



# Representation on Warwick District Local Plan: on transport

## Representation: Where the local plan falls down in planning for transport.

### Preamble

Since Colin Buchanan's "Traffic in Towns" published by HMSO in the mid 60s it has been an accepted precept that development planning and transport planning should be fully integrated. Recent government guidance does not specifically set out this principle but it does stress the connection between planning and transport when it focuses on the importance of planning for sustainability.

The fundamental flaw in the current draft of the Warwick District Council local plan is that the strategy adopted to allocating new development areas has failed to take proper account of the impact they will have on traffic patterns and volumes. The proper consideration of this aspect in allocating the new development areas has been overridden by the perception that it is more important to comply with 50 year old green belt restrictions which are overdue for review and have already resulted in significant skewing of development away from our principal town, Leamington. Instead, the council decided to allocate the bulk of new development areas in the south; a strategy that has exacerbated many of the issues at the heart of this representation.

### Planning Guidance

The guidance sets out a variety of key considerations related to traffic and transport to be borne in mind in preparing local plans and in reaching decisions over planning proposals.

What follows is by no means an exhaustive list:

#### Planning Guidance

##### National Planning Policy Framework (NPPF) from the DCLG published 27 March 2012

Annex2: Glossary

**Transport assessment** : A comprehensive and systematic process that sets out transport issues relating to a proposed development. It identifies what measures will be required to improve accessibility and safety for all modes of travel, particularly for alternatives to the car such as walking, cycling and public transport and what measures will need to be taken to deal with the anticipated transport impacts of the development.

NPPF Paragraphs

156. Local planning authorities should set out the strategic priorities for the area in the Local Plan. This should include strategic policies to deliver: ● the provision of infrastructure for transport....

7. There are three dimensions to sustainable development: economic, social and environmental.

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Friday, 27 June 2014



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These dimensions give rise to the need for the planning system to perform a number of roles:.....

- an economic role | contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;

## Core planning principles

.... planning should:

- actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable;

## 4. Promoting sustainable transport

29. Transport policies have an important role to play in facilitating sustainable Development...and...the transport system needs to be balanced in favour of sustainable transport modes

30. Encouragement should be given to solutions which support reductions in greenhouse gas emissions and reduce congestion. In preparing Local Plans, local planning authorities should therefore support a pattern of development which, where reasonable to do so, facilitates the use of sustainable modes of transport.

34. Plans and decisions should ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised. However this needs to take account of policies set out elsewhere in this Framework, particularly in rural areas.

156. Local planning authorities should set out the strategic priorities for the area in the Local Plan. This should include strategic policies to deliver:

- the provision of infrastructure for transport, etc.

157. Crucially, Local Plans should:

- plan positively for the development and infrastructure required in the area to meet the objectives, principles and policies of this Framework;

## Infrastructure

162. Local planning authorities should work with other  
And.... • take account of the need for strategic infrastructure

177. It is equally important to ensure that there is a reasonable prospect that planned infrastructure is deliverable in a timely fashion. To facilitate this, it is important that local planning authorities understand district-wide development costs at the time Local Plans are drawn up. For this reason, infrastructure and development policies should be planned at the same time, in the Local Plan.



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## Planning Practice Guidance (PPG) - published by DCLG, February 2014

... Transport Assessments and Statements can positively contribute to:

- encouraging sustainable travel;
- lessening traffic generation and its detrimental impacts;
- reducing carbon emissions and climate impacts;
- creating accessible, connected, inclusive communities;
- improving health outcomes and quality of life;
- improving road safety; and
- reducing the need for new development to increase existing road capacity or provide new roads.

They support national planning policy which sets out that planning should actively manage patterns of growth in order to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable.

29 Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives.

30 Encouragement should be given to solutions which support reductions in greenhouse gas emissions and reduce congestion. In preparing Local Plans, local planning authorities should therefore support a pattern of development which, where reasonable to do so, facilitates the use of sustainable modes of transport.

34...Plans and decisions should ensure developments that generate significant movement are located where the need to travel will be minimised...

37 Planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities.

129 Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal.

### 002 What is the role of Local Plans with regard to air quality?

Paragraph: 002 Reference ID: 32-002-20140306

Therefore in plan making, it is important to take into account [air quality management areas](#) and other areas where there could be specific requirements or limitations on new development because of air quality.



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## A peer review of Transport Assessments

The Save Warwick Group, together with Warwick Town Council, The Warwick Society and Bishops Tachbrook Parish Council were concerned that the approach to transport adopted in the local plan was seriously flawed. They commissioned Royal Haskoning DHV, the UK branch of the independent, international engineering and project management consultancy with special expertise in Transport Planning, to undertake a peer review of the Strategic Transport Assessment 4.

Their report is attached as Annex 1

The findings confirm the concerns of the campaign groups and the results of the peer review provide the evidence for the statements made in the following paragraphs which reflect on how transport is affected by the local plan proposals in the context of fundamental principles of good planning and, hence, whether they comply with those set out in the NPPF and PPG .

## The wrong strategic decisions

**The fundamental flaw that leads to many of the transport issues is the strategic decision taken to locate most of the major new development areas south of the River Avon. Clearly, they are wrongly located to satisfy the need set out in the NPPF to "ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised." And, crucially, the plan does not satisfy the "need to focus significant development in locations which are or can be made sustainable."**

The peer review exposes the admission in the transport assessment that not only the £34m of mitigations proposed under the assessments will be insufficient to address all the transport impacts of the development proposals but would leave us with a legacy of congestion which will damage our health and the heritage that is key to the attractiveness and character of Warwick, and to its economy. Hence, the failure to take on the importance of integrating development and transport planning has produced what is in effect a bad and unsound plan.

