Agenda No

AGENDA MANAGEMENT SHEET

Name of Committee Warwick Area Committee

Date of Committee 10th July 2007

Report Title Warwick Town Centre Traffic Management

Review

Summary This report describes the progress to date in

developing schemes to manage traffic in Warwick. Much of this work has been carried out by the Forum

which was established by this Committee in

November 2005. The views of Committee are sought on the Forum's proposed schemes and a range of possible complementary measures, which, taken in combination, should help deliver the Forum's Vision for Warwick. The endorsement of Committee is sought for the design and implementation of an initial phase of the Forum's proposed schemes and to investigate further the effectiveness of the preferred package of

measures.

For further information

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Would the recommended decision be contrary to the Budget and Policy

Framework?

Yes/No

Background Papers Warwick Forum – Street by Street proposals.

CONSULTATION ALREADY UNDERTAKEN:-

Details to be specified

Other Committees

Cabinet approved the use of developer funding on the "interim" traffic management schemes at its meeting on 28th April 2005 when approving the Capital Programme for Transport 2005-06.

Warwick Area Committee 23rd November 2004, 22nd November 2005, 16th May 2006.

Regulatory Committee 1st February 2006.



Local Member(s) (With brief comments, if appropriate)	X	Councillor K Browne – 'The Forum report was no available for me to comment on, but I'd welcome further exploration of demand management measures, such as road pricing, to discourage motorists from using Warwick town centre unless that is their ultimate destination, and thereby improving the air quality and pedestrian friendliness of the town centre'. Councillor Mrs M Haywood Councillor R Randev – awaiting a copy of the Forum's report.	
Other Elected Members			
Cabinet Member (Reports to The Cabinet, to be cleared with appropriate Cabinet Member)	X	Councillor M Heatley – for information.	
Chief Executive			
Legal	X	I Marriott – comments noted and incorporated.	
Finance			
Other Chief Officers			
District Councils	X	Warwick District Council would like the Forum to consider whether changes are required to on-street parking restrictions.	
Health Authority			
Police			
Other Bodies/Individuals	X	Warwick Forum - The Forum's Technical Group entirely supports the recommendations of this report. It hopes that the progress made so far: in understanding the problem; developing consensus on immediate action to reduce the impact of traffic; and considering longer-term options including perhaps road user charging: will be consolidated by the Committee supporting the recommendations.	



FINAL DECISION

YES/NO

(If 'No' complete Suggested Next Steps)

SUGGESTED NEXT STEPS:

Details to be specified

Further consideration by this Committee	X A programme of schemes to be implemented will be reported to a future meeting of this Committee.
To Council	
To Cabinet	Request for funding for the design and implementation of the initial phase of the 'street by street' schemes.
To an O & S Committee	
To an Area Committee	
Further Consultation	X Further public consultation will be required on the detail of schemes.



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Warwick Area Committee - 10th July 2007

Warwick Town Centre Traffic Management Review

Report of the Strategic Director for Environment and Economy

Recommendation

That Committee:-

- 1. Provides it views on:-
 - (i) The various proposals which have been developed by the Forum.
 - (ii) Various other complementary measures for managing traffic in the Town Centre.
- 2. Approves the commissioning of a report into the effectiveness of the chosen package of measures, their funding and the timetable for their implementation.
- 3. Endorses the commitment of resources to design and implement an initial phase of the Forum's proposed 'street by street' schemes.
- 4. Supports the continuing work of the Forum.

1. Introduction – The Warwick Forum

- 1.1 In November 2005, this Committee endorsed the establishment of a Forum of stakeholder organisations for the purpose of considering traffic and related issues in Warwick town centre.
- 1.2 The Members of the Warwick Forum have structured themselves into a Co-ordinating Group, a Technical Group and have convened a number of Working Groups with a remit to look at various issues. There have been five whole Forum meetings to date. The Forum has access to officers and an independent facilitator to assist when required.
- 1.3 The Progress Report of the Warwick Forum is attached here as **Appendix A**.
- 1.4 A significant outcome from the Working Groups of the Warwick Forum is the development of a first phase of proposals for measures which could be implemented on a 'street by street' basis. Details of these proposals are shown



in the Annexes to **Appendix A** and plans will be on display at the meeting for comment. Considerable time and energy has been spent by the Forum's Members on drawing up these proposals with the residents of the streets themselves and it can therefore be reasonably assumed that they have the support of the residents.

- 1.5 To date, an initial phase of 'street by street' proposals have been developed for:-
 - (i) Chapel Street.
 - (ii) West Street.
 - (iii) Castle Lane.
 - (iv) St Nicholas Church Street.
 - (v) High Street.
 - (vi) Theatre Street and Bowling Green Street.
- 1.6 The next phase of 'street by street' proposals being worked on by the Forum are for:-
 - (i) The streets of the Commercial Core and other small streets in the area.
 - (ii) The remaining main streets The Butts, Friars Street, Hampton Street, Saltisford and Priory Road.
- 1.7 Additionally, proposals are being developed for the six major junctions in Warwick:-
 - (i) Westgate.
 - (ii) Eastgate.
 - (iii) Northgate.
 - (iv) Castle Hill.
 - (v) St John's.
 - (vi) Saltisford.
- 1.8 The 'street by street' proposals form one strand of a number of different options which have emerged to tackle the traffic-related issues in Warwick town centre. A number of schemes, known as 'interim schemes' have been identified and reported previously. Some of these have now been implemented, e.g. the Puffin crossing on Friar Street, the cycleway between Warwick and Warwick Technology Park. Progress on other schemes is currently being made, e.g. the Warwick Bus Interchange, the Car Park Management Signing.
- 1.9 There is no doubt that the 'street by street' proposals and the 'interim schemes' will deliver improvements to the conditions in Warwick town centre. However, these are unlikely to fully deliver the scale of improvement for Warwick that is required to fully achieve the Forum's vision "To make Warwick's historic centre safer, easier and more pleasurable to live in, to work in, and to visit, now and in the future" and a package of complementary measures may be required.
- 1.10 In this report, various options for progressing towards this goal are discussed and the views of Committee are sought on the way forward.



