to look at increasing the amount of active travel links throughout the town. Consultation has begun to identify a preferred way forward.	
C7	Vehicle Fleet Efficiency	Introduce low emission buses and consider smaller buses at off-peak times.	<p>The T1 Carmarthen / Aberystwyth bus service in process of transitioning to an electric fleet.</p> <p>In progress to deliver T1 electric bus by February 2023 in partnership with the Welsh Government and Transport for Wales.</p>	Local buses are predominantly owned by private transport operators, the exception being the forthcoming T1 service where electric buses will be leased to an operator. Providing a second fleet of smaller buses during
G15		Promote shift to Low emission busses / Consider Vehicle		

		Retrofitting programmes		off peak periods is not commercially viable for operators. Current purchase costs for electric buses and associated infrastructure are significant and are only feasible if external grant funding is available. The development of the Southwest Wales Metro will review the bus networks across the region.
G13	Vehicle Fleet Efficiency	Introduce ULE vehicles within public sector fleet	<p>Baseline - all Fleet vehicles meet Euro 6.</p> <p>Three electric waste collection vehicles are being introduced within the Fleet in January 2023</p> <p>EV charging facilities are also being introduced at Glanamman, Trostre and Cillefwr Depots. Grant funding opportunities for transitioning fleet vehicles to ULE continue to be monitored.</p> <p>A Fleet strategy is also under development for completion by April 2023. The vehicle sector is in a state of transition with uncertainty around the future energy source for different segments of vehicle type.</p>	

The orange table below provides a summary of the measures that have not been completed and are to be removed from the Air Quality Delivery Plan for reasons provided below.

Action Ref	Action Category	Action Description	Progress	Reasons /Difficulties
LLN6	Alternatives to private vehicle use	Bus based park and ride (Llanelli)	Llanelli has a good bus transport network to support movement into the town. Improved real time information at bus stations/ stops and links to active travel network and metro project.	The option for a park and ride service in Llanelli is not considered operationally or financially feasible.
LLN5	Freight and Delivery Management	Identify and review HGV delivery timings to businesses in and around the town centre.	Reviewed upon new planning developments to avoid peak times, where applicable.	Measure is difficult to influence and may not reduce overall emissions, but short-term higher emissions from congestion at peak times. This one is difficult to deliver and difficult to monitor its impact. It will be considered as part of the Regional Transport Plan work next year.
G12	Freight and Delivery Management	Discuss with WG barriers / opportunities to transfer road freight from ferries to rail freight.	Wales Transport Strategy Llwybr Newydd has been published and includes support for interventions that shift freight from road to rail. 5 year national transport delivery plan is being developed. Regional Transport Plans are also to be developed.	This action is not under our control. The Regional Transport Plan process will make reference to freight.
LLN7	Promoting Travel alternatives	Implement traffic survey for Llangennech / Dafen / Thomas Street to establish why	Survey not conducted, Improvements from Hendy M4 aims to support active travel modal modes.	Sat Navs often determine the quickest route to Llanelli West and this is difficult to influence.

		that route is used.		
G32	Promoting Travel Alternatives	Increase use of trains in County	Significant reduction in train use 20-21. Uptake within AQMA's will continue to be monitored. The development of a Southwest Wales Metro system is in progress and will form part of the Regional Transport Plan.	The provision of rail services is a Welsh Government function, and this will be considered as part of the Southwest Wales Metro project aligned to the Regional Transport Plan.
G34	Public Information	Engagement with SAT NAV providers to highlight AQMA's	Currently Sat Nav's recognise Clean Air Zones but not AQMA's	Not feasible unless congestion zone or Low Emission Vehicle zone declared. Further research Will be undertaken as part of the development of the Regional Transport Plan.