The peer review also has identified a series of shortcomings in methodology in the transport assessment that make it more than doubtful that it can be relied upon to providing the evidence needed to underpin the current local plan.

On their own, the shortcomings in the transport assessment may not at first appear to be sufficient to prove the plan unsound. On the contrary, examination of the conclusions shows, firstly, that addressing transport issues will be critical to ensuring the district is well planned and not overwhelmed with traffic, and secondly, the proposals in the transport assessments will not satisfactorily mitigate the traffic consequences of the new developments - and hence the plan.

## What's wrong with the STA4 transport assessment?

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1. **It is incomplete/unfinished** *"At this stage, the level of assessment does not include detailed information and analysis of each of the proposed schemes in detail. Rather it is intended to confirm what strategic elements of infrastructure are likely to be required to ensure that the allocated growth can be accommodated upon the existing network."*<sup>1</sup>
2. **Despite the 27 proposed "improvements" for traffic mitigation the traffic modelling has shown network failure and increased congestion in key areas, particularly in Warwick.** Introduction of a revised town centre strategy is predicted to affect the model and it is also safe to assume that additional measures are going to be required to mitigate the impact of traffic growth on the town centres. This approach of leaving decisions on the town centres to a separately developed strategy avoids the need in this plan to address directly the intractable problems the traffic growth generated by the development proposals for the district will create for Warwick town centre.
3. **The interpretation of the data does not give the full picture: traffic growth has been "capped" - reduced - so as to make the traffic "predictions" fit the series of indicative proposals.** The measures adopted include:-
  - excluding the education trips that contribute so much to congestion in the mornings and evenings,
  - trip discounting that assumes up to 22.5% of trips will be subject to mode shift
  - peak spreading where assumptions are made that people and institutions will change their working hours and travel times
  - Whilst manipulating the data makes it fit the model there is no evidence that it will accurately reflect what will occur on the network and what is likely to occur post development?

With fixed hourly work patterns and fixed educational hours, it is questionable that the data can realistically be manipulated in this way if we need to rely on it to produce an honest estimate of what will happen in reality. Furthermore, the STA4 doesn't include any clear validations to support the assumptions made in the modelling methodology.

4. **The report admits, the current indicative schemes will not solve the problems and goes on to say that "without a full, and potentially increased schedule of highway improvement schemes" the development allocations as proposed cannot be accommodated under the proposals in the current assessments.** Hence, if implemented, we can anticipate the outcome will be more congestion, increased traffic queues, unacceptable traffic conditions and damage to the environment especially in our town centres and increasingly damaging to health.
5. **The assessment includes simplistic 'inception designs' for the mitigations but has not gone into detail because detailed designed schemes would be cost prohibitive and disproportionate. However, without those detailed schemes residents and their elected representatives have to take on trust that the mitigations will achieve what is needed and be acceptable.** We are already well aware that schemes which have been proposed for the centre of

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<sup>1</sup> WCC STA4 Peer Review, Section 8, Summary and Conclusions



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Warwick including those for Banbury Road, St Nicholas Church Street and others are not practical and not acceptable to the local community.

6. **Against such a background "it therefore cannot be acceptable that a report which concludes as follows can be said to successfully underpin the Local Plan:**

*"Overall, the findings of this Report indicate that the potential impacts of the proposed RDA strategy will be, **in part**, mitigated by the proposed transport strategy but **some residual impacts will still occur**. Such impacts may occur through the allocation of natural growth within the network although, without the mitigation measures, the impacts may reach comparable levels at an earlier point in time.*

*The Report considers the impacts likely to occur at the end of the plan period based on **robust trip generation assumptions** and including schemes which should be considered as being relatively high level in terms of design and feasibility.*

*Detailed work on measures which may reduce the car based trip generation, through alternative, sustainable, modes, as well as further refinement of the proposed measures, **would likely reduce the impacts** that have been documented within this report."*<sup>2</sup>

These broadly sweeping conclusive statements are followed by yet more considerations and recommendations to the effect that:

### *Mitigation*

Further work is needed to refine and assess the details of the mitigation schemes, and the phasing of their delivery, as the report states; *"Before schemes are subject to further refinements or detailed design it is recommended that the priority for delivery of the schemes is identified in order that those schemes which are likely to be triggered during the early stages of the plan period have been fully established."*<sup>3</sup>

The STA4 also acknowledges in section 4.6 *" The results analysis..... demonstrate(s) that, in spite of the application of all proposed mitigation measures, the impacts of the development allocation strategy are not fully mitigated. Should any of the mitigation measures be removed completely these impacts would inevitably be further exacerbated."*

In essence the schemes are all NECESSARY at least and despite all of the proposals the impacts on the Strategic Road Network are not fully mitigated – So, **The development allocation as proposed cannot be ACCOMMODATED**

### *Sustainable Transport*

**The STA recognises that** in order to reduce the traffic impact on the roads in and around South Warwick and Warwick town Centre **there have to be significant improvements to the Sustainable Transport Options** and work is said to be ongoing to develop a strategy in this regard. Currently the measures described to be taken to make the transport system more sustainable are

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<sup>2</sup> WCC STA4 Peer Review, The STA4

<sup>3</sup> WCC STA4 Peer Review, The STA4



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risible. No indication of how £2m would be spent is given and there are no indications given other than unsupported assertions as to what this would be spent on or what it would achieve.