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2. Other Proposed Schemes which will affect Traffic Conditions in Warwick Town Centre

- 2.1 As well as the schemes being looked at by the Forum, there are two other proposed schemes which will impact on conditions in Warwick town centre. These are:-
 - (i) The changes to M40 Junction 15 (Longbridge) in 2009 (current estimate) by the Highways Agency.
 - (ii) SPARK a public transport initiative focusing on the urban movements between Warwick, Leamington and Whitnash and including a Park and Ride site to the south of Warwick and Leamington. (Local Transport Plan funding).
- 2.2 It should be noted, however, that the scope, timetable and funding for SPARK is not finalised, but it does need to be taken into consideration when considering what traffic management measures or strategies are appropriate.

3. Traffic Management Schemes for Warwick Town Centre

- 3.1 The 'interim' schemes and the 'street by street' proposals will deliver a degree of improvement to the conditions in Warwick Town Centre. The cost of the 'interim' schemes already identified is likely to be £1.1 million, from a projected total of £3.5 million (funding available from the South West Warwick development). The cost of delivering the 'street by street' proposals has not been assessed yet.
- 3.2 It is the view of officers that the many worthwhile schemes being proposed by the Forum may need to be supplemented with other complementary traffic management measures in order to fully realise the Vision for Warwick Town Centre.
- 3.3 Traffic management measures generally fall into the categories of 'demand management' and 'supply management'. Demand management measures limit the desire for drivers to travel into and through the town centre to a level which can be better accommodated without adverse impacts, and without limiting the physical ability (i.e. freedom of choice) to do so.
- 3.4 Supply management measures alter the amount of highway available for different activities and modes in order to affect driver route choice, thus altering the level of traffic in town.
- 3.5 Typical examples of these type of measures, and their potential applications in Warwick, are discussed further in **Appendix B**. The Forum have also included comments on some of these measures in their report in **Appendix A**.

4. Funding

4.1 As previously discussed, the Section 106 developer funding available is £3.5 million. Of this, £1.1 million has been identified for the 'interim' schemes.



- 4.2 The estimated cost of the 'street by street' and other measures being proposed by the Forum has not been established, but is likely to be significant.
- 4.3 The Forum's proposed schemes and any further complementary traffic management measures would need to be funded from the remaining Section 106 developer funding, and, depending on the package of measures chosen, additional funds may need to be sought from the Local Transport Plan capital funding or from other sources. It should be noted that Section 106 funding can only be used if the scheme's objectives are compatible with the terms of the agreement.

5. The Way Forward

- 5.1 The Committee's views on the full range of possible traffic management measures is sought, bearing in mind the objective of the Forum's work.
- 5.2 It is proposed that a more in-depth study of the package of measures chosen by Committee be commissioned and reported back to Committee in due course. The study will include an equality and diversity assessment of the measures, which will be developed through consultation with representative members of the Forum to ensure that we fulfil our duties under disability equality legislation and policies.
- 5.3 In addition, Committee's endorsement is sought for the Forum's proposed 'street by street' schemes, and for support of the continuing work of the Forum. If Committee endorses these schemes, then a request for funding will be submitted to Cabinet for approval to commit resources to design and implement the initial phase from the funding available.

JOHN DEEGAN Strategic Director for Environment and Economy Shire Hall Warwick

2nd July 2007



Warwick Area Committee – 10th July 2007

Appendix A of Agenda No

WARWICK TOWN CENTRE FORUM

TECHNICAL GROUP PROGRESS REPORT TO WARWICK AREA COMMITTEE, 10 JULY 07

1 Introduction and Background

- 1.1 The overall objective of the South West Warwick planning requirement to reduce the impact of traffic on the Warwick town centre led to the decision of the Area Committee at its meeting on 21 November 06 to approve Objectives and Principles to achieve this aim. These are detailed in Annex A (page 8). The Forum has worked since then to develop specific measures directed towards achieving the objectives and matching the principles.
- 1.2 This report summarises the work that has been done in developing these measures. At the fifth full meeting of the Forum on 26 March 07, the direction of the proposed measures was supported. This report is made by the Technical Group of the Forum, to provide up to date information on subsequent progress too.
- 1.3 The report, recognising the practical and cost constraints on what can be achieved quickly, seeks the approval of the Area Committee for:
 - 1.3.1 The overall rationale and progress towards developing proposals which are useful for both the short and the longer term.
 - 1.3.2 Some measures which can be implemented quickly at relatively low cost, with real benefits in reducing the impact of traffic on the town centre;
 - 1.3.3 Further development by members of the Forum, including the deployment of County Council design resources, of measures which could next be implemented incrementally;
 - 1.3.4 Continuing the work of the Forum to complete the short term proposals, to study possible longer term policies, and to increase understanding of the level of air pollution.

The proposed measures are detailed in sections 4, 5 and 6.

2 Overall Rationale:

Understanding the Problem: the present impact of traffic in the Town Centre and the need to reduce traffic passing through it

- 2.1 A survey to improve understanding of the present pattern of traffic to, from and through the town centre was devised by the County Council in consultation with other members of the Forum's Technical Group and carried out in September 06 with the help of additional enumerators recruited by the Forum. A report of the survey is being prepared by officers. The draft report has been discussed between them and the Forum's Technical Group.
- 2.2 The survey enumerated traffic movements across two cordons.
 - 2.2.1 The outer cordon embraced the **Warwick built-up area** (except for, south of the river, the Technology Park, Heathcote and Warwick Gates, which, while administratively part of Warwick, are geographically and in transport terms more closely linked with Leamington).
 - 2.2.2 The inner cordon encircled **Warwick town centre** (using the established Local Plan definition of this area).

2.2.3 Annex B (page 9) includes a map showing the cordons and the areas within them, and provides detailed definitions of the terminology used in the following paragraphs. The key terms are, briefly:

The Warwick built-up area and within it Warwick town centre.

