



Air Quality Action Plan for Usk, Monmouthshire December 2008

**Usk Air Quality Steering
Group
DRAFT**

Document Control

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The report as prepared by Air Quality Consultants Ltd has been amended by the Client to reflect National and Local circumstances and following consultation.

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Contents

Contents	1
1 Introduction	3
2 Air Quality Management in Monmouthshire.....	8
3 Existing Policies and Strategies relevant to air quality in Usk.....	13
4 Specific Measures to Deliver Air Quality Improvements in Usk	21
5 Specific measures.....	23
6 Cost effectiveness and wider impacts	38
7 Prioritising measures.....	45
8 Funding Implementation of the Action Plan	48
9 Evaluation and Monitoring Proposals.....	49
10 Consultation Process	52
11 References	54

Executive Summary

This draft Air Quality Action Plan [AQAP] has been prepared by Monmouthshire County Council in fulfilment of its statutory obligation under section 84 [2] of the Environment Act 1995.

Following the declaration of an Air Quality Management Area [AQMA] local authorities are required to prepare and implement an AQAP, setting out the measures that they intend to take in order to improve local air quality, in pursuit of national air quality objectives.

In 2003, Monmouthshire County Council identified potential exceedences of the annual mean nitrogen dioxide objective at locations in Monmouth, Chepstow and Usk. Following a Detailed Assessment and Further Assessment [FA] of nitrogen dioxide, Monmouthshire County Council declared an AQMA along the A472 in Bridge Street and parts of Castle Parade in Usk in May 2005. *[see map in figure 1]* This report should be read in conjunction with the FA.

The Further Assessment indicated that heavy goods vehicles travelling through the town and along the A472 contribute approximately 25% of the emissions in relation to the nitrogen dioxide annual mean concentration. Bridge Street in Usk offers a strategic route across the river, and as such the volume of traffic using the A472 is relatively high, and the street is relatively narrow, giving rise to the exceedences of the annual mean nitrogen dioxide objective. Traffic often queues along the A472 in Bridge Street because of parked delivery vehicles and traffic waiting to turn off, to access the free parking available in the town centre.

With pollutant emissions within the AQMA being predominantly linked to road transport, this AQAP considers various traffic-related measures to deliver improvements to air quality. Following a consideration of the likely effectiveness of various measures, those most likely to deliver air quality improvements involve a reduction in heavy goods vehicles parking along Bridge Street.

The next stage of the action planning process is to take the draft AQAP to the wider community to consult on the proposals and to see support for its implementation.

Note that unless specifically stated or implied, references in the draft AQAP to Bridge Street, include that part of Castle Parade included in the AQMA as shown in Figure 1

1 Introduction

- 1.1 Part IV of the Environment Act, 1995, places a statutory duty on local authorities to periodically review and assess the air quality within their area. The concept of Local Air Quality Management (LAQM) and the process of ‘review and assessment’ was established in the 1997 National Air Quality Strategy¹. In 2000, the Government reviewed the Strategy and a revised Air Quality Strategy for England, Scotland, Wales and Northern Ireland² was published.
- 1.2 The Government’s most recent update to the Air Quality Strategy for England, Scotland, Wales and Northern Ireland³ sets out a framework for air quality management, which includes a number of air quality objectives. These objectives are designed to protect human health and the environment. The Strategy also sets out how the different sectors: industry, transport and local government, can contribute to achieving the air quality objectives. The objectives for use by local authorities are prescribed within the Air Quality (Wales) Regulations, 2000⁴ and the Air Quality (Wales) (Amendment) Regulations 2002⁵. The relevant objectives for this assessment are provided in Table 1 below.

Table 1. Relevant Air Quality Objectives

Pollutant	Time Period	Objective	To be achieved by ^a
Nitrogen Dioxide	1-hour mean	200 $\mu\text{g}\text{m}^{-3}$ not to be exceeded more than 18 times a year	2005
	Annual mean	40 $\mu\text{g}\text{m}^{-3}$	2005

^a The achievement dates for the UK objectives are the end of the specified year.

- 1.3 The objectives for nitrogen dioxide were to have been achieved by 2005, and will continue to apply in all future years thereafter. Measurements across the UK have shown that the 1-hour nitrogen dioxide objective is unlikely to be

1 DoE (1997). The United Kingdom National Air Quality Strategy The Stationery Office

2 DETR (2000). The Air Quality Strategy for England, Scotland, Wales and Northern Ireland – Working together for Clean Air, The Stationery Office

3 Defra (2007). The Air Quality Strategy for England, Scotland, Wales and Northern Ireland. July 2007. Cmd Paper No. 7169.

4 Air Quality (Wales) Regulations 2000. Stationery Office, 2000.

5 Air Quality (Wales) (Amendment) Regulations 2002. Stationery Office, 2002.

exceeded where the annual mean concentration is below $60 \mu\text{g m}^{-3}$ (Laxen and Marner, 2003)⁶. Therefore, 1-hour nitrogen dioxide concentrations will only be considered if the annual mean concentration is above this level.

- 1.4 National and international measures are expected to achieve these objectives in most locations, but where areas of poor air quality remain, air quality management at a local level has a particularly important role to play. Part IV of the Environment Act 1995 requires local authorities to periodically review and assess the current and likely future air quality in their areas. The role of this process is to identify areas where it is unlikely that the air quality objectives will be achieved by the due date. These locations must be designated as AQMAs and a subsequent Air Quality Action Plan developed in order to reduce pollutant emissions in pursuit of the objectives.
- 1.5 For each air quality objective, local authorities have to consider whether the objective is likely to be achieved by the due date. Where it appears likely that the air quality objectives will not be met by the designated target dates, local authorities must declare an Air Quality Management Area (AQMA). Following the declaration of an AQMA, the local authority must then carry out a Further Assessment of existing and likely future air quality and develop an Air Quality Action Plan which sets out the local measures to be implemented in pursuit of the air quality objectives.
- 1.6 Policy Guidance LAQM.PG(03)⁷ published by the Government in 2003, provides guidance on the development of Action Plans. Action planning is viewed as the most important and significant aspect of the LAQM process, playing a key role in helping the UK Government deliver the air quality objectives and EU limit values. An Action Plan is expected to include the following:
- quantification of the source contributions to the predicted exceedences of the objectives, to allow the Action Plan measures to be effectively targeted
This was undertaken as part of the Further Assessment.
 - evidence that all available options have been considered on the grounds of cost-effectiveness and feasibility;

⁶ Laxen and Marner, 2003. Analysis of the Relationship Between 1-Hour and Annual Mean Nitrogen Dioxide at UK Roadside and Kerbside Monitoring Sites

⁷ Defra (2003). Policy Guidance LAQM.PG(03)

- explanation as to how the local authority will use its powers and also work in conjunction with other organisations in pursuit of the air quality objectives;
- clear timescales in which the local authority and other organisations and agencies propose to implement measures within the Action Plan;
- quantification of the expected impacts of the proposed measures and, where appropriate, an indication as to whether the measures will be sufficient to meet the air quality objectives; and
- how the local authority intends to monitor and evaluate the effectiveness of the Action Plan.

1.7 In December 2001, the Office of the Deputy Prime Minister (ODPM) set out proposals to reform council services, with the intent to give more freedom and flexibilities to local authorities, and to reduce the burden to produce and submit plans. One outcome is that local authorities are no longer required to produce a separate Air Quality Action Plan where the problem is predominantly related to road transport. In such cases, local authorities are advised to incorporate the Action Plan into their Local Transport Plan. There is no longer a requirement for a local transport plan in Wales, and due to timing, this draft Action Plan has been prepared as a separate plan and not as part of the existing Monmouthshire's Local Transport Plan or the emerging Regional Transport Plan.

1.8 Supplementary guidance to help local authorities with the integration of their Action Plans into the Local Transport Plan was issued by DEFRA in 2005 (LAQM.PGA(05))⁸. The Local Transport Plan should contain the following:

- background information on air quality (from the review and assessment reports);
- evidence that the local authority has considered all available measures to tackle the problems, and that these measures have been considered on the grounds of cost-effectiveness and feasibility;

⁸ Defra (2005). Local Air Quality Management, Policy Guidance Addendum LAQM.PGA(05).

- consideration of the wider environmental, social and economic impacts of the measures;
 - the target dates for implementation of the measures, and indication of funding mechanisms;
 - identification of those responsible for implementing the measures, and
 - clarification of how the local authority intends to measure progress with the implementation of the measures and air quality improvement afforded.
- 1.9 Local authorities are also required to set out a 2004/05 baseline, a 2010/11 target, and “intermediate outcomes” to measure progress against the target. These may include indicators such as total emissions within the AQMA and traffic flows. This is discussed in Section 8 of this report.
- 1.10 The local authority is also required to identify measures taken for both internal and external consultation. Where the local authority has also prepared a local or regional air quality strategy, relevant measures or policies within that strategy should be reflected in the LTP.
- 1.11 The National Society for Clean Air (NSCA) has also published two guidance documents entitled ‘Air Quality Action Plans (2000)⁹’ and ‘Air Quality: Planning for Action (2001)¹⁰’. These guidance documents have also been taken into account in the development of this draft Action Plan.