The report states:<sup>4</sup> *"It is critical that sustainable transport improvements form part of the mitigation package to support the housing and employment growth proposals within the District. Such improvements will:*

- *Contribute towards the delivery of sustainable development within the District;*
- *Maximise the number of journeys made by sustainable transport modes from trips generated as a result of new development;*
- *Reduce the impact of car based travel on the local and strategic highway network;*
- *Deliver an integrated approach to transport provision to serve new development; and*
- *Contribute towards the aims and objectives of the District Council's Garden Towns, Villages and Suburbs Prospectus."*

There is currently no evidence to support the assertion that sustainable transport measures will significantly reduce car trips in areas; which are highly dependent on car based travel.

DfT research<sup>5</sup> also finds that there is no convincing evidence of any behavioural trend towards higher or lower trip rates per person for any travel purpose. **So, the methods employed** to cap and reduce traffic, together with a reliance on sustainable transport **do not result in a robust assessment.**

**7. Although all the proposals in the Assessment have been subject to a process of modelling the assessment admits to problems in these processes.** It is admitted that the model used in the STA4 has been unstable. Only 10 successful runs have been achieved out of the 20 undertaken. The model would lock-up/freeze with more than 8500 vehicles in the AM and 9500 vehicles in the PM peak hours remaining on the model network - which throws into question whether the model is accurate or whether the network really can cope with the 2028 traffic.

**8. Disappointingly, the Cumulative Impact Assessment which brings together the transport assessments for Warwick and Stratford District has been completed too late to influence the proposed development patterns proposed for Warwick District.**

The new developments for Lighthorne and Gaydon on South Warwick are now seen as having a significant effect on Warwick District as it is the area to which or through which many of the residents will travel to work.

The CIA assessment does not include information and analysis of the proposed schemes in detail, nor does it comprehensively identify the full scope of the impacts and benefits that occur as a result of the proposed allocation strategies. Rather it is intended to confirm what strategic elements of infrastructure are likely to be required to ensure that the allocated growth can be accommodated upon the existing network.

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<sup>4</sup> WCC STA4 Peer Review, The STA4

<sup>5</sup> The Department for Transport's 2009 report 'Research into Changing Trip Rates over Time and Implications for the National Trip End Model'





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If, however, capacity enhancements to the M40 corridor are not delivered then an increasing volume of this 60 to 80% development traffic will load onto the local network through Warwick and Leamington Spa as capacity on the motorway reduces in time; due to the inevitable SRN growth

Again, disappointingly, the approach has been to choose to manipulate the statistics, *"The need to apply a capping procedure is further demonstrated by the fact that, during the initial modelling exercise, it was not possible to undertake an assessment of the impacts of each option within the PM model period on account of the inherent model instability. By applying a cap the impacts of model instability are minimised."*

This implies that through its shortcomings the traffic modelling has been unable to assess the true impact of the proposed developments on the network. Even so, the comparative assessment resulted in the following conclusions:

- Inclusion of the SDC strategy demands will likely result in a further increase in the average network journey times and a reduction in average speeds that vehicles are able to achieve in comparison to the 2028 Reference Case conditions. These impacts occur in spite of the adoption of a proposed mitigation strategies. **Agreed**
- Analysis of the network statistics reveals that whilst relatively similar levels of delay and speed are expected during the AM peak period for the SDC scenarios, Option 2 results in improved conditions during the PM peak period compared to the 2028 WLWA RDA network performance. **Not agreed**
- The location of the Gaydon/Lighthorne Heath development, near the M40 J12, is such that additional capacity along the M40 has been included within the localised modelling assessment, transferring this additional capacity, alongside the inclusion of capacity enhancements to the northwest of M40 J15, within the WLWA model area is likely to contribute to the mitigation of the impacts associated with the demands generated by the Gaydon/Lighthorne Heath development. **AGREED - – this will reduce impacts but only if they are delivered. Note, though, that there has been no testing without this additional capacity enhancement to assess the local impact on WLWA.**
- The queuing analysis revealed a number of instances where the level of queuing experienced at key locations increases in both Cumulative Assessment Options when compared to both the 2028 Reference Case and the 2028 WLWA RDA scenario networks. **AGREED**
- Within the AM queuing levels tend to increase in areas to the east and south of the model area in both 2031 WLWA CA SDC options. There are impacts observed along the A452 and Tachbrook Road corridors as well as around M40 J15. Within the PM there is a general worsening of queuing levels to the south and east of the model area as the additional demands associated with the two SDC options are assigned to the model network. **AGREED**
- The analysis of the difference in journey times across the three scenarios, when compared to the reference case, reveals that the majority of journey time increases are consistent across all three

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<sup>6</sup> WCC STA4 Peer Review: Section 3 Scenario Development Assumptions: Growth Capping





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scenarios. The 2031 WLWA CA SDC Op 2 scenario demonstrates a greater level of journey time increases to the south east of the model area when compared to either the 2028 WLWA RDA or 2031 WLWA CA SDC Op 5 journey times. **AGREED**

- Overall the queuing and journey time analysis indicates that further attention should be afforded to the performance of the junctions along the A452 and Tachbrook Road corridors as well as the Fosse Way within both 2031 WLWA CA SDC scenarios. **AGREED**

## Other key findings in respect of Transport

The foregoing paragraphs point to serious issues that beset the Transport Assessment and lead us to the conclusion that it should not be relied upon as adequate evidence to underpin the local plan.

The Assessment does however, bring forward a number of points which point to serious consequences the south of the district in particular will suffer if the plan goes ahead as currently formulated.