Town centre traffic is the number of vehicles crossing the inner cordon in either direction. This provides the best measure of the impact on Warwick town centre of each traffic movement.

Traffic movements: movements of vehicles across one or more of the cordons.

- 2.2.4 The figures quoted are taken from the draft report, and provide the most comprehensive available picture of the contribution of different traffic movements to town centre traffic.
- 2.3 The survey confirms the findings of earlier work, carried out by consultants and local groups, that:
 - 2.3.1 Three-quarters (76%) of town centre traffic in the six-hour morning period 0700-1300 is passing through it, not starting or ending a trip in it.
 - 2.3.2 In the peak hour 0800-0900, this proportion increases to four-fifths (80%).
- 2.4 This traffic passing through the town centre is the source of most of the impact of traffic on it and particularly on its air quality. It is also the main source of congestion within the town centre and on the approaches to it this traffic has a negative impact on town centre *traffic*, as well as on town centre *streets*.
- 2.5 The data from the survey makes it possible to analyse the different traffic movements to, from and through the town centre. Paragraphs 2.6.1 to 2.6.5 describe and categorise these traffic movements and draw broad conclusions about measures which could reduce the volume and hence the impact of each on the town centre. For some traffic movements a change to a different mode of transport for all or part of a journey may be appropriate. For others, modal change is unlikely to be attractive and a change of route would be the most likely way to reduce town centre traffic.
- 2.6 The figures given in this analysis are for morning peak hour town centre traffic (as in 2.3.2 above); the letters given for each are those used in the survey report to identify each movement, and detailed in Annex B (page 9).
 - 2.6.1 Very short traffic movements entirely within the Warwick built-up area (B, E and F, for example journeys between West Street and Emscote Road) make up 22% of town centre traffic, one -third of this or 7% of the whole being movements starting or finishing in the town centre. The trips making up these traffic movements are likely to be between 1 and 3 miles long and may most easily be reduced by encouraging walking, cycling and greater use of local public transport to alter the mode used.
 - 2.6.2 Traffic movements between the town centre and outside the Warwick built-up area (G and H, for example residents leaving the town centre for Stratford or employees coming into it from Leamington) make up 12% of town centre traffic. These traffic movements, with the 7% created by very short trips to/from the town centre, make up the one-fifth of town centre traffic which is *not* passing through it. Some of these traffic movements may be reduced by improving cycling and local public transport to alter the mode used. These measures may be particularly useful in reducing car journeys ferrying schoolchildren.
 - 2.6.3 Traffic movements between other parts of the Warwick built-up area and places outside Warwick via the town centre (C & D, for example journeys between Woodloes Park

and Gaydon) make up 43% of town centre traffic. Some might be reduced by improving public transport, including school bus services. But with diverse origins and destinations, the trips which make up these movements are more likely to remain car-borne, and changes in routing rather than mode give the potential for their reduction.

- 2.6.4 Traffic movements between origins and destinations both outside the Warwick built-up area via the town centre (A, for example, journeys between Leamington and Stratford) make up 23% of town centre traffic. With diverse origins and destinations, the trips which make up these movements are not susceptible to changes in local public transport and are very likely to remain car-borne: changes in routing rather than mode give the potential for their reduction.
- 2.7 Reducing the overall volume of traffic in the town centre thus requires a range of actions. It depends most on changing the routing of the longer distance through movements (A, C and D) which make up **two-thirds** (66%) of town centre traffic. It could also be helped by encouraging the use of other modes for the movements to and from the town centre (E, F, G and H) and very short through movements (B) which make up the other **one-third** (34%) of town centre traffic.
- 2.8 So, reducing the impact of traffic on the town centre requires above all a change in the routing of through traffic movements. This would need a change in the relative qualities of town centre routes and routes which do not pass through it, making the town centre less attractive for through transits and other routes relatively more attractive.
- 2.9 Many different measures are available to pursue this reduction. The recommended strategy combines several of those which are more readily implemented to give short term gains, while keeping open the option for probably more difficult measures with even bigger benefits, later.

3 The Recommended Strategy

- 3.1 The strategy recommended has three main elements, the first two short and medium term, the third longer-term:
- 3.2 **Short and Medium Term**: The recommended strategy is to make more attractive the use of modes of transport other than the car for the shorter distance trips which are most easily susceptible to changing mode; and to make less attractive, relative to other routes, transits of the town centre by car for longer journeys. Rebalancing the use of road space within the town centre will also benefit commercial, residential and tourist: activities, by better air quality, better pavements and more crossings.

The two short and medium term elements of the strategy are:

3.3.1 **Street-by-street**: Improving town centre streets and junctions with a series of 'low-tech' measures, implemented incrementally:

More crossings for people on foot, formal and informal,

Wider pavements and narrower carriageways, and

Lower vehicle speeds 'self-enforced' by changes in road design, making walking safer and more comfortable, and cycling safer and more attractive without needing separate lanes and routes.

These measures can make the streets much more attractive for people on foot and cyclists and rather less attractive as main roads for cars. Modal shift from car to walking, cycling and

public transport for the very short and other town centre trips will be encouraged, and the use of town centre streets by medium and long distance trips discouraged.

3.3.2 Town centre-wide:

Reclassifying the town centre streets from Primary or A roads to lower categories, and Establishing a 20mph zone throughout the town centre.

Both of these overall measures would further discourage medium and long distance traffic movements from using town centre routes. The proposed enlargement of the Longbridge junction is also forecast to make it easier for those movements to use the main road network outside the town.

It is not clear whether together these changes would divert traffic sufficiently to eliminate air quality problems. Better measurement and understanding of these problems and their sources throughout the town centre is therefore an additional urgent requirement.