Status of this report

- 1.12 This report sets out the draft Air Quality Action Plan for Usk in Monmouthshire. It describes the processes that are in place and sets out the measures that are currently being considered to deliver improvements to air quality within the area of Bridge Street, Usk. An evaluation of potential measures is provided. Although this draft Air Quality Action Plan is to be read as a stand-alone document, the final Action Plan could be included as an

⁹ National Society for Clean Air and Environmental Protection (2000). Air Quality Action Plans: Interim guidance for Local Authorities (2000)

¹⁰ National Society for Clean Air and Environmental Protection (2001). Air Quality: Planning for Action (June 2001).

Annexe to a Local Transport Plan, or Local Transport Plan Progress Report
(or equivalent) in future.

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2 Air Quality Management in Monmouthshire

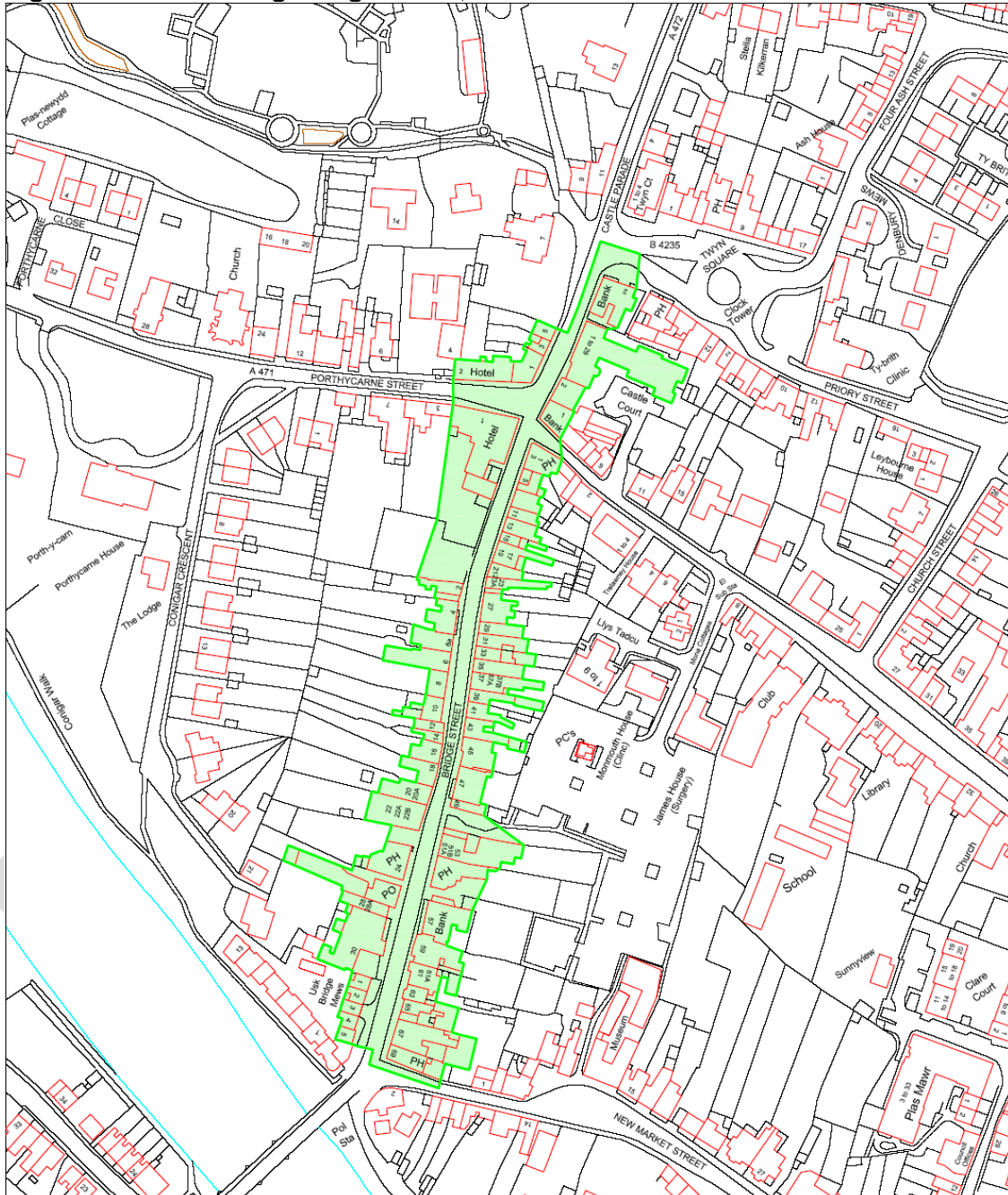
- 2.1 This report provides the basis for the draft Air Quality Action Plan for Usk, relating to the Air Quality Management Area (AQMA) declared along Bridge Street in November 2005 for the annual mean nitrogen dioxide objective. The Action Plan is a statutory requirement on local government, and is the final stage of the air quality review and assessment process described by Defra and the devolved Administrations including the Welsh Assembly Government.



The Third Round of Review and Assessment

- 2.2 The Review and Assessment of air quality is an ongoing process, structured as a series of 'rounds'. A third round of review and assessment is currently underway. The fourth round is due to start in April 2009
- 2.3 Review and assessment involves an initial Updating and Screening Assessment (USA), which all authorities must undertake. If a USA identifies any areas where there is a risk that the air quality objectives may be exceeded, which were not identified in previous rounds, then the local authority must progress to a Detailed Assessment (DA).
- 2.4 In 2003, Monmouthshire's USA identified potential exceedences of the annual mean nitrogen dioxide objective along Bridge Street in Usk. A Detailed Assessment was then undertaken, and an interim Detailed Assessment, reporting on a 9-month monitoring programme was submitted to the Welsh Assembly Government. The results indicated that an Air Quality Management Area (AQMA) would be necessary in the Bridge Street area of Usk.
- 2.5 In 2005, Monmouthshire submitted a Progress Report, which included monitoring data for 2004. The nitrogen dioxide concentrations were found to be above the annual mean objective along Bridge Street, and as such the requirement for an AQMA was confirmed.
- 2.6 The AQMA for Bridge Street in Usk was officially declared in November 2005. Figure 1 illustrates the boundary of the AQMA, which extends from the Usk

Bridge (town-side of the Bridge) to the junction of Castle Parade with Twyn Square. Twyn Square is the location where all buses serving the town stop.

Figure 1. AQMA along Bridge Street, Usk.



 <p>monmouthshire COUNTY COUNCIL <i>air quality</i></p>	<p style="text-align: center;">AIR QUALITY MANAGEMENT AREA BRIDGE STREET USK</p> <p>DRAWING No. BT/AP/AQN SCALE 1:2000 DATE MAY 16 2005</p>	
<p><small>THIS MAP IS REPRODUCED FROM ORDNANCE SURVEY MATERIAL WITH THE PERMISSION OF ORDNANCE SURVEY ON BEHALF OF THE CONTROLLER OF HER MAJESTY'S STATIONERY OFFICE. © CROWN COPYRIGHT. UNLAWFUL REPRODUCTION INFRINGES CROWN COPYRIGHT AND MAY LEAD TO PROSECUTION OR CIVIL PROCEEDINGS. MONMOUTHSHIRE COUNTY COUNCIL, LAG07/2, 2005</small></p>		

- 2.7 In April 2007, Monmouthshire County Council submitted a Progress Report to the Welsh Assembly Government. The report concluded that monitoring results show the annual mean nitrogen dioxide objective is expected to be exceeded at relevant locations along Bridge Street in Usk and Hardwick Hill/Mount Pleasant, Chepstow. Both of these locations have now been declared AQMAs. An Action Plan for Chepstow will be prepared in 2008. Elsewhere in the County of Monmouthshire, air quality objectives are achieved.

Further Assessment in relation to Bridge Street, Usk

- 2.8 Following the official declaration of the AQMA in Usk, a Further Assessment (FA) was undertaken to confirm that the AQMA declaration remains justified and that the appropriate area has been declared. A Further Assessment is a statutory requirement, which should also ascertain the sources contributing to the exceedence and the magnitude of emission reduction necessary to achieve the objective. The results from detailed modelling and on-going monitoring did not indicate any exceedences beyond the AQMA boundary, except for one unexplained anomaly at approximately 120 metres outside the AQMA on Castle Parade. Further monitoring is taking place at this location, which indicates that there is no requirement to extend the AQMA boundary currently. Monitoring data from this location will be considered as part of the annual air quality progress reporting process in future.

Source Apportionment

- 2.9 In drawing up proposals to reduce local air quality, it is important to first identify the emission sources contributing to the nitrogen dioxide concentrations within the AQMA. Results from the FA indicate that traffic is the only significant source of emissions. There are no localised 'point source' emissions (e.g. industrial emissions) to be considered and no 'area source' emissions, such as those from domestic heating of any significance along Bridge Street.
- 2.10 Results from the ADMS modelling in the FA indicated that at worst-case receptors, the main sources of emissions of NO₂ are cars and LGVs, as

illustrated in Table 2 below. However, the contribution from HGVs is also significant.

Table 2. Modelled Annual Mean (2006) Nitrogen Dioxide Concentrations at the Worst-Case Receptors and the Contribution of Each Source to the Total.

Receptor	Background	Car+LGV	HGV	Buses	Total
Annual Mean Concentration (μgm^{-3})					
79 ¹	9.1	22.6	11.2	0.8	43.8
U2 ²	9.1	19.1	9.5	0.8	38.4
Percentage Contribution to the Total ^a					
Bridge Street AQMA					
79 ¹	20.7	51.7	25.7	1.9	====
U2 ²	23.5	49.6	24.8	2.0	====

¹ this location is the Three Salmons Hotel at the northern junction of Porthycarne Street [A471] and Bridge Street, but as there are no permanent residents it is not classed as a relevant exposure, such as a house or school, but is included in this analysis to indicate worst-case conditions within the AQMA. The data is modelled.