1. **According to the assessment, as a result of congestion, despite the mitigations proposed, we can anticipate our journey times to increase in places by in excess of 25% in the morning and in excess of 50% in the evening peak hours.** These very significant increases, coupled together with increased queues, will lead to large volumes of very slow moving traffic especially in the Warwick town centre. **In Warwick this** will adversely affect the air quality in an area which is already an Air Quality Management Area and **will exacerbate the problem of a town where the County Council currently quotes average traffic speeds at peak periods of around 9mph - much slower than in Leamington (16mph) and Kenilworth (16mph)** (See Annex 2) and significantly slower than the average of UK's largest cities where a recent published survey quoted in the Daily Mail (19th June 2014) claimed speeds overall averaged 17.8 mph in our main cities.

2. **The STA4 also concludes that the following will occur despite the proposed mitigation strategy:**

- Increased average network journey times together with reduced average speeds (Congestion);
- Increased average maximum queue length from between 30-50 vehicles (Congestion); and also
- The negative impact on traffic flow in the AM peak hour with the inclusion of the Revised Town Centre (RTC) proposals indicates that further work to find a suitable solution is required



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For Warwick, the STA4 concludes "*The initial analysis indicates that the proposals considered as part of the Revised Town Centre measures may not successfully accommodate the required level of demand with the same magnitude of impact as the schemes proposed within the RDA network.*"<sup>7</sup>

Further highway mitigation works are recommended to improve the performance of the network sufficiently. We can, however, be confident that any mitigations designed to increase the carrying capacity of town centre streets are sure to have adverse physical and environmental impacts especially in Warwick, on the historic buildings in the conservation area and will certainly be contrary to the policy to reduce traffic through the town centre agreed by a series of town centre forums.

3. **There is little or no evidence that STA4 gives any consideration to the damage its proposals will do to the historic fabric and heritage assets of Warwick Town Centre** and the impacts of the traffic proposals in the town centre on health, and the physical and historic environments. For an assessment of traffic in one of England's most historic towns it is staggering that the impact of traffic on heritage is not a major consideration and the word "conservation" does not even appear in the assessment.

This neglect carries through to the local plan. Whilst policies are established in it for heritage and the historic environment both the plan and the transport assessment omit to register the potential for the planned increases in traffic from the new development areas to the south of Warwick to severely damage the fabric, setting and environment of the very many listed buildings in the Warwick conservation area.

In particular, a number of Grade 2\* listed buildings are threatened by the increases in traffic the plan anticipates. These include the Castle Bridge with its view of Warwick Castle drawn by JMW Turner in 1830 and celebrated by Sir Walter Scott as being "unsurpassed in England," and which will be subject to significantly increased loadings as a result of the growth in traffic which cannot be other than damaging to the fabric of this historic construction.

4. **Air quality, already poor in Warwick town centre, will deteriorate even more and will be damaging to health and the environment**

The Warwickshire LTP 2011-2016 has a section, reproduced in Annex 3, that points out how "poor air quality can be particularly harmful for the most vulnerable members of society such as young children, the elderly and those with pre-existing illnesses such as asthma, heart disease or other cardio-respiratory conditions. Exposure to poor air quality, particularly over a long period and at elevated concentrations, is believed to play a role in diseases such as asthma and cancer. ....Air pollution can also have an adverse effect upon wildlife and vegetation, including crops. Some pollutants contribute to acid rain which can erode the facades of buildings and other structures. Certain pollutants (specifically carbon dioxide in relation to road transport) are now known to directly contribute to global climate change. Activities such as those highlighted above can also affect the immediate environment and human health on a local scale."

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<sup>7</sup> WCC STA4 Peer Review: Sections 5 and 6: Results Analysis



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It points out that AQMAs have been established in Warwick and notes that Air Quality Action Plans were established in 2008 and are overdue for revision.

Despite the above in the LTP, there seems to be a degree of complacency in the transport assessment on air pollution. There seems to be a reliance on assumptions that air pollution - despite being at illegal levels in places - will look after itself in the future. The evidence is not convincing. As recently as May 2014 the Telegraph reported that while CO2 pollution from motor vehicles was falling, the impact of the dangerous NOx pollution had been consistently underestimated and is likely to remain high for many years. [attached](#) as Annex 4

The impact of new developments to the south of Warwick and the traffic they would generate will not only cause more congestion on the Banbury Road and in Warwick Town Centre, but will result in more poisonous NOx pollution of the streets. Obviously this will do nothing to address the problems of the AQMAs of Warwick but, perhaps more seriously, will increase the levels of NO2 that pupils of Westgate School, Coten End School, Kings High School and Warwick Prep. School; not to mention the parents and children walking to school on our polluted pavements will be exposed to. Apart from their social obligation to look after its citizens' health the Councils have a legal obligation to reduce NOx pollution from illegal levels. A decision to go ahead with allocating the sites south of Warwick for development would work in the opposite direction - adding to the levels of poison in our town centres. If officers are still inclined to dismiss this problem as scare mongering they should reflect that the London Mayor's Office is planning to introduce an ultra low emissions zone to "deliver dramatic benefits to air quality" as a means of combating the effects of NOx pollution generated by diesel engines and avoiding prosecution for failure to address the problem.

**5. What is worst, however, is that while the transport assessment acknowledges that the town centre of Warwick faces and will face considerable problems, both the assessment and the local plan effectively disregard this, and persist in proposing a pattern of development in the south that will exacerbate the very problems that the town centre faces. Finally, rather than address the problems directly through changing the development strategy, it is proposed pass the problems over to a town centre strategy review which will be unable to influence the very development policies that cause the problems in the first place.**

## Conclusions

Many ways in which the increases in traffic will impact on our district are set out in the foregoing and many of these are significant and need to be addressed. However, at the heart of this whole issue is that the assessment of transport and meeting its needs need to be at the heart of the decisions made in the local plan. The inescapable conclusion from the work done by our consultant is that the STAs which are intended to underpin the local plan are flawed. In places the STAs are only vague about needs and proposals. There are also instances of assumptions being adopted for which firm evidence is missing. We note that the report recommends that further work is undertaken once the allocation of



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sites has been determined. This in itself is an acknowledgement of the shortcomings of the current STA.