- 3.4 There is substantial evidence from other towns and cities in the UK and elsewhere in Europe that the short and medium term strategy of rebalancing road space from car to foot, cycle and public transport causes a reduction in car trips. On average, a quarter of car trips, after a short term settling-in period, either shift to other modes or cease to occur: traffic 'evaporates'. For example, in the medium term, more parents might share walking to school with their children, or more residents use local shops rather than drive to more distant supermarkets; or in the longer term house purchase decisions would take stronger account of peoples' desire to reduce unproductive car use and wasted time. The key success factors and lessons learned in other towns and cities are fully described in an EC report¹, of which copies can easily be made available if wished.
- 3.5 We make recommendations in section 4 below for rapid further development and implementation of the full range of short and medium term measures.
- 3.6 Longer Term: The short and medium term elements would contribute to adjusting the balance between through traffic and local activities in the town centre. They would encourage some modal shift, and some re-routing of through movements to routes which create less congestion and less environmental damage. They might, however, leave congestion on the approaches to the town centre as a continuing symptom that demand for town centre road space exceeds supply. No 'magic wand' solution exists to increase road space or reduce demand by so much as to eliminate this peak congestion. Indeed, accelerating traffic might well be self-defeating, as it would simply attract more vehicles into the town centre for the faster transits that it offered. The third element of the strategy is therefore a recommendation to study two possible 'high-tech' measures, one, road user charging, designed to reduce demand, and the other, a ring of 'gateway' traffic lights, designed to reduce supply even further than do the short term measures.
- 3.7 An outline of these two possible longer term measures is:
 - 3.7.1 A **ring of 'gateway' traffic lights** at outer entry points to the town could control by computer the flow of traffic up to or below the town centre capacity. It is unclear whether such a system could function satisfactorily without similar control of junctions within the town, to measure and optimise the complex flows through it. Such an approach would continue to require town centre residents, businesses, visitors and buildings to feel the impact of traffic passing through it at this capacity level. This would defeat the basic agreed

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¹ Reclaiming City Streets for People - Chaos or Quality of Life? European Commission, Luxembourg, 2004.

objective of reducing the impact of traffic in the town centre. We are unaware of any similar scheme to 'ration' entry to a town centre, reducing the supply of space on the access roads, and have doubts about its acceptability: the passage of traffic within the town centre would be facilitated, probably encouraging more through journeys, while access journeys to the town centre for employment, business or tourist purposes would be limited indiscriminately in supply.

- 3.7.2 **Road user charging** is likely to be politically controversial and may not be technically sufficiently developed to distinguish between the requirements of residents, visitors, those on town centre business and long distance through traffic. But we understand that government policy seeks consideration of local road user charging schemes. Many members of the Forum and individual inhabitants, recognising the economic rationale, might not object to Warwick being considered as a possible pilot location. The demand for road space in central Warwick is clearly greater than the supply, and the market mechanism (with appropriate safeguards for economic and social inclusion) may be the most appropriate way to balance supply and demand. In addition, the external costs of car use in the town centre principally pollution and congestion are high, and, by definition the road user does not meet them. Road user charging improves economic efficiency by internalising these external costs, and thus could contribute to the economic vitality of the town.
- 3.8 Recognising that there is not yet wide public appreciation of the benefits or support for road user charging, we recommend that the possibility of Warwick joining the programme of development of local road user charging schemes should be considered positively but carefully; and that studying this possibility should allow a future decision to be taken on a properly-informed basis.
- 3.9 The continuing development of the 'SPARK' Park+Ride and public transport proposals is a further element of the overall strategy, and the Forum is keen to see (and to contribute to) the finalisation of a scheme which makes an effective contribution to reducing town centre traffic.
- 3.10 The strategy is therefore consistent between the short, medium and long term; and consistent, as are the agreed objectives, with the local transport plan objectives to reduce dependence on and the impact of the car.

4 Overall Measures Recommended for Action

4.1 Reclassifying routes through the town from primary and A to lower category

The Forum proposes that, as has already been done in many other towns, the main roads to, from and within the town centre should cease to be part of the primary route network, or classified as A roads. Maps and input to Sat Nav systems would indicate to drivers that these are local rather than through routes, and encourage them to avoid using the local routes for longer distance journeys. This is particularly important as a step to reducing the use of town centre routes, in spite of the 7.5t weight limit, by HGVs passing through, a major safety risk and concern of Forum members and residents in general. The change to the primary route network (Longbridge - Warwick - Leamington) requires GOWM² approval; changing the other routes (Banbury Road, Hampton Road, Birmingham Road and Coventry Road and connecting town centre streets) requires a County Council recommendation to the Department of Transport for decision.

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Government Office of the West Midlands

4.2 20mph Zone throughout the central area of the town

The Forum recommends that, in line with government policy guidance for roads in residential areas and near schools, the whole Town Centre should be within a 20mph zone, the precise boundaries of which need further detailed consideration. Apart from the direct safety benefits, this will make the town less attractive to through traffic; and, by reducing the perceived as well as real danger of fast-moving vehicles, make the streets more attractive to people on foot and thus assist both modal shift and commercial viability especially when combined with the self- enforcing traffic slowing measures outlined in the detailed street- by-street proposals

4.3 Measuring and improving air quality and reducing CO₂ emissions

This issue continues to be regarded as very important by residents, businesses and visitors to the Town Centre. The Forum has not made satisfactory progress in understanding the measurement, pattern or cause of air quality problems. It is clear that recommendations cannot be based on anecdotal evidence. It is a high priority for the next stages of the Forum's work to move on to a fully informed state and proper understanding, shared with the District Council and the County Council. More intense measurement is urgently necessary to establish conclusively air quality risks in, for example, St. Nicholas Church Street, Theatre Street and The Butts.

5 Street-by-Street and Junction-by-Junction Measures

The development of these measures is being carried out in a programme of round table discussions involving residents, businesses and other interested parties in each part of the Town Centre. About one-third of the programme has completed a first stage, which has produced outline proposals for changes in each street which move towards the objectives and principles as agreed by the Warwick Area Committee. In each case, there has been a good consensus among those taking part in the round table discussions in support of both the overall principles and the specific proposed measures. The streets considered early in the programme have led to the proposals for provisional implementation and where required to the allocation of design resources recommended at 6 below.