² The location is diffusion tube U2 at 16 Bridge Street and due to the proximity of housing can be considered as being representative of relative exposure. The data is measured.

^a contribution based on un-rounded results

Air quality improvements needed

2.11 In terms of the air quality improvements necessary to meet the annual mean nitrogen dioxide objective, this has been defined as the difference between the highest predicted concentration within the AQMA (in 2006) and the objective level of $40\mu\text{gm}^{-3}$. In describing the reduction in emissions required, it is more useful to consider nitrogen oxides. Table 3 below provides an indication of the reduction requirements necessary in terms of nitrogen dioxide concentrations and emissions of nitrogen oxides.

Table 3. Improvement in Annual Mean Nitrogen Dioxide Concentrations and in Emissions of Oxides of Nitrogen at the Worst-Case Representative Receptor in 2006¹¹.

Receptor	Required reduction in annual mean nitrogen dioxide concentration ($\mu\text{g m}^{-3}$)	Required reduction in emissions of oxides of nitrogen from local roads (%)
79 ¹	3.8	17
U2 ²	0.7	3

¹ this location is not representative of relevant exposure, but is included in the analysis to indicate worst-case conditions within the AQMA

² representative of relevant exposure

2.12 Predictions of concentrations at worst-case receptors were estimated as part of the FA, using future year projection factors applied to modelled 2006 data. Table 4 below indicates that some local action will be necessary to ensure concentrations of nitrogen dioxide are reduced over the next few years. There are concerns that concentrations of nitrogen dioxide at roadside sites have not followed the predicted trends, and the decline might not be as great as shown.

Table 4. Modelled and Estimated Annual Mean Nitrogen Dioxide Concentrations ($\mu\text{g m}^{-3}$) at the Worst-Case Representative Receptors.

Receptor	2006	2007 ^a	2008 ^a	2009 ^a	2010 ^a
79 (modelled)	43.8	42.4	40.9	39.3	37.9
U2 (measured)	40.7	39.4	38.0	36.6	35.2
U2 (modelled)	38.4	37.2	35.9	34.5	33.3
Statutory Objective for 2005	40				
EU Limit Value for 2010					40

^a Estimated from 2006 measured values using the future year projection factors available on the UK Air Quality Archive.

¹¹ These data are slightly different to those that can be derived using the NO_x to NO₂ calculator published by Defra (2005). This is because the calculator is based on national default concentration relationships, but these data are derived directly from the model results and use the adjustment factors built into the model verification.

3 Existing Policies and Strategies relevant to air quality in Usk

- 3.1 This section examines a number of specific policies in place that will have an important role to play in delivering air quality improvements in Usk. It is important to take account of national, regional and local planning, transport and economic policy, as it provides the context in which any policies and specific options for improving local air quality can be implemented.

Transport Planning

Wales Transport Strategy

- 3.2 The Wales Transport Strategy (WTS) vision is to 'provide a framework that connects national, regional and local policy to maximise the contribution that transport can make to achieving a sustainable future for Wales, where actions for social, economic and environmental improvement work together to create positive change'. This vision underpins transport policy at the regional level (i.e. South East Wales Regional Transport Plan)
- 3.3 The WTS seeks to maximise the contribution transport can make to delivering fifteen specific social, economic and environmental outcomes, one of which is particularly relevant to local air quality hot spots, specifically 'reducing the negative impact of transport on the local environment'. The WTS also proposes three themes to meet these outcomes, and they are:
- Theme 1: To achieve a more effective and efficient transport system
 - Theme 2: To achieve greater use of the more sustainable and healthy forms of travel
 - Theme 3: To minimise the need to travel
- 3.4 All three themes have the potential to help improve air quality, and the Regional Transport Plan is required to address all three themes (see below).

South West Wales Transport Alliance (SEWTA)

- 3.5 SEWTA (the South East Wales Transport Alliance), established in 2003, is a consortium of the 10 South East Wales local authorities, brought together to

undertake some of their functions in relation to public transport and other transport matters. SEWTA produced an Outline Regional Transport Plan in 2007 on behalf of all the local authorities, which set out to address congestion and carbon emissions as well as deliver the Welsh Assembly's aspirations for its Spatial Plan and Transport Strategy. The Draft Regional Transport Plan (RTP) is expected to be published in 2008.

- 3.6 The RTP will need to identify how it can best contribute to meeting the Welsh Transport Plan outcomes. Traffic congestion is recognized as an immediate and pressing problem. Congestion is estimated to cost the economy of South East Wales an estimated £600million per year, and the RTP therefore seeks to tackle the problem of traffic congestion and traffic growth by proposing integrated transport measures. These will include improvements to public transport, walking and cycling, reducing the demand for travel and increasing the efficiency of the road system.
- 3.7 A fundamental principle of the RTP is to tackle the problem of congestion, traffic growth and carbon emissions from transport. The RTP recognizes that South East Wales has most of the Air Quality Management Areas (AQMA) declared in Wales – with most being in Cardiff or Newport. Vehicle pollution is recognized as being the main source of pollution, with most AQMA being declared for nitrogen dioxide, and the congestion problem is anticipated to get worse. The RTP recognizes that the approach to maintain good air quality is to:
- Encourage walking and cycling;
 - Reduce car-use through encouraging use of public transport or car-sharing schemes, and
 - Encourage the use of best available technologies to reduce emissions.
- 3.8 Likely future actions in relation to the RTP will focus on a more extensive and frequent bus service than is currently operating on the network. Bus services need to be more reliable, through implementing bus priorities and better control and enforcement of parking on bus routes. Other proposals of relevance within the existing LTP include:
- 3.9 The road network to be more efficiently and effectively used: cars to have a higher occupancy via car sharing and travel planning; space to be allocated to

buses, cyclists and pedestrians, and the use of the network may be regulated by pricing protocols.

Monmouthshire County Council's Local Transport Plan

3.10 Monmouthshire's Local Transport Plan was produced in 2000. It outlined the County Council's aspirations to provide transport options across the County for the benefit of the local communities and residents. A range of policies and measures were proposed for implementation. The more relevant proposals for Usk were as follows:

- Undertake A472 improvements including Little Mill and Usk Bypass; this is now a responsibility of the Trunk Road Agency, and does not figure in their current plans.
- To work with Usk communities to produce a Green Transport Plan, with a target a plan by 2010 (Policy LTP27). Green Transport plans and Safe routes to school projects are now combined into community travel plans with associated funding from Wales Assembly Government and is examined further below

Proposals for cycling routes through Usk include the following routes:

- Chepstow to Holyhead via Usk and Abergavenny, National Cycle Route no. 42 (both shared pedestrian/cycle path and on-road sections);
- Monmouth to Pontllanfraith via Raglan and Usk, Regional Cycle Route No. 30 (both shared pedestrian and cycle path and on-road sections), and
- Possible additional routes including Usk to Little Mill to and to Mamhilad.

Due to geographical and land ownership factors, existing cycle routes in the Usk area are predominantly road based, and so can add to hazards which slows traffic until it can overtake cyclists.

3.11 Monmouthshire County Council submitted a Local Air Quality Management Progress Report in 2005, which identified Bridge Street in Usk as being one of two sites at risk from traffic-related emissions. The Progress Report indicated that since the adoption of Monmouthshire's Bus Strategy in 2003, some initiatives have been implemented which should help alleviate congestion in Usk. These are:

- Infrastructure improvements in respect of the Monmouth-Usk-Caerleon bus corridor;
- The Little Mill-Usk bus corridor (implemented in 2002-2003), and
- The Usk-Chepstow bus corridor (implemented in 2003-2004)

Local Planning Framework

- 3.12 Land-use planning policy in Wales is established within the policy document *Planning Policy Wales*¹² (PPW) which provides the strategic policy framework for the effective preparation of local planning authority development plans. PPW is supported by a series of Technical Advice Notes (TANs) and National Assembly for Wales Circulars, and local planning authorities have to take PPW, TANs and Circulars into account when developing Unitary Development Plans.
- 3.13 All local planning authorities in Wales are required to prepare UDPs, and in 2006 Monmouthshire's Unitary Development Plan Deposit Version (September 2001)¹³ established the planning framework for 2006-2011. This report replaced both the Gwent Structure Plan (1991-2006) and Monmouth Borough Local Plan (1991-2006). Work has now commenced the next plan, called a Local Development Plan to provide a land use framework up to 2021 at a local level.
- 3.14 One of a number of guiding principles of the plan is environmental quality such that 'high standards of design and amenity will be required to ensure that development is appropriate in its environment and responsive to all users. Safety, noise, pollution and accessibility are important considerations in ensuring that development is acceptable to the community.'
- 3.15 The environmental objective within the UDP is to 'encourage development in locations that seeks to protect Monmouthshire's population from risks to their health and safety and minimise any detrimental environmental effects.' A specific policy relates to pollution (ENV5), and states that 'all development proposals will be required to ensure that technical measures relevant to the activity are undertaken to prevent or minimize pollution and to render

¹² *Planning Policy Wales* (Welsh Assembly Government). March 2002.