As it is already recognised that mitigation under this assessment's proposals will not adequately address the transport needs particularly in the south of the district, it begs the question, why is it that WDC persists with a proposed pattern of development which will result in serious transport consequences?

In the Consultant's report which supports this submission it points to the need for the Transport Assessments to underpin the proposals of the Local Plan. In so doing the assessments need to provide solutions to issues and to address the objectives of the plan. In paragraph 2.1 of the consultant's report it points in particular the need to satisfy three particular LP core objectives<sup>8</sup>.

- *Objective 1: Providing sustainable levels of growth in the District.*
- *Objective 2: Providing well-designed new developments that are in the right location and address climate change*
- *Objective 3: Enabling the District's infrastructure to improve and support growth*

It is submitted that the content of this report shows that:-

- a key consequence of the levels and locations of the growth proposed in the plan is that measures that can be taken do not effectively mitigate the transport consequences of the development proposals - and it is therefore not a sustainable plan for growth
- the location of the bulk of the new development areas south of the river make them remote from the services and sources of employment the residents will need. They are also divided off from them by a river with only three crossings. The transport assessments show that even with the manipulation of the data the proposed mitigations will be hard pushed to deal with the growth in traffic
- Even with the mitigations in place there will be 25-50% more congestion in our town centres and rather than addressing the issues of congestion, damage to our heritage, health and economy that this will bring the transport assessment and the plan have avoided assessing and planning to avoid these consequences.
- The transport assessment assesses the costs of mitigation of the traffic consequences of the planning proposals as £34m. However, it leaves a number of hostages to fortune by acknowledging that additional uncoded works will be necessary. High on the list have to be proposals to relieve Warwick Town Centre of the impacts of the traffic that the plan channels to and through our county town. There could be serious costs involved with this - to which not even a thought has yet been given

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<sup>8</sup> WCC STA4 Peer Review: non technical summary



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So, the transport assessment fails to meet the objectives referred to. Since planning for, and dealing with the transport consequences of the plan is fundamental to the plan itself this failure represents a fundamental failure of the plan which shows it is unsound.

Save Warwick group

19th June 2014



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## Annex.1 - WCC STA4 Peer Review: Royal Haskoning DHV Report to Warwick Town Council, the Save Warwick Group and its partners: June 2014

Copies can be downloaded from [www.savewarwick.co.uk](http://www.savewarwick.co.uk) or by request to [info@savewarwick.co.uk](mailto:info@savewarwick.co.uk)

## Annex 2: Traffic Volumes and Congestion - from Warwickshire Observatory Quality of Life report 2013-2014

Transport & Environment

### Road Traffic Volumes and Congestion

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Road traffic in Warwickshire has increased at a greater rate compared to the equivalent increases seen in the West Midlands or England. Since 2007, there has been a sharp decrease in traffic levels at a national and regional level. Meanwhile in Warwickshire, the decline was much more gradual. The increase in 2012 means traffic levels have almost returned to their 2007 peak.

Data for average traffic speeds in Warwickshire's towns is based upon satellite navigation monitoring data supplied by the Department for Transport (DfT). A number of routes in each town are used and the data covers the period 8.00 a.m. - 9.00 a.m., Monday to Friday during term time, excluding heavy goods vehicles.

Average speeds have fallen since 2011 in all towns measured across the county. The increase in traffic as seen in Figure 8.1 is likely to be the cause of this increase in congestion. Roads in Warwick town centre continue to have the slowest recorded speeds, whereas the highest speeds are found in Rugby town. It should be noted that the layout of the road network within each town has a bearing on the results, as those towns with fewer junctions and 'pinch points' can expect to have more free flowing traffic. Similarly, the number of cars passing through the town centre will be lower if adequate relief roads are available.

Figure 8.2: Average traffic speed during the morning peak for Warwickshire's main towns, 2008-2012

Town	2008	2009	2010	2011	2012
Nuneaton	16	16	16	16	16
Bedworth	19	17	17	17	16
Rugby	19	19	19	19	19
Stratford-upon-Avon	15	15	15	15	15
Kenilworth	18	12	18	18	16
Warwick	9	9	10	10	8
Leamington Spa	14	14	14	14	16

Source: Warwickshire County Council (WCC) Transport & Highways Department

QUALITY OF LIFE REPORT 2013/14 // TRANSPORT & ENVIRONMENT

WARWICKSHIRE OBSERVATORY





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## Annex 3: Air Quality

Extract from- **from Warwickshire Observatory Quality of Life report 2013-2014**

### **Air Quality Warwick District**

Warwick District Council is also in the process of developing its new Local Plan to shape development that takes place in the district over the next 15 years. The proposed Plan makes provision for a significant number of new residential developments along with employment land and necessary improvements to infrastructure and transport networks. **Work is currently being carried out to assess the impact that such growth is likely to have on the district's air quality in order that suitable mitigation measures might be included as early as possible.** In addition, Low Emission Strategies will also be considered, to address emissions associated with diesel passenger cars which currently make the biggest contribution to NO<sub>2</sub> concentrations across the district's town centres.

