

Fluin Lane Air Quality Action Plan

Consultation Document

5 May 2017

Background

Generally air quality in Frodsham is good. Cheshire West and Chester Council has been monitoring air pollution levels in and around Frodsham for a number of years. Figure 1 below shows monitoring locations in Frodsham.

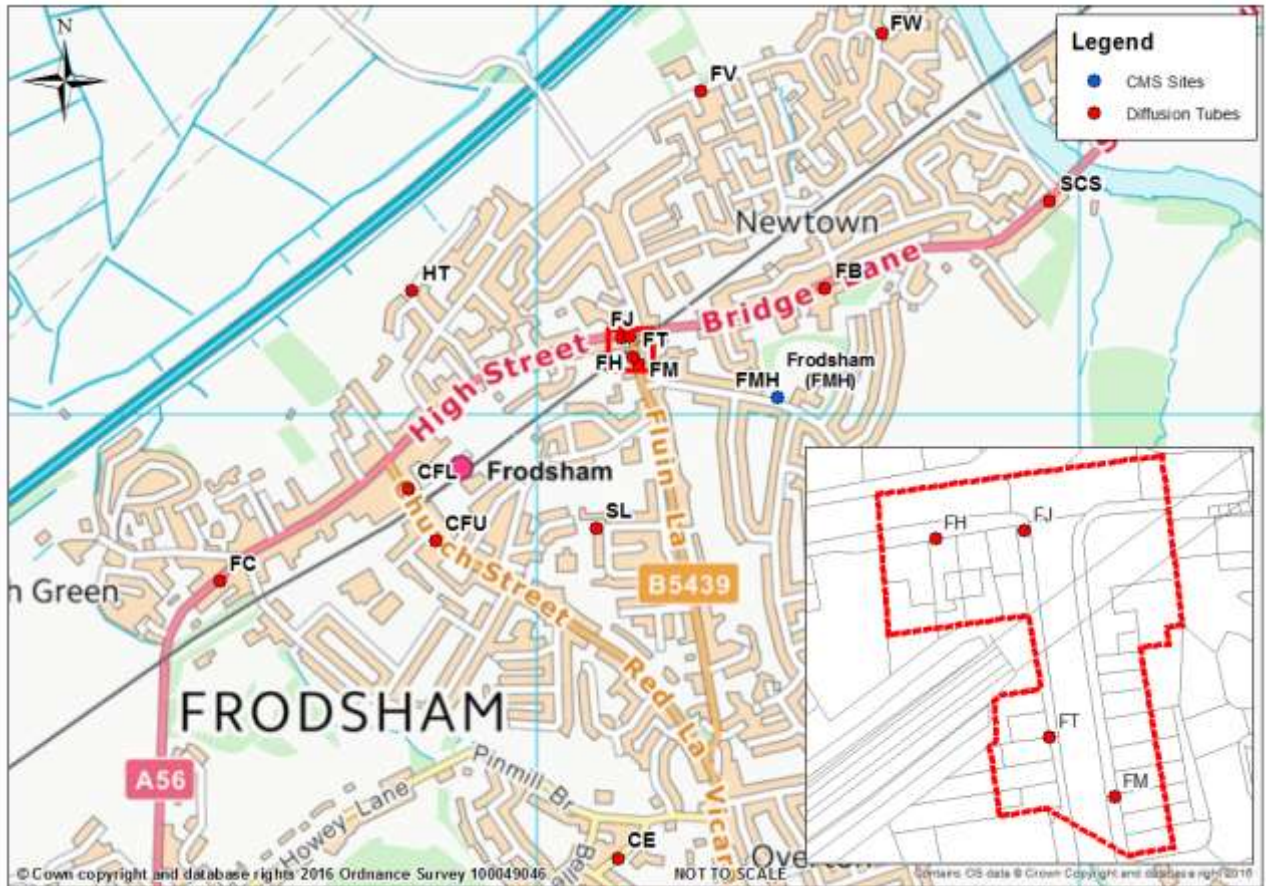


Figure 1 – air quality monitoring locations in Frodsham

The above plan identifies the locations of diffusion tubes on Church Street, High Street Fluin Lane and Bridge Lane Frodsham (red dots) and the location of the Continuous Monitoring Station (CMS) situated at Manor House Primary School, Langdale Way Frodsham (blue dot).