¹³ *Monmouthshire's Unitary Development Plan Deposit Version*, September 2001.

harmless pollutant releases to the environment.’ There is no specific reference to the local air quality management regime. Policy ENV5 is designed to ensure that development requiring planning permission, as far as possible, does not cause significant deterioration in existing environmental standards.

- 3.16 In England, the new regime intends to improve the effectiveness of the local planning process, improving the efficiency and predictability of planning decisions. Planning Policy Guidance (PPG) is also to be revised, to become Planning Policy Statements (PPSs). The new Planning Policy Statement relating to Planning and Pollution Control (PPS23) was published in November 2004, and complements the new pollution control framework under the Pollution Prevention and Control (PPC) Act 1999 and the PPC Regulations 2000. Similar updated guidance is likely to be available for Wales in due course.
- 3.17 With respect to planning policy guidance, TAN (Technical Advice Note) 18 on transport¹⁴ makes reference to local air quality and the need for Air Quality Action Plans to be prepared for any Air Quality Management Areas declared.

Community Strategies

- 3.18 Part 1 of the Local Government Act 2000 placed a duty on each principal council in England and Wales to prepare a community strategy to promote and improve the economic, social and environmental well-being of their areas and to contribute to the achievement of sustainable development in the UK. Community strategies are intended to bring together all those who can contribute to the future of communities within a local authority area, to agree on the key priorities for the area and pursue them in partnership.
- 3.19 Monmouthshire is currently producing a new Community Strategy through a Local Service Board that incorporates the other major public and voluntary service providers.

The draft Strategy identifies three key themes; social justice, social cohesion and localisation. It then seeks to address the key priorities that need to be addressed in the next three years based on these three key themes. Two of those four priorities are relevant to this air quality action plan

¹⁴ Planning Policy Wales Technical Advice Note 18: Transport. Welsh Assembly Government, March 2007.

Priority	Strategic Risk Issues Addressed
Transport / Access to services and facilities	Community cohesion by strengthening access to local services and development of community transport options Localisation by making local service delivery the preferred choice
Climate Change	Localisation by minimising the carbon footprint of public services

Emerging Health, Social Care and Well-Being Strategies.

From this year, local authorities in Wales, in partnership with local health boards are required to develop and implement Health, Social Care and Well-Being Strategies¹⁵. These local strategies are intended to embrace public health at the local level, reflecting upon the need to tackle underlying factors which lead to poor health such as poor education, poor housing and other environmental factors. Monmouthshire's Strategy has been consulted on across the appropriate public services and with local communities. It generally supports the aims and objectives of the community strategy

- 3.20 With respect to Air Quality Action Plans in Wales, they are to be subsumed into local Health, Social Care and Well Being Strategies from 2008. This means that although the Action Plan for Usk is unlikely to be included in any such strategy, any subsequent Air Quality Action Plans for other areas of the County, such as Chepstow, may well be included.
- 3.21 The draft overarching Health, Social Care and Well being Strategy does already address some issues that are relevant to this Air Quality Action Plan

Local Agenda 21 in Monmouthshire

- 3.22 Monmouthshire County Council's Local Agenda 21 Strategy recognises that transport issues are important to our well-being and health, and that there is a

¹⁵ Welsh Assembly Government & NHS Wales (2003). Health, Social Care and Well-Being Strategies: Policy Guidance, February 2003.

real need to reduce car dependency within the County. The Strategy encourages residents to think about the following actions:

- If you have children, why not consider setting up a “walking bus” at their school;
- For journeys of only a couple of miles or less, try cycling or walking, even if it is just once a week;
- Find out about your local train and bus services, by phoning Travel Line Wales;
- If you are buying a new car, consider buying an energy efficient car with a smaller engine;
- If you use a car, try to combine trips, for example buying your shopping on the way home from work, rather than making a separate trip, and
- Consider car-sharing on the way to work, with someone who lives near you.

Climate Change

3.23 This draft Action Plan recognises the importance of considering air quality in the context of other environmental areas, in particular climate change. As such, the measures proposed in this Action Plan take into account any significant impacts on climate change (both positive and negative) within the evaluation of specific measures (see Section 5).

3.24 Monmouthshire County Council do not have a Climate Change Strategy in place, although their Local Agenda 21 Strategy (March 2002) does provide the policy framework for ensuring the climate change is considered across the Council. The Council is also consulting on its sustainable energy strategy which is very relevant to this plan. The strategy is due to be published by the end of March 2008. The strategy will address the greenhouse gas emissions from its transport operations and encourage individuals and businesses in the County to undertake similar reviews.

Economic Development

- 3.25 The Economic Development Strategy *Fresh Directions 2004-2008*¹⁶ (2004) is a five-year strategy to direct economic growth within the County to achieve the continued prosperity of all sectors of the community. It concentrates on the four main towns of Monmouthshire, but its chapter on rural areas with its particular emphasis on accessible public transport is relevant to Usk.
- 3.26 Usk Chamber of Commerce together with Usk Town Council have commissioned and endorsed a short plan for the town that aims to sustain Usk as a small shopping hub for surrounding small villages and hamlets, and to encourage further visitor opportunities to the town through farmer's markets and festivals like its well established Victorian Weekend.
- 3.27 The town is already famous for its floral displays and its Open Gardens weekend. These events, together with the annual Usk Agricultural Show must be protected and sustained at all costs.

¹⁶ Monmouthshire County Council Economic Development Strategy *Fresh Directions* (March 2004)

4 Specific Measures to Deliver Air Quality Improvements in Usk

Introduction

- 4.1 From the source apportionment study undertaken as part of the Further Assessment work, it is clear that traffic is the most significant source of emissions, with cars and light goods vehicles being the dominant source. The Further Assessment also concluded that pollutant concentrations are influenced to a greater extent by the acceleration and deceleration of traffic along Bridge Street than the total traffic volume using the road. As such, measures should be considered that influence the way traffic moves along Bridge Street as well as the volume of traffic through the AQMA area.

Observations from a Site Visit

- 4.2 A site visit to Usk in October 2007 supported the fact that the nature of the traffic flow (i.e. congestion, volume of flow and type of traffic) across the bridge and along the A472 is mainly responsible for the air quality exceedences being experienced. Observations indicated that the frequency of delivery vehicles servicing various shops and other businesses and premises along Bridge Street caused local traffic to build up. This was particularly the case when two or more vehicles (often vans) stopped for a short period on either side of the road, making it very difficult for traffic to pass.
- 4.3 Traffic flow is also interrupted by short term illegal parking for short visits to various shops such as the paper shop along Bridge Street
- 4.4 In conjunction with the above, traffic was seen to build up on the Woodside Industrial Estate side of the Usk Bridge, away from the town centre. At this point where the A472 crosses the River Usk, there appears to be a 'pinch point', causing heavy goods vehicles to stop and wait for traffic on the bridge to move through.
- 4.5 A further problem observed was the need for traffic to queue along Castle Parade, and Bridge Street in particular, as traffic waits to turn into Maryport Street. This right turn from Bridge Street is important for access to the free car

parking available in the town. It is not the only access, as Twyn Square offers an access point off the A472, however this route is unsuitable as a key route through to the car parks, given the narrow and residential nature of the local roads.

- 4.6 Traffic waiting on the A472 to turn into Maryport Street appears to cause the traffic along Porthycarne Street to queue before being able to enter onto the A472.

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5 Specific measures

5.1 Table 5 provides a summary of measures that may assist in improving local air quality along Bridge Street in Usk. These measures have been suggested following discussions with the County Council. They are considered under the following four categories:

- Emission reduction measures
- Traffic management measures
- Public transport measures
- Other general policy measures

5.2 A number of non-transport measures that could be implemented to reduce air quality in the vicinity of Bridge Street in Usk have been identified. Each individual measure identified in Table 5 is discussed in more detail later in this chapter. The wider implications of each measure, including their perceived cost-effectiveness and wider impacts, are provided in Table 6 in Section 5, which considers the overall effectiveness of the measures.

Table 5. Summary of Potential Measures

EMISSION REDUCTION MEASURES				
ENCOURAGE WALKING & CYCLING				
Measure	Details	Responsibility	Timescale	Key points
1. Encourage more cycling; implement hierarchy of urban & inter-urban cycle routes	Implement local, urban, inter-urban and regional networks (Policy LTP54) Completion of national & regional cycle routes	MCC working with Sustrans and other partners	Medium-term	Work on Routes 30 and 42 of relevance to Usk. New routes under investigation
Comment Usk is already a centre for cycling and as the problem is caused more by major through traffic, local cycling into town will only hold up that through traffic even more, causing more emissions				
2. Support & promote facilities for cyclists at school and in town centre	Implement Safe Routes in the community initiative (Policies LTP56 and LTP60)	MCC working with School to produce School Travel Plan to be taken to other parts of the town	Medium-term	No progress made in Usk as yet. Ongoing identification of need
Comment As above				
3. Encourage walking as a mode of transport	Through distribution of promotional material. (Policy LTP59). Council Walking & Cycling Strategy underway.	MCC with appropriate voluntary and community organisations.	Short-medium term	Ongoing
Comment. Walking trails to school could be examined with the local primary school. Local groups are already working on local footpaths				
TRAFFIC MANAGEMENT				
TRAFFIC MANAGEMENT SCHEMES				
Measure	Details	Responsibility	Timescale	Key points
4. Undertake A472 improvements	Proposed in Gwent Structure Plan (1991-2006). Not	MCC Transport & Highways	Long-term	No specific proposals

and Usk Bypass	proposed specifically in LTP			within LTP
Safety work on A472	Local study carried out on road safety measures that would slow and perhaps deter through traffic	MCC Transport and Highways	Medium term	Consultation on going with local community councils