### **Warwick District Air Quality Action Plan 2008.**

#### **Policy AQ5 – Integration of air quality with land use and transport planning goals**

Warwick District Council and Warwickshire County Council will work in partnership to locate new development in a sustainable way. Warwickshire County Council will promote the use of public transport, and will seek to provide better services and facilities to improve accessibility and safety, and reduce dependency on the private car. The County Council will actively promote cycling and walking as alternative modes of transport to the car, especially for shorter journeys.

### **LTP p168 et seq**

#### **16. Air Quality Strategy**

##### **Introduction and Overview**

Air quality is a key issue for society. It has the potential to impact on human health and the environment. Air quality is largely determined by the emissions from activities such as energy production, industrial processes and road transport. These activities contribute a variety of pollutants at differing concentrations into the air.

Poor air quality can be particularly harmful for the most vulnerable members of society such as young children, the elderly and those with pre-existing illnesses such as asthma, heart disease or other cardio-respiratory conditions. Exposure to poor air quality, particularly over a long period and at elevated concentrations, is believed to play a role in diseases such as asthma and cancer.

Depending on the pollutant type, exposure to high levels over short time scales can lead to difficulties in breathing and acute symptoms such as wheezing, coughing, headache and nausea.

Poor air quality does not just impact upon human health. Air pollution can also have an adverse effect upon wildlife and vegetation, including crops. Some pollutants contribute to acid rain which can erode the facades of buildings and other structures. Certain pollutants (specifically carbon dioxide in relation to road transport) are now known to directly contribute to global climate change. Activities such as those highlighted above can also affect the immediate environment and human health on a local scale. An Air Quality Strategy for Warwickshire

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will help to manage potentially polluting actions and activities, particularly the use of road transport and its impact on air quality. It is hoped that this will lead to a healthier environment, as well as encouraging more sustainable patterns of travel.

The Air Quality Strategy aims to focus on air quality issues within Warwickshire, drawing strong links with the five District/Borough Councils (in their role as the local Environmental Health Authorities), whilst also taking into account regional considerations and the UK National Air Quality Strategy objectives. The Government's targets on reducing greenhouse gas (carbon dioxide) emissions are also taken into consideration, as is the promotion of more sustainable lifestyles.

The Strategy focuses on road transport as this is the main contributor of polluting emissions in Warwickshire, and puts forward an Air Quality Action Plan for reducing these emissions. Many of the schemes and initiatives outlined in the Action Plan have common, interlinked approaches, answering directly to the most relevant air quality issues in the County, often seeking the same end result. Many of them also complement the wider objectives of the LTP. Improving local air quality delivers a number of benefits, the most important of which is the improvement of health and quality of life. In addition to influencing air quality, transport policy can determine other benefits including the improvement of road safety, increased provision, security and comfort of public transport, public realm enhancements and the promotion of healthier lifestyles through the encouragement of walking and cycling. Addressing air quality issues can also help meet Government objectives on greenhouse gas emissions. The Government has set out standards in legislation for seven key pollutants in its National Air Quality Strategy. The standards are in place to protect human health and are based on European legislation and guidance from organisations such as the World Health Organisation. In the UK each local authority is obliged to meet these standards within their respective areas.

The remainder of this Strategy sets out:

- The local, regional and national policy framework related to air quality;
- An overview of the current situation in terms of key pollutants and the geographical variances which exist across the County;
- The Air Quality Strategy developed in response to these issues;
- An Action Plan for delivering the Strategy; and
- Targets and Monitoring of the Action Plan.

## **The Policy Context: National policy**

The provisions of Part IV of the Environment Act 1995 establish a national framework for air quality management, which requires all local authorities in England, Scotland and Wales to conduct local air quality reviews. Section 82(1) of the Act requires these reviews to include an assessment of the current air quality in the area and the predicted air quality in future years. Should the reviews indicate that the standards prescribed in the UK Air Quality Strategy 1 and the Air Quality Standards Regulations 20072 will not be met, the local authority is required to designate an Air Quality Management Area (AQMA). Action must then be taken at a local level to ensure that air quality in the area improves. This process is known as 'local air quality management'.

National air quality policy comes in the form of the Local Air Quality Management Policy Guidance Note LAQM. PG(09), which provides guidance and assists local authorities in working towards meeting the UK air quality standards and objectives. LAQM. PG(09) also provides guidance on the development of local and regional air quality strategies. Chapter 5 of the document includes particular points of guidance such as:

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- Co-operation between local authorities, neighbouring authorities and local authority departments in the devising of air quality strategies to ensure a fully-integrated, “corporate” approach;
- Linking strategies to other local initiatives and strategies;
- Linking the strategy to plans such as the Local Transport Plan;
- Setting out measures to maintain or further improve areas with existing air quality as well as seeking to improve areas with poor air quality; and
- Following the same principles in developing an air quality strategy as one would in developing an Air Quality Action Plan for an Air Quality Management Area.

Advice is also given in documents such as the National Society for Clean Air (NSCA) ‘Planning for Air Quality, 2006 Update’, which suggests that objectives and targets within schemes and initiatives are:

- Practicable, to ensure that they can actually be carried out as desired;
- Measurable, in order to determine their success;
- Set to be carried out within a reasonable timescale; and
- Have the involvement and support of key stakeholders as well as ensuring that the wider benefits of a Strategy are given greater emphasis to the public.

It is also recommended that longer-term objectives and targets be considered as well as the more medium and short-term ones.