6 Recommended Immediate Actions:

Consistent with the strategy and capable of incremental implementation in the short and medium term, we recommend that further development is initiated of the measures proposed street-by-street. Details are given in Annexes C1 to C7 (pages 10-22). The Annexes reproduce the conclusions of the round table discussions, and demonstrate both the process by which the proposals have been developed and their content. There is a variety of formats, because different people have prepared the write-ups of the discussions, but all indicate the general support among those involved for going to a next stage of development. Maps showing the outline proposals will be available for display at the Area Committee meeting. The streets for which work has already reached this stage are:

6.1 **Chapel Street**: Recommendation that the street should be made one-way northbound: Annex C1 (pages 10/11)

- 6.2 **Castle Lane**: Recommendation to allocate design resources to developing measures: Annex C2 (pages 12/13)
- 6.3 **West Street**: Recommendation to allocate design resources to developing measures: Annex C3 (pages 14/15)
- 6.4 **Theatre Street**: Recommendation to allocate design resources to developing measures: Annex C4 (pages 16/17)
- 6.5 **The Butts**: Recommendation to allocate design resources to developing measures Annex C5 (pages 18-20)
- 6.6 **St Nicholas' Church Street**: Recommendation to allocate design resources to essential measures: Annex C6 (page 21)
- 6.7 North Rock, Saltisford and **Birmingham Road**: Progress report and recommendation to investigate potential for lowering level of road surface under railway bridge to permit passage of slightly taller HGVs: Annex C7 (page 22)

7 'Work-in-progress' on further Street-by-Street and Junction-by-Junction Measures

The programme of round table discussions will continue through the summer, covering Saltisford (two meetings already held), Smith Street (one meeting already held), Friar Street and Hampton Street, Jury Street and Priory Road. A single round table is being arranged during July for the smaller streets in the commercial core. The experience gained by the Forum and by participants in the round table discussions will allow the six major junctions, Westgate, Eastgate, Northgate, Castle Hill, St John's and Saltisford, to be considered next.

8 Conclusion

- 8.1 In our considerations and recommendations for action (sections 2-5) we have consistently been mindful of the **WAC** agreed objective of minimising the impact of traffic on the town centre. No single 'big bang' solution exists. Our proposals are informed by the results of the most recent traffic survey and the street-by-street discussions to date.
- 8.2 Some proposals like the 20mph town centre speed limit, the reclassification of town centre through routes and signing to encourage routes avoiding the town centre are capable of implementation at relatively modest cost, whereas the street by street proposals deterring traffic and making the streets more attractive to people can be implemented incrementally as costs will allow.
- 8.3 An informed debate within the Forum and with wider participation on the feasibility and acceptability of the longer term measures outlined in paras 3.6 to 3.8 would be helpful.

Annex A Objectives and Principles approved by WAC Nov 06

Vision: To make Warwick's historic town centre safer, easier and more pleasurable to live in, to work in, and to visit, now and in the future.

The objectives try to make this vision real. They set a framework for changes in the town, its streets, traffic and transport, consistent with government policies and with the Local Transport Plan, and propose principles by which the objectives should be pursued. These are the five **objectives**, and the *principles* beneath them:

Objective 1: Reduce pollution and its impact on people and buildings

- 1.1 Reduce Nitrogen Dioxide emissions from vehicles to 20% below the threshold of an Air Quality Management Area at residential property frontages
- 1.2 Reduce Carbon Dioxide emissions from vehicles by 20%
- 1.3 Reduce noise, vibration, and visual pollution

Objective 2: Make it safer, easier and more pleasurable to walk, cycle and use public transport

- 2.1 Make it safer and easier for people on foot to cross traffic
- 2.2 Improve pavements' quality
- 2.3 Improve direct routes for walking, especially on routes of up to 1 mile
- 2.4 Improve safety for cyclists and increase the extent and the quality of cycle routes and lanes
- 2.5 Eliminate the town centre 'bus loop'
- 2.6 Increase the frequency of bus services and the directness of routes
- 2.7 Establish Park+Ride, and Drop+Ride for schoolchildren, as better alternatives to car use
- 2.8 Give specific attention to the needs of people with disabilities, elderly people, children, parents with buggies, etc
- 2.9 Improve the enjoyment and benefits of Warwick's small scale, charm, historic nature, and green spaces

Objective 3: Improve access to the town centre and its activities

- 3.1 Enhance the retailing and tourist activity of the town
- 3.2 Improve access to the town centre from the rest of the town, from the surrounding area and for visitors
- 3.3 Make it easier to deliver to commercial premises
- 3.4 Improve the availability of short stay parking in the town centre and of long stay parking serving it

Objective 4: Facilitate and control better the movement of vehicles

- 4.1 Reduce the speed of traffic
- 4.2 Promote the proper enforcement of moving traffic regulations
- 4.3 Manage better conflicting vehicle movements
- 4.4 Change road classifications and direction signs to reduce through traffic and ease parking

Objective 5: Reduce the overall level of vehicle traffic in the town centre

- 5.1 Reduce the volume of through traffic
- 5.2 Reduce peak traffic flows and congestion

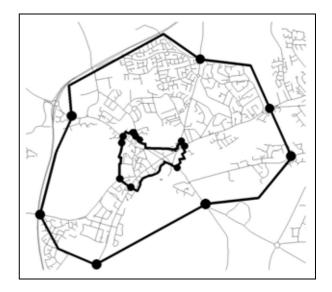
Annex B Definitions

The **Warwick built-up area** is the area within the outer cordon.

Warwick town centre is the part of the builtup area which is within the inner cordon and is the area defined in the WDC Local Plan to which town centre policies apply.

Outside Warwick is everywhere outside the Warwick built-up area.