5. HGV restriction along Bridge Street	Review the operation of current weight restriction (7.5 tonne, except for access) along Bridge Street	MCC with Police and local businesses	Short term	Currently being reviewed
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PARKING CONTROLS

Measure	Details	Responsibility	Timescale	Key points
6. on street parking	Existing restrictions to be enforced	MCC Transport & Highways with police	Short term	Parking along Bridge street is considered an important contributor to restricting traffic flows
Consideration of delivery-time strategy	Look at separating peak time traffic and delivery times	MCC area working with Chamber of commerce and individual businesses		Economic sustainability is important for the town so local business must be protected

SPEED REGULATION SCHEMES

Measure	Details	Responsibility	Timescale	Key points
7. Consideration of existing speed limits	Select committee looking at 20 mph zones in the County	MCC Transport & Highways	Medium to long-term	Unlikely to be considered as an option as idling adds to emission problems not speed

PUBLIC TRANSPORT MEASURES				
INCREASE PUBLIC TRANSPORT USE				
Measure	Details	Responsibility	Timescale	Key points
8. Increase the number of bus services to and from Usk	<p>Bus corridor improvements (Policy LTP5):</p> <ul style="list-style-type: none"> - Little Mill to Usk; - Caerleon to Usk to Monmouth; - Usk to Chepstow 	MCC Transport & Highways	<p>Little Mill to Usk (02/03)</p> <p>Caerleon to Usk to Monmouth (03/04)</p> <p>Usk to Chepstow (03/05)</p> <p>Short term</p>	<p>Problem is with primarily with through traffic not local traffic</p> <p>Issue is whether there is further scope for increasing bus patronage</p>
Better use of public transport by Increased use of community bus service	Existing services to Abergavenny and to Cwmbran are increasingly well patronised. It is possible to divert further grass routes buses to these routes	MCC and voluntary sector		Unlikely to have any significant effect on emissions in Usk
OTHER GENERAL POLICY MEASURES				
LAND-USE PLANNING MEASURES				
Measure	Details	Responsibility	Timescale	Key points
9. Reduce indirect emissions from future development	Develop a protocol or Supplementary Planning Guidance on Development Control & Air Quality for use across the County as part of emerging Local Development Framework; provision of information to <i>would-be</i> developers	MCC	Short to medium-term	Proposed in addition to traffic-related measures

Waste Management	Extend black box recycling kerb side collections to the area around Usk	MCC Waste Management	Short term	Could cut down on nos of cars travelling along Bridge Street to Civic Amenity Site in Usk
GREEN TRAVEL PLANNING				
Measure	Details	Responsibility	Timescale	Key points
10. Community travel plan	School travel plan co-ordinator to start work with Usk school and area working team to develop the work with Usk strategy group, Chamber of Commerce, Town Council etc	MCC with other partners in Usk	Medium term	Current Community Travel plan funding already committed, but plans to be prepared for 2010 funding
11. Encouraging car sharing	Develop and promote Council car share database, through SEWTA website	MCC Transport & Highways	Short to medium-term	Ongoing – previous project with Torfaen Council has been successful
SPECIFIC INITIATIVES				
Measure	Details	Responsibility	Timescale	Key points
12. Car club scheme	Scheme encouraged as part of LTP28	MCC Transport Highways; Environment & Planning support	Short-term	Support and mechanism in place already.
13. Flexible home-working, work-time	MCC is developing an 'agile working' approach as largest employer in the area.	Environment & Planning; Chief Executive Unit involvement	Short to medium-term	Should have some effect on through traffic in Usk
14. Travel Awareness campaigns	Various campaigns already in progress – to be co-ordinated to focus on reducing traffic along Bridge Street	Environment & Planning	Short to long-term	

Emission reduction measures

Encourage walking and cycling

- 5.3 The potential exists for air quality improvements to be made through increasing the proportion of trips made by bike is marginal, as the main sources of emissions are through traffic believed to be long distance rather than local. However it is a general priority of the council and partners to reduce the carbon footprint in the County. Provision for cycling must be balanced with the needs of pedestrians. Three specific measures involving walking and cycling have been identified within the Local Transport Plan that may help improve local air quality in Usk.

Measure 1: Encourage more cycling through implementing hierarchy of urban & inter-urban cycle routes

- 5.4 In 2001, the County began the process of refining and consulting on the cycle network across the County, and a programme of implementation began in 2002, as part of policy option LTP54. In each year between 2002 and 2006, the target was set for developing 1000 metres of off-road cycle track a year and 500 metres of on-road track a year. A number of routes (Route 30 and 42) are of relevance to Usk, and new routes are under investigation. In relation to the AQMA in Usk, it would be helpful if investigations included maximising the number of off road cycling routes in and around Usk.

Measure 2: Support & promote facilities for cyclists at school and in town centres

- 5.5 Policy LTP56 requires the County Council to support and promote facilities for cyclists at school and within town centres. Identifying needs and promoting the 'Safer Routes to School' initiative has been an ongoing process. The local school does encourage safe cycling and it is recommended that this option be progressed as an Air Quality Action Plan option.

Measure 3: Encourage walking as a mode of transport

- 5.6 Increasing pedestrian areas will often improve air quality in locations where air quality is a problem. It may however, depending on location, move the congestion and air quality issues elsewhere. Pedestrianisation is generally seen as negative for local business (although businesses which rely on passing trade often do better in pedestrianised areas). There are no areas within Usk that are pedestrianised and there would be specific problems in pedestrianising Bridge Street as it carries a through route, the A472. Safer walking routes into the town would however encourage local people to leave their cars at home.
- 5.7 Increasing the promotional literature to encourage walking in and around Usk may help raise awareness of the issues involved. This measure would fit with the social and health and well being initiatives in the local strategy

Traffic management

- 5.8 There are a number of measures relating to the control of traffic through Usk which will have an impact on air quality along Bridge Street. These relate to specific traffic management measures such as the construction of a bypass for Usk, parking control measures and speed restriction measures.

Traffic management measures

Measure 4: Undertake A472 improvements and Usk Bypass

- 5.9 A bypass was first proposed for Usk in 1965. Proposals for the A472 improvements, which included the Usk Bypass, were subsequently identified as strategic route schemes in the Structure Plan Policy T4¹⁷, for construction during 1988 subject to funding being available. Concerns were raised over the proposed route of the bypass (along a former railway route, which remains the preferred route) on a number of grounds, including the likelihood of increased traffic on the A472 and environmental effects such as noise and pollution.

¹⁷ Gwent Structure Plan (1991-2006). Adopted Plan, Gwent County Council, March 1996.

- 5.10 At the time, the Usk Bypass was considered to be a way of improving the environment within Usk town centre. An evaluation of this as a measure of improving local air quality is discussed in Section 6. This specific measure is not proposed as part of the Regional Transport Plan. Neither is there any funding within the Trunk Roads Agency for such a by pass which would be extremely expensive as it would involve land ownership issues and another major river crossing.
- 5.11 Improvements for consideration along the A472 in Usk might include directing traffic off Bridge Street along streets other than Maryport Street to reduce queuing traffic along Bridge Street to access the car parking available in the town. This may be through the use of existing streets within the town, or through the development of feeder lanes, although constraints within the ancient heritage of the town centre environment are likely to prevent this option from being implemented. Alternative routes would affect local homes.

Measure 5: Weight restriction along Bridge Street

- 5.12 From the Further Assessment of air quality along Bridge Street, HGVs contribute a significant proportion [25%] of traffic emissions responsible for the exceedences being experienced. A reduction in the HGV component of the traffic along Bridge Street will have an impact on the speed, flow and composition of the traffic and a subsequent impact on local air quality concentrations.
- 5.13 There is no specific policy in place to address the type of traffic using Bridge Street in Usk, although a policy within the Local Transport Plan, LTP40, requires the Council to review the local road hierarchy. Following extensive local concerns the Council is working with the police to review the extent and operation of weight restrictions. Damage to Usk Bridge has lead to local traffic chaos through the subsequent repair work required, and the vibration from heavy vehicles is also causing local concern. However, it must be recognised that there is an industrial estate adjacent to Usk just over the bridge to the rear of the A472 and so vehicles requiring access might well have to be exempt from such an order
- 5.14 As a result of concerns raised, the local Police Division has proposed a task force to review existing Heavy Goods Orders in operation and to further

enforce the legislation in place. The larger haulage firms could be targeted with a view to exploring the use of alternative routes. Proposals are also in place to explore a weight reduction to 3.5 tonnes such that offending vehicles could be more easily recognised.

Parking controls

Measure 6: Management of on and off-street parking

- 5.15 Usk prides itself on the availability of free parking to encourage people to use the town centre shops, services and businesses. However, it is proposed to investigate the use of off street parking within the town to ensure that this facility does indeed add to the economic prosperity of the town, and is not being used by commuters' car sharing from Usk after travelling separately to the town, as happens elsewhere.
- 5.16 The need to enforce the management of on-street parking has been identified in the draft LTP, which provoked concern over the right to park along Bridge Street. Public Highways intended traffic to pass and re-pass only, so there is potential for a conflict of interest here between those needing to deliver goods and services locally. It is necessary to ensure private cars do not park alongside local shops which increases the potential for congestion and a breakdown of effective traffic management. The MCC local area working team will be working with the Chamber, and the local police to see how enforcement of parking restrictions can be applied without detriment to local business
- 5.17 The Council began to develop a Strategy in 2006/2007 for managing the on and off-street parking along Bridge Street. This issue remains an important option for delivering air quality improvements in the vicinity of Bridge Street.