UK national policy also exists in terms of climate change and the emission of greenhouse gases. Following the Kyoto Protocol, the UK Government committed itself to reducing carbon dioxide emissions by 20% below 1990 levels by 2010, and to cut overall greenhouse gas emissions by 12.5% below 1990 levels by 2008 – 2012. The Government has now set a long term aim of

1 DEFRA, The Air Quality Strategy for England, Scotland, Wales and Northern Ireland, 2007.

2 DEFRA, The Air Quality Standards Regulations 2007 reducing CO<sub>2</sub> levels by 80% by the year 2050. This Strategy and the wider proposals in the LTP have a key role to play in meeting these targets.

In terms of the national transport goals and challenges, the Air Quality Strategy is directly relevant in the following areas:

- Tackling Climate Change: Deliver quantified reductions in greenhouse gas emissions within cities and regional networks, taking account of cross-network policy measures;
- Contributing to better safety, security and health: Reduce the social and economic costs of transport to public health, including air quality impacts; and
- Improving Quality of Life: Minimise the impacts of transport on the natural environment, heritage and landscape and seek solutions that deliver long term environmental benefits.

## Overview of the Current Situation

### Key pollutants

There are seven key pollutants considered in the UK Air Quality Strategy, each of which has a specific threshold of concentrations in the air to protect human health. All of these substances are present in the atmosphere at background levels. It is human activities that contribute to an excess or elevated concentrations of these substances in quantities enough for them to become polluting. These seven pollutants, including their primary sources and effects are briefly described below.



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## **Nitrogen dioxide**

The main source of nitrogen dioxide (NO<sub>2</sub>) in the UK is road transport (around 43% of total emissions). It is the primary pollutant of concern in Warwickshire and gives rise most frequently to the declaration of Air Quality Management Areas. The health effects of exposure to nitrogen dioxide at levels above normal ambient concentrations include irritation of the lungs and an increase in the symptoms felt by those with existing lung conditions such as asthma and also those with heart conditions. Exposure of young children to high levels of nitrogen dioxide can increase the risk of respiratory conditions and can even limit lung growth, leading to poor lung function in the long-term.

## **Particulate Matter (PM10)**

Particles less than 10 µm (0.01 mm) are considered a pollutant because they are easily inhaled into the human lungs and airways, potentially causing damage. In Warwickshire there are currently no exceedances of the PM10 objective, although it is still a pollutant of some concern in parts of the County.

## **Carbon Monoxide**

Carbon monoxide levels have dropped considerably in the UK in the last 35 years and it is not a significant pollutant for Warwickshire.

## **Benzene**

Benzene levels in Warwickshire are appreciably below the UK objective and this is not considered to be a pollutant of concern in the County.

## **1,3 Butadiene**

1,3 butadiene levels in Warwickshire are not significant

## **Air quality in Warwickshire**

Air quality across Warwickshire is generally good. There are a number of areas however where the air quality objective for nitrogen dioxide is not being met. In these locations Air Quality Management Areas (AQMA) have been declared by the relevant District/Borough Council. In each of these AQMAs, road transport has been identified as the most significant contributor to elevated air pollution levels. The County Council, as Highway Authority, has assisted in the preparation of Air Quality Action Plans (AQAPs) to address these AQMAs during LTP2. These draw extensively upon the existing strategies and proposals contained within the Local Transport Plan. In line with Government guidance we have fully integrated the existing AQAPs into this LTP. The general policies and action plan which can be found towards the end of this strategy will be used to form the basis of subsequent AQAPs as they come forward within the County.

## **Warwick District**

There are currently four declared AQMAs within Warwick District. Three were declared in December 2004 in Warwick, Leamington Spa and Barford, the last of which has subsequently been revoked. Two further AQMAs were declared in Kenilworth in 2008. The AQMA in Warwick has been extended from the original declaration, and now includes High Street up to the junction with Bowling Green Street, Theatre Street/Saltisford up to the junction with Vittle Drive, Northgate/The Butts, Smith Street and St Nicholas Church Street. This effectively means that the majority of the town centre core is covered by the AQMA.

Warwick District Council



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has recently consulted on the proposed declaration of a further extension to the Warwick AQMA in the Coventry Road/St John's area of the town. Subject to this being formally declared, it is proposed to consider how to address this issue through the preparation of a revised Air Quality Action Plan for the District (see below).

The AQMA in Leamington Spa is located at the junction of High Street/Bath Street/Old Warwick Road/Clemens Street, and like Warwick it contains a substantial number of receptors including both residential and business properties. Ongoing monitoring of the Barford AQMA following its declaration showed a substantial reduction in NO<sub>2</sub> levels following the opening of the A429 Barford Bypass in 2007. The AQMA was formally revoked in 2009.

The two AQMAs in Kenilworth are located on the Warwick Road between Waverley Road and Station Road in the town centre, and on New Street immediately east of the junction of Bridge Street, High Street, New Street and Fieldgate Lane.

An AQAP to cover the AQMAs in Warwick, Leamington Spa and Barford was prepared by the District Council and the County Council in 2008, a full copy of which is reproduced in Appendix C of the LTP.

A revised AQAP for the District covering the two AQMAs that have recently been declared in Kenilworth will be prepared in Spring 2011. This may also cover the Coventry Road/St Johns area of Warwick, subject to it being formally declared as an AQMA.

**Annex 4:** From the Daily Telegraph 29 May 2014:

**The amount of pollution generated by diesel cars on congested roads may be much higher than previously thought. Diesels may actually be emitting three times the pollution allowed under current emissions tests**

By David Motton  
2:48PM BST 29 May 2014

Diesel cars emit around three times more NO<sub>x</sub> pollution in congested traffic than is permitted in current European emissions tests, according to research by Imperial College London and Emissions Analytics.