The cordons and these three geographical definitions are shown on this map:



Town centre traffic: the number of vehicles crossing the inner cordon in either direction, entering or leaving the town centre. This is not the same as *trips*. It provides the best measure of the impact on Warwick town centre of each *traffic movement*.

Trips: journeys into, through or out of Warwick town centre, the built-up area and areas outside Warwick. Each trip might use one of many different entrances and exits across cordons to/from each zone, and one of many routes between their origin, those entrances and exits, and their destination. The trips contribute to eight *traffic movements*.

Traffic movements: movements of vehicles across one or more of the cordons, into and/or through and/or out of Warwick town centre, the Warwick built-up area, and areas outside Warwick: each movement is the total of many different *trips* by different routes between different origins and destinations.

The traffic movements between each zone^{\dagger} and their contribution to town centre traffic between 0800 and 0900 are demonstrated by this chart:

move-	outside Warwick	Warwick	built-up	area	outside Warwick	% of total town	
ment			town centre			centre	
uc						traffic*	
cordon	outer	inner	inner	outer			discussed in para
F		•>>>>	>>>>			3.3%	Ţ
E			•>>>>	>>>>		3.9%	2.6.1
В		•>>>>	>>>>> >>	>>>>		14.4%	Ĺ
Н	•>>>	>>>>>	>>>>			8.6%	2.6.2
G			•>>>>	>>>>>>	>>>	3.7%	Ĺ
С	•>>>	>>>>>>	>>>>>	>>>>		21.4%	2.6.3
D		0>>>>	>>>>>	>>>>>>	>>>	21.7%	Ĺ
Α	•>>>	>>>>>>	>>>>>	>>>>>>	>>>	23.0%	2.6.4

Movements in the built-up area which do not enter Warwick town centre are not included in the chart.

^{* %} of total number of vehicles crossing inner cordon 0800-0900.

Annex C1 Chapel Street:

Recommendation that the street should be made one-way northbound

This annex summarises the conclusions of a 'round table' discussion involving residents of Chapel Street and Gerrard Street, and of subsequent discussion with King's High School. These allow the Forum to make a firm recommendation for one way traffic in Chapel Street.

It is recommended that, after the formal procedure has been completed, the measure should be implemented provisionally, and, after some months to allow the effect to settle down, be reviewed to assess whether the expected benefits have been realised.

Chapel Street and Gerrard Street Residents' Round Table Discussion, 2 February 07

1 Issues to be dealt with

We agreed that, within the objectives agreed for a traffic scheme for the whole town, the issues that need to be dealt with in Chapel Street and Gerrard Street are:

- 1.1 Improving air quality and reducing noise pollution caused by the volume of traffic.
- 1.2 Reducing the speed of traffic, especially for the safety of King's High School pupils and other people on foot.
- 1.3 Responding to the narrowness of streets and narrowness (in some places absence) of pavements.
- 1.4 Increasing parking for residents.
- 1.5 Making better arrangements for dropping off and collecting, and other transport plans, for KHS.

2 Conclusions

We reached a strong consensus that these changes would deal well with these issues, and match the overall objectives:

- 2.1 Chapel Street to be one way northbound, uphill.
- 2.2 Gerrard Street to remain one way southbound, downhill.
- 2.3 The speed of the remaining traffic in both streets should be constrained to no higher than the 20mph limit proposed for the town centre as a whole by measures such as 'chicanes', speed humps, perhaps modified or moved, and changes in surface material.
- 2.4 As well as wider pavements at the south end of Chapel Street, routes across the street for KHS pupils should be improved, with pavements at the exits from the school to improve visibility.
- 2.5 The parking space outside the Iris Lees club should be lengthened, and made available for ordinary parking outside the club's hours.
- 2.6 More parking spaces should be provided on the same side of Chapel Street, as far as its width permits.

3 Other Issues

We recognised that several lesser issues will need to resolved by more detailed work. These include:

- 3.1 Reducing the use of Chapel Row
- 3.2 Making safer the shared use by people on foot and vehicles of the north end of Chapel Street.
- 3.3 Improving the crossings at the junctions at each end of both streets.
- 3.4 Designing the exit from Chapel Street to Priory Road to prevent entry and to continue to allow parking.
- 3.5 Care in the design of measures including humps and crossings so that they are not ugly or intrusive.
- 3.6 It is likely that there will as a result of this measure be an improvement in the flow of peak traffic out of St Nicholas Church Street onto the Castle Hill roundabout, and this is referred to again in Annex C6 (page 21).

4 Next steps

4.1 The proposals have been discussed with King's High School, through its bursar, and its view is:

"Overall, the staff felt that the benefits in terms of protecting the girls from a majority of the traffic hazards outweighed the drawbacks, in terms of affecting staff leaving the staff car park being forced to turn right up Chapel Street, even if they wanted to go south towards the Banbury Road. In many ways, our best solution is actually to keep Chapel Street two-way as far as Chapel Row and one-way, north-bound only, above Chapel Row. If you can find a way to express this that will not cause traffic chaos, KHS would be delighted! However, we accept that our over-riding consideration is to the safety of our pupils and if our optimum solution isn't possible, we'd be generally supportive of moves to make Chapel Street safer by making it one-way. the overall effect would be to enhance the quality of life for residents whilst improving the safety of pupils."

- 4.2 In the light of support from all the interested parties in Chapel Street and Gerrard Street who have been involved, it is recommended that the Area Committee should support the change and initiate a formal proposal to make Chapel Street one-way northbound.
- 4.3 If this recommendation is accepted, a further 'round table' discussion will be held to consider detailed changes in the layout of the street required for and permitted by one-way traffic.

Annex C2 Castle Lane:

Recommendation to allocate design resources to developing measures

This annex summarises the conclusions of a 'round table' discussion involving residents of Castle Lane and the streets which join it. Subsequent informal discussion with the Castle has obtained its support in principle for the proposals. It is therefore possible to recommend that design resources should be allocated to develop and cost the proposals in more detail. It is recognised that it will be necessary to prioritise the most beneficial and affordable elements.