Speed regulation schemes

There are a number of possible traffic speed-related measures that may have an influence on the air quality along the Bridge Street section of the A472, if implemented. They include the implementation of specific speed restrictions (although a 30mph speed restriction is already in operation along Bridge Street) and a speed management strategy, as discussed below.

Measure 7: Implement new 20mph speed limit or Home Zones

- 5.18 The County Council proposed to develop a speed management strategy under policy LTP21, although no progress has been made to date. This policy is to be progressed under the Local Road Safety Strategy. If implemented, a consideration of the A472, including the section along Bridge Street, may help address traffic speed along this section. If lowering the speed restriction would maintain a more constant traffic flow this would help alleviate the air quality problem. This needs further investigation as it is important to keep the traffic flowing.
- 5.19 Home Zones are streets in which the road space is shared between drivers of motor vehicles and other road users, with the wider needs of residents (including people who walk and cycle and children) in mind. The aim is to change the way that streets are used and to improve the quality of life in streets by making them places for people, not just for traffic. Changes to the layout of the street should emphasise this change of use, so that motorists perceive that they should give informal priority to other road users. Variations on this theme such as Shared Space initiatives are being examined in other areas of the county.
- 5.20 A speed limit of 20mph is usually implemented as part of the development of a Home Zone. Such zones are not appropriate in all streets, and are more often associated with more residential locations than retail locations. However, they represent a further option for the managing and prioritising traffic flow along Bridge Street. As in the discussions above, it is important to balance the safety of pedestrians with keeping the traffic flow going

Public Transport Measures

- 5.21 Improving access to public transport and facilities is an important way of helping reduce car dependency. In relation to Usk, this may be relevant for short journeys into the town from neighbouring settlements. The existing community bus service known as Grass Routes may be a more appropriate way of fulfilling this need than increasing existing underused service buses. This will also be dependent on a local push to encourage use of this service.

Increase public transport use

Measure 8: Increase the number of bus services to and from Usk

- 5.22 The County Council's policy LTP5 to promote and encourage improvements to the bus services provided across the County has been successfully undertaken along a number of specific corridors in the vicinity of Usk. This includes the corridors of Little Mill to Usk, Caerleon to Usk to Monmouth and from Usk to Chepstow. All were completed by 2005. A survey could be undertaken of existing use, and an appraisal of the suitability of extending the use of the community bus scheme will be carried out.
- 5.23 This Action Plan provides the opportunity for all bus services in and out of Usk to be considered in terms of whether they are sufficient or whether more services and routes could feasibly be added to further encourage bus patronage. There is a view within the Usk Community that there is much scope for improvements to the availability and frequency of services, particularly between Usk, Chepstow and Abergavenny.

Other General Policy Measures

- 5.24 Having considered the main transport-related measures that are most likely to improve local air quality in Usk, there are a number of other measures relating to land-use planning and other initiatives with a potential to positively affect air quality. Each is discussed below, and the effectiveness of each is considered in Section 6.

Land Use Planning Measures

Measure 9: Reduce indirect emissions from future development

- 5.25 This measure is intended to consider the impact of any future development in and around Usk. It does not necessarily need to target potential development along Bridge Street only. Included in the measure is the provision of information to *would-be* developers, the development of Supplementary Planning Guidance and local Planning Protocol.

- 5.26 Developers could be targeted to provide information to new retailers or home-buyers regarding information about transport modes (pedestrian routes, public transport, local cycle paths etc). Developers of large developments could be encouraged to provide better infrastructure (cycle paths, bus routes etc.) as part of a planning obligation or condition. Such conditions might include the provision of cycle lanes and safe and secure cycle parks, or the improvement of existing facilities. Generally speaking, any actions that focus on encouraging development that seeks to reduce commuting and outward travel will help reduce the overall impact of development on travel behaviour.
- 5.27 The provision of an air quality assessment, either as part of a wider environmental statement or as a stand-alone report, should be a consistent requirement of major planning applications that satisfy certain criteria. Such criteria could be set out in a Local Planning Protocol or Supplementary Planning Guidance. This will provide a consistent mechanism for requiring air quality assessments of potentially polluting developments. Such a document will also help address the consideration of cumulative impacts, low-polluting development and appropriate impact mitigation, which may thereby influence local air quality along Bridge Street.
- 5.28 Extensive further development of the town centre and the surrounding environment is considered unlikely given the physical constraints locally. However, the development of guidance can inform and address development which is likely to impact on the A472 further afield and lead to traffic generation within Usk.

Sustainable energy travel plans

- 5.29 The County Council, through a number of specific policies, intends to encourage a range of initiatives across Monmouthshire that could loosely be seen to include more sustainable energy travel plans. Such plans are intended to reduce work, school or leisure-related car trips through initiatives such as car sharing, providing pool cars, cycling incentives, cycle parking, showers and changing facilities, video conferencing, flexible working and discounted bus and train tickets. These plans can be extremely cost-effective and have proved very successful in reducing car use, and could reduce traffic emissions in the air quality area

- 5.30 Three such policies have the potential to help improve local air quality along Bridge Street.

Measure 10: Green Travel Plans for specific towns

- 5.31 The County Council, through policy LTP27, is working with local communities across the County to produce Green Transport Plans across various towns. A specific proposal to work with the community of Usk had been proposed in the LTP, but there has been no progress made due to a lack of resources. It is recommended that this proposal be undertaken as a measure to seek reductions in air quality concentrations along Bridge Street in Usk.

Measure 11: Green Travel Plans for local business

- 5.32 Policy LTP28 states that the County Council will work with businesses in the County to produce Green Transport Plans. A successful seminar for Chepstow businesses was provided, and it is recommended that a similar presentation be provided for retailers and businesses in Usk. This will provide a platform for a number of travel initiatives aimed at reducing air quality along Bridge Street, to be discussed (such initiatives are discussed as measures below).

Measure 12: Green Travel Plans for schools

- 5.33 The school journey is often a major cause of localised congestion in towns and contributes to the peak traffic levels each morning. Over the past 20 years, the proportion of children travelling to school by car has almost doubled, yet many live close enough to school to walk. Very often children would choose to cycle, but safety concerns and a lack of secure cycle storage facilities prevents cyclists. Other pupils would like to travel by bus, but there may not be a service available at the right time. Encouraging more children to walk or cycle to school, even walking to the bus stop, will not only reduce congestion but also improve health directly through increasing exercise.
- 5.34 Through policy LTP29, the County Council is continuing to promote, develop and implement school travel plans across the County. It is recommended that a school travel plan for Usk Controlled Voluntary Primary School is developed to support the reduction in car travel in the Usk area.

Specific Initiatives

- 5.35 There are, in addition to the specific Local Transport Plan policies and other measures described above, a number of other initiatives that may help reduce air quality concentrations along Bridge Street. Three such initiatives are described below which, in conjunction with the other measures previously outlined, have the potential to alter travel behaviour. Each are described below and evaluated in Section 6.

Measure 13: Car club scheme

- 5.36 Part of the County Council's policy to encourage the development of business Green Travel Plans has involved the development and implementation of a Council car share scheme called *Staff Care2Share*. This has been run in conjunction with Torfaen County Borough Council since 2003. Promotion of this scheme is ongoing, and it is recommended that Usk be targeted in the development of the car club scheme.

Measure 14: Flexible home-working and work- time

- 5.37 Monmouthshire County Council is the largest employer in the area, and it is moving out of its main County Hall base to move towards a more flexible or 'agile' work scheme. All workers will become classified as mobile, home or fixed desk workers and will be encouraged to move towards more flexible working hours, or supported to work from home bases. This could reduce congestion, particularly during peak periods. There are, however, social, environmental, management and performance impacts to consider relating to such practices. The authority has an established 'Agile working group' that is preparing for timescales culminating in 2011. Transition arrangements are already being implemented.

Measure 15: Travel awareness campaigns

Specific travel awareness campaigns (e.g. Bike-2-work or leg-it days)?

- 5.38 Monmouthshire Council's Local Agenda 21 Strategy identifies a number of specific campaigns and activities related to travel awareness campaigns. One relates to the annual *Don't Choke Britain campaign* run at County Hall. This

could be focused in the Usk area through a targeted campaign towards business, retailers and local residents.

- 5.39 There are a number of other campaigns, such as *Bike-2-Work* or *leg-it days campaign* which can be developed and rolled out to inform and educate the local workforce, schools and wider community.

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6 Cost effectiveness and wider impacts

- 6.1 This section considers the measures identified in the previous chapter in terms of their cost effectiveness, wider environmental and social impacts, feasibility of implementing the measure and the likely improvement afforded by the measure.
- 6.2 Table 8 provides a summary of each measure in terms of the criteria discussed above. A summary of the key used in Table 8 is provided in Box 1 below. Each criterion is described in more detail in the remainder of this section.