The study analysed the exhaust emissions of 12 diesel cars, all of which met today's euro 5 emissions standard when tested in laboratory conditions. "We found that low-average-speed, stop-start driving dramatically increases levels of NO<sub>x</sub> emissions," says Nick Molden, CEO of Emissions Analytics. NO<sub>x</sub> (a generic term for nitric oxide and nitrogen dioxide) can be harmful to the lungs, especially in people with existing respiratory conditions. Diesels produce far more NO<sub>x</sub> than petrol vehicles (current European regulations allow a diesel passenger car to produce three times as much NO<sub>x</sub> as its petrol equivalent). Data was obtained on the road rather than in a lab, collecting gases from cars' exhaust pipes for analysis. Each vehicle followed a standard urban and suburban test route, chosen to represent typical UK driving conditions.

The researchers concluded that both the official European tests for economy and emissions and existing models for estimating the impact of traffic on urban air quality substantially underestimated

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the real-world emissions of many modern diesel engines. The findings are particularly significant given the rapid growth in the number of diesels on the road in recent years. Figures from the Society of Motor Manufacturers and Traders show that just less than half (49.8 per cent) of all cars registered in the UK in 2013 were diesel-powered. Go back 10 years and diesel sales were a little more than a quarter (27.3 per cent) of the market. This may go some way to answering the conundrum of why, if cars and other motor vehicles are becoming ever cleaner, levels of air pollution in many cities remain stubbornly high. Earlier this year, The Department for Environment, Food and Rural Affairs released statistics showing that air pollution levels were up to four times the European legal limit in some parts of London.

You would think older diesels deserved more of the blame than high-tech modern engines, but the difference in emissions isn't as great as might be expected. The Imperial College London study references work by Newcastle University and King's College London from 2013, which used roadside sensors to analyse exhaust gases from a variety of road vehicles. In absolute terms, newer engines proved cleaner, but the authors found that on-the-road improvements had not kept pace with advances on the test bench. "Despite the standards tightening, real-world emissions aren't reducing by the same ratio," says Dr Robin North, who leads the programme of work at Imperial College London.

A further concern uncovered by Imperial and Emissions Analytics is that technology aimed at reducing emissions can actually increase the level of pollutants, although only under certain circumstances.

Diesel particulate filters (DPFs) remove tiny soot particles from the exhaust. In effect they've been compulsory for diesels in order to meet the euro 5 standards that came into being in 2009. The small particles that these filters remove can be harmful to heart and lung function, so you would think that DPFs were entirely positive for local air quality.

However, these filters need to be cleansed periodically (a process called regeneration), burning off the soot in the filter at high temperatures. "When a DPF regenerates there's a spike in exhaust gas temperature, fuel economy worsens and NOx emissions increase," says Molden. The effect is especially pronounced under acceleration, when the NOx levels typically double compared with the same acceleration with the DPF operating normally.

Generally these regenerations take place outside urban areas when a car is driven at a steady speed for a prolonged period, but Molden and his team have noticed regenerations occurring while testing cars in urban areas at low speeds. "Originally DPFs were configured to regenerate outside of town, but many customers were finding the filters became blocked, particularly when only driven in urban areas," says Molden. "DPFs now seem to be configured to regenerate at lower speeds."

By switching from petrol to diesel in such numbers, have Britain's drivers chosen better fuel economy and lower carbon dioxide emissions at the expense of air quality?

"With the benefit of hindsight, fiscal incentives via tax to buy diesel over the past decade have probably been a mistake for air quality," argues North. Whatever fuel a vehicle is powered by, smarter road design and traffic management can ease the flow of vehicles and cut down the stop-start driving that raises emissions so dramatically. "Initiatives such as improved signal co-ordination and variable speed limits can reduce congestion and smooth traffic flow and will tend to help," says North.

So what, if most of our driving is in town, should we be driving instead of a diesel? "There's no

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easy answer,” says Molden. “Most technologies involve some form of trade-off. Petrol cars emit less NOx but more carbon dioxide, plus they use more fuel. Hybrids can be good in town, but less so on the motorway. Electric vehicles have no exhaust emissions but are expensive to buy and have limited range. The trouble is the official data informing these trade-offs isn’t complete or accurate. That’s why real-world emissions data is so valuable.”

Molden agrees with North’s suggestion that better-managed traffic flow is important in reducing NOx levels, but also points to the development of cleaner diesel engines that offer the low carbon dioxide output of today’s cars but with the promise of dramatically reduced NOx emissions. “The adoption of Selective Catalytic Reduction (SCR) systems should solve the NOx issue for the next generation of diesel engines,” says Molden. SCRs use substances such as urea to convert NOx into nitrogen and water. Car manufacturers are adopting SCR technology in growing numbers, particularly with the more stringent euro 6 emissions standard coming into force this September. Peugeot’s BlueHDi engine uses an SCR and is fitted to the new Peugeot 308, 308SW and 508. The company claims that the SCR combined with a particulate filter and the use of an additive allows for a NOx reduction of 90 per cent compared with earlier generations of e-HDi diesels. Mercedes-Benz uses SCR under the BlueTEC label while Vauxhall employs SCR technology for its 1.6-litre diesel in the Astra, Meriva and Zafira Tourer.

While euro 6 engines with SCR promise the step-change in local air quality that today’s engines haven’t delivered, it will take many years before such clean engines make up the majority of vehicles. So, urban air quality is set to improve, but don’t hold your breath.

Emission tests 'substantially underestimate' pollution pumped out by di...  
<http://www.telegraph.co.uk/motoring/news/10862975/Emission-tests-s...>  
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