Monitoring results confirm that air quality in Frodsham complies with the national air quality objectives for a range of pollutants with the exception of a small area in the immediate vicinity of the Fluin Lane junction with the A56. This area, shown on the inset in Figure 1 above, fails to meet the annual objective for nitrogen dioxide (NO₂).

NO₂ has been identified as contributing to respiratory and cardiovascular illness. If your health is good, the levels of NO₂ monitored at Fluin Lane are unlikely to have any short-term health effects. The long-term effects however can result in a gradual deterioration in health of people who are already suffering from respiratory problems, and an increased susceptibility to respiratory infections amongst healthy individuals. It is therefore essential that we tackle this issue

As a result of identifying this issue, the Council declared an Air Quality Management Area (AQMA) on 27 November 2015. Since then we have been undertaking further assessment work and formulating an Action Plan to begin to address this issue.

What is the cause of the problem?

The cause of the issue has been confirmed as traffic emissions of NO₂. Different vehicles give off different amounts of NO₂. Larger vehicles, older vehicles and diesel vehicles produce more NO₂ than new petrol vehicles. New vehicles are 'cleaner' due to technology such as catalytic converters and particulate filters. Hybrids and electric vehicles produce little or no pollution at point of use.

Fluin Lane (B5439) is a busy local road forming part of a staggered cross-road with the A56 and St Hilda's Drive. Residents in the immediate area and in particular the Lakes Estate area who need to access the A56, or parents dropping and collecting their children from the two local primary schools, have very limited options other than to use this junction. As the A56 can be very busy throughout the day, traffic can sometimes find it difficult to turn right out of Fluin Lane and this can lead to long queues forming on Fluin Lane.

Fluin Lane also has a strategic significance on the local network as it offers a shortcut for many vehicles, particularly commercial vehicles and HGVs in the Delamere area, wishing to access the M56 or Runcorn and beyond. It offers drivers an alternative to the A49 and a more direct route than joining the M56 via Chester and the M53. This means that Fluin Lane is often busy outside of the morning and evening rush hour and queues can form at various times throughout the day.

Whilst Red Lane and Church Street offer an alternative route to the A56, for local residents this can be an unwelcome detour; and for regional traffic, Fluin Lane is more direct and does not have the height restrictions that Church Street has as a result of the railway bridge. Irrespective Church Street is often subject to considerable queues at the junction with the A56 and therefore offers little incentive by way of saving time.

Understanding the problem

As part of the work to produce an Action Plan, we have undertaken additional monitoring and analysis of traffic in the area. It is important to be aware that the problem is not just confined to Fluin Lane. Monitoring has confirmed that levels of nitrogen dioxide on parts of High Street and Bridge Street (A56) near the junction with Fluin Lane also exceed the national objective.

As previously stated the cause of the problem is NO₂ emissions from traffic. We also know that traffic emissions are worst when vehicles are queueing. Ideally then we want to reduce standing traffic on the Fluin Lane junction and this can be done primarily by two methods:

1. Making changes to the highway to enable traffic on Fluin Lane to exit on to the A56 safely and swiftly.

2. Diverting traffic away from Fluin Lane on to Red Lane and Church Street.

Unfortunately any attempt to facilitate traffic exiting Fluin Lane onto the A56, for example the installation of traffic lights, results in queueing on the A56. Modelling work has shown that whilst this will deliver some improvements in air quality at Fluin Lane, it will be at significant detriment to air quality for residents on the A56.

Similarly any attempt to reduce queue lengths by diverting traffic to Church Street would require an increase in capacity at the Bears Paw junction to ensure that queues on Church Street and the A56 do not reach an unacceptable length and result in the creation of new air quality issues.

What we see then is a fine balancing act with no single solution capable of delivering the necessary improvements. It is important to note that, whilst the Council's aim is to improve local air quality, it may not be possible to achieve compliance with the objective for NO₂ in the short term. Whilst we are mindful of the need to reduce pollution levels, we need to avoid creating new issues or aggravating existing issues at other locations. We must avoid substituting one problem for another and must be realistic about the challenges faced.