Box 1. Key used in Table 8 to consider the effectiveness and wider impacts of individual measures

> = increase >> = increase significantly <> = no increase or decrease
 < = decrease << = decrease significantly

Air Quality Impacts

L = Low (imperceptible but step in right direction)
 M = medium (perceptible - improvement of up to $2\mu\text{g}\text{m}^{-3}$ which could be shown in modelling)
 H = high (significant - improvement of more than $2\mu\text{g}\text{m}^{-3}$)

Cost

L = low (<10K)
 M = medium (£10k-100K)
 H = high (£100K – £1 million)
 VH = very high (>£1 million)

Feasibility (based on professional judgement and discussion)

L = low
 M = medium
 H = high

Wider Impacts

+ve = positive impact
 ++ve = very positive impact
 +/-ve = both positive and negative impacts
 -ve = negative impact
 --ve = very negative impact
 0 = neutral impact

Timescale

S = Short (can be implemented over next 1-2 years)

M	= Medium (can be implemented within lifetime of LTP2)
L	= Long (6+ years away i.e. post LTP2)

Cost effectiveness

6.3 Implementing any of the measures identified has a cost implication, either in terms of capital expenditure, running costs and/or staff costs. A full cost-benefit analysis is not required as part of the action planning process. Instead, local authorities are required to provide a broad indication of costs so that the proposed measures can be ranked according to the cost and the expected improvement to air quality.

6.4 Although cost-effectiveness is not included explicitly within Table 6, measures have been judged on their likely cost to the Council and to others. This may include members of the public, users of a particular service or others affected by the measure. The following classification scheme has been used:

- **Low** cost is taken to be <£10K
- **Medium** cost is £10 - 100K
- **High** cost is £100K - £1 million
- **Very High** cost is over £1 million

Air Quality Impacts

6.5 Air quality impacts have been classified as 'low', 'medium' or 'high'. For each measure, or package of measures, the expected reduction in annual mean nitrogen dioxide concentrations has been evaluated. The expected air quality impacts are based largely on professional judgement, drawing wherever possible on experience gained from other studies.

6.6 The following classification scheme has been used

- **Low:** *imperceptible* (a step in the right direction). Improvements are unlikely to be detected within the uncertainties of monitoring and modelling;
- **Medium:** *perceptible* (a demonstrable improvement in air quality). An improvement of up to $2\mu\text{g}\text{m}^{-3}$ in nitrogen dioxide concentrations within the AQMA, which could be shown by a modelling scenario. Improvement is not likely to be shown by monitoring due to confounding factors of the weather;

- **High:** *significant.* Improvement of more than $2\mu\text{g}\text{m}^{-3}$ in nitrogen dioxide concentrations. Improvements can be clearly demonstrated by modelling or monitoring. A significant improvement in air quality is likely to be delivered by a package of options rather than by a single option.
- 6.7 Table 6 also summarises the specific effect on air quality, i.e. whether the measure impacts on vehicle flow, on vehicle kilometres within the AQMA, on emissions per vehicle or whether the option is designed to reduce relevant exposure to pollutants. The symbol '>' denotes an increase, with '>>' being a significant increase. A decrease is denoted by '<', with '<<' denoting a significant decrease. Where a measure is judged to have no impact, this is denoted by '<>'.
- 6.8 The feasibility of implementing individual measures is not straightforward to quantify. The following factors have been taken into consideration:
- Synergy with other Monmouthshire County Council strategic initiatives, regional planning strategies and Local Transport Plans;
 - Wider non-air quality impacts (i.e. social, environmental or economic impacts);
 - Stakeholder and political 'will';
 - Availability of enabling legislation, and
 - Source of funding available or possible.
- 6.9 Some elements related to feasibility, such as alignment with existing Council policies or whether legal powers are available etc., have been included in the descriptions of the options. The wider (i.e. non-air quality) impacts reflect the potential impacts upon other environmental criteria (e.g. noise, visual amenity and climate change gas emissions) and non-environmental criteria (social and economic issues). Semi-quantitative descriptors have been used.
- 6.10 These descriptors are based on positive and negative impacts, with '++ve' being very positive, '+ve' being positive; negative impacts are described as '-ve' and '- -ve'. Where the measure has both positive and negative impacts, the overall impact has been evaluated. In arriving at the feasibility 'scores' there is inevitably some element of professional judgement included.

Timescale

6.11 The timescale for the implementation of measures has also been considered. The following classifications have been used:

- **Short-term** relates to those measures that can be implemented within 1-2 years;
- **Medium-term** relates to those implemented within 3-5 years (i.e. still within the lifetime of the second LTP 2006-11), and
- **Long-term** options are those which are >5 years (i.e. those measures which may be considered for implementation in the third round of Local Transport Plans (i.e. LTP3)).

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Table 6. An evaluation of the 15 potential action planning measures (key provided in Box 1 on page 30).

Emission Reduction Measures												
Encourage Walking & Cycling												
Measure	Effects					Cost		Feasibility				Time-scale
	Vehicle flow	Impact on Exposure	Vehicle kms within AQMA	Emissions per veh/kms	AQ impact	To Council	To others	Practicability	Wider impacts			
									Social	Environ-mental	Econo-mic	
1. Encourage more cycling; implement hierarchy of urban & inter-urban routes	<	<>	<	<	L	L	L	H	++ve	++ve	+ve	S-M
2. Support & promote facilities for cyclists at school and in town centres	<	<>	<	<	L	L	L	H	++ve	++ve	+ve	S-M
3. Encourage walking as a mode of transport	<	<>	<	<	L	L	L	H	++ve	++ve	++ve	S

Traffic Management Measures												
Traffic Management Schemes												
Measure	Effects					Cost		Feasibility				Time-scale
	Vehicle flow	Impact on Exposure	Vehicle kms within AQMA	Emissions per veh/kms	AQ impact	To Council	To others	Practicability	Wider impacts			
									Social	Environ-mental	Econo-mic	
4. Undertake A472 improvements including Usk Bypass	<	<<	<<	<< (reduce congestion)	M-H	VH	M-H	L	-ve	-ve/+ve	--ve	L

5. HGV restriction along Bridge Street	<<	<	<	<<	M	L-M	M	M	+ve	++ve	+ve/-ve	M
Parking Controls												
6. Management of on and off-street parking & free car parking; consideration of delivery-time strategy.	<<	<>	<>	<< (reduce congestion)	M	L-M	L-M	M	+ve/-ve	+ve	-ve/+ve	S-M
Speed Regulation Schemes												
7. Implement new 20mph speed limits/zones	<>	<	<>	<	L	M	L	L	+ve	+ve	0	M

PUBLIC TRANSPORT MEASURES												
Increase Public Transport Use												
Measure	Effects					Cost		Feasibility			Time-scale	
	Vehicle flow	Impact on Exposure	Vehicle kms within AQMA	Emissions per veh/kms	AQ impact	To Council	To others	Practicability	Wider impacts			
									Social	Environ-mental	Econo-mic	
8. Increase the number of bus services to and from Usk	<	<>	<	<>	L	n/a	H	L-M	0	+ve	+ve/-ve	M-L

OTHER GENERAL POLICY MEASURES												
Land-Use Planning Measures												
Measure	Effects					Cost		Feasibility			Time-scale	
	Vehicle flow	Impact on Exposure	Vehicle kms within AQMA	Emissions per veh/kms	AQ impact	To Council	To others	Practicability	Wider impacts			
									Social	Environ-mental	Econo-mic	
9. Reduce indirect emissions from future development (i.e. development of Planning Guidance)	<	<<	<	<>	L	L	L	H	+ve/-ve	+ve	-ve	S-M
Specific Initiatives												
12. Car club scheme	<	<>	<	<	L	L	L-M	M	++ve	0	+ve	S-M
13. Flexible home-working, work-time	<	<	<	<	L	n/a	L	L-M	0	+ve	+ve	S
14. Travel Awareness campaigns	<	<>	<	<	L	L	L	M-H	+ve	+ve	+ve	S-M

7 Prioritising measures

- 7.1 Having considered the individual merits of specific action planning measures in Section 5 and 6, the next stage of the action planning process is to attempt to rank or prioritize the measures outlined. Prioritization is the culmination of the information collation process, and requires a judgement to be made of all the information available.
- 7.2 Having undertaken a process of identifying where air quality problems exist and the emissions sources responsible, the list of 15 possible measures identified through the collaboration of various organisations and parties (discussed further in Section 8) has been evaluated against a set of criteria and the outcomes provided in Table 6.
- 7.3 In order to now rank the measures, a simplified quantitative approach has been taken, whereby the overall impact on the key criteria from Table 6 are considered against various individual or groups of measures. Table 7 provides a prioritisation of the 14 measures.
- 7.4 The prioritisation of measures in Table 7 has been developed by Air Quality Consultants, Officers of M.C.C and the Usk Air Quality Steering Group (further details can be found in Section 9 – Consultation Process). The Steering Group is aware that the action plan has to list measures that can be implemented to address the nitrogen dioxide exceedence, therefore measure 4 - Undertake A472 improvements and Usk Bypass – has been removed from the prioritisation table. However the parties involved with the steering group are keen to point out that a bypass for Usk remains a long term aspiration for the town and its surrounding area. The action plan overlaps with other on going work to address the serious concerns posed by heavy goods vehicles in Bridge Street and the damage being done to the bridge itself.