The text of the Annex reproduces the summary of the 'round table' discussion and its conclusions. A map showing the outline proposals will be available at the Area Committee meeting.

Castle Lane

The County Council's agreed Vision, Objectives and Principles have allowed the Forum Technical Group to begin to develop measures which achieve the overall objectives and can gain the support of people generally in the town.

All the residents of Castle Lane and of the streets which open off it were invited to 'round table' discussions. Eleven took part, and prepared a proposal which is described here and has been mapped. The proposal is also being discussed with Warwick Castle.

Applying the objectives and principles to Castle Lane means:

Making it easier to walk along and across the lane

More priority for local uses, and less for through traffic

Measures to 'self-enforce' a 20mph speed limit, making the lane feel much safer and more 'people-friendly'

Maintaining as much parking as possible

Improving the townscape, recognising the importance of the lane as a connection between tourist attractions and the rest of the town

Assumptions:

High Street and Jury Street will remain in use for traffic in both directions

20mph speed limit throughout town centre

Proper parking enforcement from August 07 will increase the availability of on-street short stay spaces and, with pay and display in some streets, reduce the demand

Important elements:

- Informal crossings on the main 'lines of desire' for people on foot: at the Castle Hill entrance to the lane, at each end of the entrance to the Castle Stables car park, at Castle Street, at the town gate to the Castle (where a crossing already exists), across Back Lane and Leycester Place, at the Castle Close entrance, and at the West Street exit
- 2 Pavement added over the ~180m where none now exists, and widened at other key locations from Castle Hill to the Stables gate and around Castle Street
- 3 Existing kerb lines kept everywhere else, with options to widen later
- Some kind of calming measure every 60m to 80m for the 20mph limit. These are:
 - ① Tighter radii at side turnings, to slow traffic entering and leaving
- ② Twists in the carriageway, at the Stables exit, Castle Street, behind the Orangery, and maybe elsewhere
- ③ Informal crossings differentiated at least by surface material and in some cases maybe with humps
- Parking: length between Castle town gate and beyond Back Lane unchanged; between beyond Back Lane and Leycester Place increased from 42m to 61m (+4 spaces), with some redistribution along this length; some further increase may prove possible opposite private entrances
- **6** Street lighting to be improved from minimal to moderate
- **②** 'THRO TRAFFIC' and left arrow markings to be deleted from Castle Hill short term operational action by WCC

With the caveat that the exit to West Street requires further discussion with proposals for the Westgate crossroads, the residents' round table reached firm consensus on the proposal mapped.

Annex C3 West Street

Recommendation to allocate design resources to developing measures

This annex summarises the conclusions of a 'round table' discussion involving a small group of residents and businesses in West Street. It has been prepared to encourage wider discussion of the outline proposals. A map showing them will be available at the Area Committee meeting.

Proposals for Westgate, at the top of West Street, will be considered at a further 'round table' discussion. These proposals are independent of whatever is proposed for that key junction.

The proposals have with some reservations on specific details been well received. It can therefore be recommended that design resources should be allocated to start to develop and cost them in more detail, recognising that it will be necessary to prioritise the most beneficial and affordable elements.

West Street

When approval was sought in 1993 for the development of south west Warwick at the Public Inquiry into the Warwick District Local Plan, the County Council made a commitment to protect Warwick town centre from the impact of the increase in traffic that would arise from it; funding of measures to effect this commitment was later agreed with the developers.

In May 2003 Warwickshire County Council proposed a traffic scheme for Warwick which involved closing High Street/Jury Street to through traffic and re-routing it by way of an inner ring road of town centre streets. It was proposed that vehicles and pedestrians would be controlled by a series of traffic lights managed by a central computer. During the peak hour access to the town would be limited to acceptable levels by queuing on the feeder roads. Proposed changes in the one way system, would have resulted in vehicles travelling a greater distances to get through the town and being driven up Smith Street. The scheme was publicised at an exhibition in the Market Place in February 2003 and attracted considerable public participation, the consultation response resulted in such a high level of objection that it was decided not to proceed.

There were however three proposals that did attract support,

- changing the layout of the town centre bus station so that buses would not need to exit by way of narrow streets,
- introducing a light controlled pedestrian crossing in Friars Street to protect the children attending West Gate School and
- introducing a similar crossing in West Street to enable people to cross the fast moving traffic streams there in safety.

In early 2004 the County Council set up a Town Centre Forum with the brief to progress the measures that had full support and to decide what further measures should be taken. A Facilitator was appointed to guide the Forum and a wide range of stakeholders were invited to take part in it. A series of workshops took place where the impact of traffic on Warwick was analysed and problems identified. Working groups were set up to report to the Forum on these problems in greater detail and from these reports the Forum drew up a statement of objectives which were approved by the Warwickshire County Council Local Area Committee. Since then Round Table groups have been set up to make specific proposals to implement these objectives and to forward the three proposals which were already agreed. The light controlled pedestrian crossing in Friars Street has been installed and proposals for improving the layout of the bus station have been

exhibited and consulted on. Other Round Table Groups have met to prepare proposals for reducing the impact of traffic on town centre streets.

The problems of West Street were addressed at a public meeting workshop held on 22 August 2006 and objectives to reduce the impact of traffic in West Street were formulated, it was agreed that these should be: -

- . Make it easier and safer for people on foot to cross West Street at several points along its length.
- . Reduce the speed of traffic.
- . Enhance the townscape and minimise visual pollution.
- . Not constrain or prejudge wider town centre traffic proposals.
- . Help discourage and reduce the volume of traffic.
- . Not speed up traffic flow.

Out of this meeting a Round Table group was formed and specific proposals prepared to put forward to the County Council. These proposals are now detailed on a comprehensive drawing displayed in Torry's shop window.