The proposed Action Plan

The Council appointed expert traffic and air quality consultants, Atkins, to explore potential solutions to the problem and report their findings. The report, found in Appndix 1, is a technical report following the template required by central government which consequently makes it difficult to read in places. It sets out a number of scenarios in Appendix B that have been identified and qualitatively assessed, ranking options in accordance with the likely improvements they could deliver to air quality against their feasibility and cost. In total 32 potential measures were identified and assessed.

After further consideration, 11 of these measures have been identified for further consideration. Table 5.1 of the main report sets out these measures identified for further exploration.

Table 5.1 – Air Quality Action Plan Measures

Measure No.	Measure	Target NO ₂ Reduction in the AQMA	Progress to Date	Comments
1	Alteration to layout of Fluin Lane / A56 junction	-1 micrograms per cubic metre (µg/m ³)	Options TI02 (right hand turn) and TI03 (traffic lights and junction widening) have been developed and assessed, with TI03 excluded for further consideration	A further option is currently being considered in terms of likely feasibility before a final decision is made on which option to progress.

Measure No.	Measure	Target NO ₂ Reduction in the AQMA	Progress to Date	Comments
2	Alteration of junction - Option TI02	-1 µg/m ³	Initial modelling work completed	Option TI02 as detailed above has been assessed and will deliver improvements to both Fluin Lane and the A56.
3	Build out / Chicane – Option TI12	TBD	Initial safety audit completed.	Variation on Measure TI12 in Appendix B, To be fully explored.
4	Low Emission Strategy	Yes, borough wide	Draft report under development	Will deliver improvements in PM ₁₀ as well.
5	EV charging points through planning conditions	Yes, borough-wide	Inclusion in local Parking Standards guidance	Policy in Local Plan part one and draft part two
6	Publicity/education – Option BC03	Low	Work not commenced	
7	Explore TRO options – Option NM01/NM02/NM05	-1 µg/m ³	Work not commenced	This measure is to further explore the possibility of restricting HGVs on Fluin Lane or prohibiting a right hand turn on to the A56
8	Bear's Paw junction feasibility - Option TI10	-1 µg/m ³	Qualitative assessment confirmed potential for further exploration.	This is subject to Measure 7 and assessing the potential to increase green time at Church Street/A56
9	Freight and Delivery Management via TROs – Option NM03	Yes, borough wide	Grant application submitted to Defra 2016.	This measure is subject to funding approval from Defra – scheme presently placed on the grant reserve list
10	Develop / Maintenance of School travel plans – Option BC01	Low	TBD	This will require schools to actively participate as the Council no longer has the capacity to lead on Travel Plans for anything but new developments
11	Explore extension of 20mph zone programme to Fluin La junction	Low	Work not yet commenced	This measure is considered undesirable as reduction of speed limits on A-roads is not generally considered appropriate but nonetheless should be explored further

Discussion of proposed measures

These measures broadly fit under five headings:

1. Traffic management
2. Freight and delivery management

3. Public information
4. Promoting Low Emission transport
5. Promoting travel alternatives

It is important to note that the Action Plan is not stating that these measures will be introduced but rather that we have been able to dismiss 21 measures from the original list of 32 potential measures and identified those remaining as warranting further consideration.

In reality the measures that are ultimately identified as being beneficial and feasible will only emerge once we have undertaken further assessment and explored them through effective consultation with the community. Each identified measure has been expanded below to facilitate the consultation.

Measure 1 – we explored the potential to make physical changes to the junction and modelled

1. the installation of traffic lights.
2. the introduction of right hand turn lanes into Fluin Lane and St Hilda's Drive from the A56.

Modelling showed that traffic lights caused significant additional queueing on the A56 and whilst it did deliver some marginal improvements at properties on Fluin Lane, it had a disproportionately negative effect on properties on the A56. As a result of this we had to discount the introduction of traffic lights at this junction as well as any other measure that would increase queueing on the A56 such as the introduction of a roundabout.