Table 7. Prioritisation of 14 measures

Ranking of measures (in order of priority)				
Measure	Overall cost-effectiveness	Overall air quality improvement (and time-scale involved)	% people positively affected by option	RANKING
6. Management of on and off-street parking consideration of delivery-time strategy.	Medium (low to medium costs)	Medium (short to medium-term)	Medium (residents & shoppers, not retailers)	1
5. HGV restriction along Bridge Street – To be informed by surveys and subsequent report (see para. 7.4)	Medium (medium costs- mainly to others and not Council)	Medium (medium-term)	High (residents, shoppers)	2
3. Encourage walking as a mode of transport	High (low cost)	Low (short-term)	High (residents, shoppers, retailers)	3
8. Increase the number of public transport services to and from Usk. To include community transport	Low-medium (high costs to others)	Low (medium to long-term)	Low-medium (residents and shoppers)	4
9. Contain indirect emissions from future development and from changes of land use that would generate traffic	High (low costs)	Low (short to medium-term)	Medium-high (residents, shoppers & retailers)	5
15. Travel Awareness campaigns e.g. Green Travel Days etc.	High (low costs)	Low (short to medium-term)	Medium (residents, retailers and shoppers)	6
New – Informed by Steering Group Work with school and others to produce community and school traffic plan	High (possible grant input)	Low (medium term)	Low (residents with emphasis on those with primary school age children)	7
1. Encourage more cycling; implement hierarchy of urban & inter-urban cycle routes	High (low cost)	Low (short-term)	Potentially high (residents, shoppers, retailers)	8
2. Support & promote facilities	High (low cost)	Low (short-term)	Potentially	9

for cyclists at school and in town centres			high (residents, shoppers, retailers)	
13. Car club scheme	High (low-medium costs)	Low (short to medium-term)	Medium (residents and retailers)	10
New – Informed by Steering Group Develop kerb side recycling collections to reduce traffic to civic amenity site	High (costs factored into MCC waste strategy)	Low (short term)	Low (percentage of local residents)	11
14. Flexible home-working, work-time	High (low costs)	Low (short-term)	Low-medium (residents and retailers)	12
7. Implement new 20mph speed limits/ zones	Low-medium (low to medium costs)	Low (medium-term)	Low (some residents only)	13
New – Informed by Steering Group Investigation of altering traffic flows through the town	To be determined	Could be high (long term)	Potentially high to residents, shoppers and businesses in the vicinity	14

7.5 The measures have been given a ranking of 1 to 14, Those most cost-effective and likely to deliver the most effective solution to the problem in Usk are traffic management measures. Addressing the through-flow of heavy goods vehicles along the A472, together with a consideration of delivery times are the specific measures most likely to deliver improvements.

8 Funding Implementation of the Action Plan

8.1 The ability to implement an Action Plan is dependant on securing adequate funding and sufficient revenue resources to fund any necessary staff required to deliver the programme of measures. For the purpose of this draft Action Plan, the potential cost of developing and implementing a specific measure has been considered and categorised as low, medium or high. The main source of funding for many of the measures will be the Local Transport Plan. Other potential sources of funding outside of the Local Transport Plan include:

- **Developer contribution** Possible link to funding for cycle and walking paths
- **European projects** – European funding is often a way to gain funding for innovation in transport planning. This funding source could be explored for the implementation of some innovative travel awareness campaigns for example.
- **New Opportunities Fund** is a lottery distributor created by the National Lottery Act and sponsored by the Department for Culture, Media and Sport. One initiative is for green spaces and sustainable communities involving safer routes to green spaces or community involvement in sustainable development, through transport schemes and energy efficiency projects. The working group established to take forward the action planning process may have access to current programmes for funding in Wales, which include 'people and places' and 'health families – way of life' as themes.
- **Direct charging**, workplace charging, off-street and on-street parking charges, although it is recognised that the Council advocates the provision of free parking within the town and close to the town centre.
- **Partnership funding** brings a wider stakeholder involvement to the action planning process, and may provide funding from transport operators, haulage companies and local businesses and retailers.

9 Evaluation and Monitoring Proposals

9.1 The success and effectiveness of an Action Plan should be assessed at a number of stages of its development, and particularly before and after its implementation. In order to monitor the progress of a plan, a number of indicators should be devised by which to monitor whether or not the Action Plan is helping deliver the intended reductions in pollutant concentrations required. This section considers a number of possible targets and indicators to monitor progress and the effectiveness of the Plan.

2010/2011 Targets and Indicators

9.2 Local authorities are required in their Action Planning process, where possible, to establish realistic targets for 2010 for key outcome indicators, to measure the achievement of improved air quality from a baseline position. The baseline position can start from 2008, as the likely year of publication of Monmouthshire's final Action Plan. Local authorities are advised to provide intermediate outcomes to provide an indication on annual progress towards meeting the targets. These can take the form of various indicators such as:

- Reductions in nitrogen dioxide concentrations along Bridge Street;
- Increase in local bus patronage;
- Reduction in vehicle numbers (and particularly heavy goods vehicles) on the A472;
- Number of fines relating to illegal traffic (heavy goods vehicles);
- Increase in the number of local retailers willing to alter their delivery times or alter their delivery location (such that there are deliveries away from Bridge Street) over a 12-month period following a targeted programme of education and dialogue;
- Progress with development of Green Travel Plans (in schools, businesses and the wider community).

- 9.3 Suggested targets and indicators, together with interim target and indicators are provided in Table 8.

Table 8. Proposed targets, interim targets and indicators

Target no.	2010/2011 Target	Interim Target 2008/2009	Commentary
1	A quantifiable reduction in NO ₂ concentrations along Bridge Street of 1-2µgm ⁻³ .	A quantifiable reduction in NO ₂ concentrations along Bridge Street of up to 1µgm ⁻³ .	This will relate to the NO ₂ concentration at the relevant receptor location (U2), along Bridge Street, only.
Indicator No.	Indicator	Interim indicator	Comment
1	A quantifiable increase in local bus patronage or an increase in the bus services provided.	Progress (through dialogue taking place), towards increasing or improving up on the bus services provided.	Wider consultation within the community will be required to assess the necessary improvements in additional services required.
2	A quantifiable reduction in vehicle numbers (and particularly heavy goods vehicles) using the A472 along Bridge Street.	Progress (through manual counts taking place) towards identifying any reductions in HGV movements.	Proposals are in place to undertake manual counts of Heavy Goods Vehicles using the A472 through Bridge Street. Manual counts would be required over a period of time to deduce whether any reductions have occurred.
3	A quantifiable increase in the number of fines relating to illegal traffic (heavy goods vehicles).	Progress with the intended task group proposals to enforce the traffic order legislation.	Proposals are likely to be put in place in the short-term.
4	At least one local retailer being willing to alter delivery times or their delivery location (i.e. avoiding Bridge Street itself) over a 12-month period.	Progress with dialogue with retailers to alter delivery times and to discourage deliveries that involves parking along the A472.	Will require a targeted programme of education and dialogue.

- 9.4 The target to reduce nitrogen dioxide concentrations of between $1-2\mu\text{g}\text{m}^{-3}$ along Bridge Street by 2010/2011 should result in the annual mean nitrogen dioxide objective being met along Bridge Street in Usk. The various indicators listed are all possible surrogate indicators to help support and monitor the implementation of the Action Plan. Emphasis should be placed on the service and delivery vehicles stopping along Bridge Street and the volume of heavy goods vehicles along Bridge Street, any therefore surrogate indicators used should focus on these two issues.

DRAFT

10 Consultation Process

10.1 To date, the Environmental Health department at Monmouthshire County Council has driven forward the air quality action planning process. In October 2007, a working group was formed to take the process forward, and this team will be responsible for overseeing all future work on the Action Plan and to consider the action planning requirements, and members of this group include the following representatives:

- Bernard Tyson, Specialist Environmental Health Officer, Monmouthshire County Council
- George Ashworth, Head of Planning and Regeneration Monmouthshire County Council
- David Harris, Head of Highways & Waste Management , Monmouthshire County Council
- Jenny Harris, Area Manager for central Monmouthshire, Monmouthshire County Council
- Paul Keeble Head of Traffic
- Graham Perry Environmental Health Manager

10.2 It was recognised that a number of other organisations, departments and individuals will need to be part of the action planning working group, and these include the following:

- Usk Town Council
- Councillor John Harry (representing the Town Council and Monmouthshire County Council)
- Chair of Usk Chamber of Commerce
- Police Traffic Division
- Representatives from the Woodside Industrial Estate
- Representatives from local haulage companies
- Representatives from the bus companies serving Usk
- Local residents along Bridge Street

10.3 Once the working group were happy with the Draft Action Plan, it was presented to the Central Monmouthshire Area Committee on 28th May 2008. A report was written by Jenny Lewis and presented at the Area Committee

meeting by Jenny Lewis and Paul White (Environmental Health Officer for M.C.C, replacing Bernard Tyson).

- 10.4 At the Area Committee Meeting it was decided that a Usk Air Quality Steering Group be set up, to include members of the original Working Group and other local stakeholders including Usk Town Council, Usk Civic Society, County Councillor, and Usk Chamber of Commerce. The Steering Group held regular meetings between July 2008 and November 2008 to discuss the Action Plan. In particular the prioritisation list in Section 7 was discussed and the changes made to Table 7.
- 10.5 The next stage of the process is to undertake a public consultation process to include local residents and businesses, the Welsh Assembly Government, the Environment Agency, all neighbouring local authorities, Local Health Board, and the Police Traffic Division. This will be undertaken in December 2008 and January 2009.

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