Modelling the introduction of right hand turn lanes however showed improvements in air quality at properties on Fluin Lane and the A56. As such it is proposed to take this forward for further detailed assessment under Measure 2.

Measure 2 – We will undertake a detailed investigation of the introduction of right hand turn lanes on the A56 including costs associated with highways widening and infrastructure relocation.

Measure 3 – this measure explores the introduction of a chicane on Fluin Lane with priority given to traffic turning off the A56 and travelling up Fluin Lane. On its own, this measure does not reduce congestion or use of Fluin Lane but it reduces traffic queueing outside residential properties within the AQMA and forces it to queue further up the road delivering an improvement in air quality within the AQMA. We will undertake modelling of this scenario to quantify any likely improvements to air quality and if it does, undertake a more detailed assessment and establish costs associated.

Measure 4 – We are producing a Low Emission Strategy which will seek to deliver improvements across the borough. It will target the Council's own vehicle fleet and promote the uptake of low emission vehicles within the borough. This measure will only deliver marginal improvements initially but should increase over time.

Measure 5 – This measure builds on Measure 4 and will prioritise Frodsham within the strategy in terms of the delivery of public electric vehicle charging points.

Measure 6 – The National Institute for Health and Care Excellence (NICE) recommend that local air quality issues should be publicised to both inform residents of the issue and importantly, to enable residents to consider measures that they can take to reduce emissions.

Measure 7 – This measure is aimed at reducing vehicles on Fluin Lane but with the acknowledgement of the capacity of the Church Street / A56 junction and the restrictions imposed by the bridge. It considers excluding HGVs from Fluin Lane and is linked with a road signing strategy extending beyond Delamere Forest to try and encourage HGVs to use alternative routes.

Measure 8 – Recognising that any vehicle restrictions or traffic measures introduced on Fluin Lane may result in additional pressure on the Bears Paw junction, we need to explore the options for increasing the capacity of this junction. This measure therefore is very important in delivering a holistic solution and not simply substituting a problem on Fluin Lane for a problem on Church Street.

Measure 9 – This measure is about rolling out a scheme known as Eco-Stars across the borough which targets freight and courier companies and educates them on good driving practice which results increased miles per gallon and reduced vehicle emissions resulting in significant savings. The scheme would target and prioritise fleets that frequently travel through the AQMA. This measure is subject to being awarded a grant from the government. Our bid was not successful but has been placed on the reserve list, which means it is possible that it may be approved later in the year.

Measure 10 – There are two primary schools in close proximity of the AQMA and it is probable that they will have travel plans which explore the way staff and children travel to and from school and ways which can reduce the impact of that on the community.

Measure 11 – The introduction of 20mph zones is being extended across the borough at the moment in the vicinity of schools. Traffic queueing on Fluin Lane within the AQMA clearly will not be travelling fast enough for a 20 mph zone to be relevant. Traffic turning off the A56 onto Fluin Lane and accelerating to 30 mph whilst going up the hill will emit more NO₂ than if they were limited to 20mph within the AQMA. This measure will explore the potential to restrict the speed limit on a section of Fluin Lane.

The consultation process

We would like to find out your views on the proposed Action Plan (Measures 1 to 11 above).

Over the next 12 weeks we will be engaging with the community through the following means:

1. In writing to all residents living in an adjacent to the AQMA.
2. In writing to all residents who live on Fluin Lane or have no option but to travel along Fluin Lane to reach their house.

3. Through the Council website and press release – a consultation page will be placed on the website with links to all relevant reports.
4. Drop in sessions at local venues to be determined.
5. Through your local Cheshire West Councillors.
6. Through Frodsham Town Council.
7. Through the local primary schools.

If you wish to provide any comments in response to this consultation then they must be submitted in writing by the **28 July 2017**. Comments can be submitted either by email to environmentalprotection@cheshirewestandchester.gov.uk or by post to Environmental Protection, Cheshire West and Chester Borough Council, Wyvern House, The Drummer, Winsford, Cheshire CW7 1AH.

If you have any further questions or wish to discuss any issues raised in this letter then please do not hesitate to contact the Environmental Protection Team on 0300 123 7038 or by email environmentalprotection@cheshirewestandchester.gov.uk.