Originally the obvious place for the light controlled pedestrian crossing already approved was at the existing pedestrian refuge outside St Mary's Church Hall (formerly a school). However when the wall at the Lord Leycester Hospital became unsafe and traffic lights were installed at the West Gate, the perceived benefits of the reduced traffic in the town centre arising from them made their installation as a permanent feature a considered option. If these traffic lights were reinstalled they could be designed to provide safe road crossings for pedestrians for both West Street and Bowling Green Street. Because of that possible eventuality, the crossing is shown further down West Street at a point felt to be most convenient.

One of the most serious hazards in West Street is the speed of traffic much of it travelling above the speed limit when the street is not congested. The Round Table would like to have seen a 20 mph speed limit imposed but the Police say that any such limit would have to be self-enforcing. The Round Table's proposals then seek to slow traffic down and make West Street more of a local community rather than just a section of a busy main road. To this end more pedestrian refuges are proposed which will also serve to narrow the carriageway, provide deviation from the straight road and take away the invitation to drivers to travel at high speeds.

The pull in for the bus stops are not popular with bus drivers, they are often unable to use them because of parked cars and having used them have difficulty in pulling out because of the reluctance of other road users to let them do so. It is proposed instead that a short section of pavement be extended into the road at bus stops where travellers can be seen and picked up from the carriageway. The redundant pull ins can then be used for car parking.

The West Street Round Table would like to know what you think of the proposals and would welcome any suggestions of your own. The main concern is to reach a consensus. We would like to thank Sue Butcher of Torry's hardware shop for allowing us to display the drawing in her window and to use her e-mail address for correspondence.

Annex C4 Theatre Street

Recommendation to allocate design resources to developing measures

This annex summarises the conclusions of two 'round table' discussion involving a group of residents in Theatre Street. It has been prepared to encourage wider discussion of the outline proposals.

It is recommended that design resources should be allocated to start to develop and cost the proposals in more detail, recognising that it will be necessary to prioritise the most beneficial and affordable elements. A map showing the proposals will be available at the Area Committee meeting.

Theatre Street

The County Council's agreed Vision, Objectives and Principles have allowed the Forum Technical Group to begin to develop measures which achieve the overall objectives and can gain the support of people generally in the town.

This proposal applies the agreed principles to Theatre Street. Each part of the town is being considered in turn.

The part of Theatre Street towards the Saltisford roundabout will be considered with the Saltisford. These proposals then run as far as Market Street. The stretch from Market Street to Puckerings Lane will be altered by the Bus Station. The pavement width on Bowling Green Street past Westgate School is being considered separately. The Friars Street junction will be considered with Westgate.

Applying the objectives and principles to Theatre Street means:

Making it easier to walk along and across the street

More priority for local uses, and less for through traffic

Measures to 'self-enforce' a 20mph speed limit, making the lane feel much safer and more 'people-friendly'

Assumptions:

High Street and Jury Street will remain in use for traffic in both directions

20mph speed limit throughout town centre

Proper parking enforcement from August 07 will increase the availability of on-street short stay spaces and, with pay and display in some streets, reduce the demand

Measures in Theatre Street:

- 1. Slowing traffic, especially on the stretch at the foot of the Jitty approached downhill in both directions:
 - 20 mph limit, enforced by narrowing and twists rather than humps
- 2. Making it easier for people on foot:
 - wider pavements: at crest of hill by Globe Hotel and between opposite the Jitty and Linen Street
 - better crossing from the Jitty to west side of street
 - better crossings of the side turnings:

especially Linen Street car park exit and Friars Street (to be considered with Westgate)

- 3. Reducing Congestion, fumes and noise:
 - 'no right turn' into Barrack Street, or other alteration depending on Market Place proposals
 - to eliminate traffic light and queue at Globe Hotel (retaining crossing to north for people on foot)

Other Measures:

- 1. No consensus on road along racecourse
- 2. Support for: Making it easier for traffic to pass outside town centre, not through it.

Park and Ride, including for schools

Consider road user charging.

The group is happy for this proposal to be passed on as an agreed recommendation to the Forum and the County Council.

Annex C5 The Butts:

Recommendation to allocate design resources to developing measures

This annex summarises the conclusions of a 'round table' discussion involving residents of The Butts. The diverse group of residents present expressed their firm support for the proposals. It is therefore possible to recommend that design resources should be allocated to develop and cost the proposals in more detail. It is recognised that it will be necessary to prioritise the most beneficial and feasible elements during this stage.

The text of the Annex reproduces the summary of the 'round table' discussion and its conclusions. A map showing the outline proposals will be available at the Area Committee meeting.

The Butts

The County Council's agreed Vision, Objectives and Principles have allowed the Forum Technical Group to begin to develop measures which:

- · achieve the overall objectives, and
- can gain the support of people generally in the town.

Each street and junction in the town centre is being considered in turn.

This proposal applies the agreed principles to The Butts, and is the output of a 'round table' discussion in which a representative dozen residents of the street took part.

Each end of the Butts is connected with one of the major junctions, Northgate and Eastgate. The proposals for the ends will be the subject of further consideration at a 'round table' involving also interested parties in the other adjoining streets - so are only provisional here.

Assumptions:

No big change in the one-way or two-way circulation of traffic, but maybe some local changes in banned turns etc.

High Street and Jury Street remain in use for traffic.

20mph speed limit throughout town centre.

Town centre streets declassed from primary or A roads.

Proper parking enforcement and pay and display (from August 07) will increase the availability of on-street short stay spaces and reduce the excess demand.

Applying the objectives and principles to The Butts means:

Reducing Air Pollution, Noise and Vibration; Measuring and understanding the present level of pollution and the health hazard it causes;

Reducing the safety risks, especially for people crossing the street or walking along its narrow pavements;

Making it more pleasant to walk along and across the street, providing good routes on 'desire lines';

Measures to 'self-enforce' the 20mph speed limit and actually slow down traffic, especially outside the peak and from Castle Hill;

Mitigating the narrowness of each end of the street to reduce the safety risk and to and the congestion that it causes;

Reducing the volume of traffic, especially HGVs;

Improving the townscape and 'people-friendliness of the street, reducing the impression that it's only purpose is for traffic rather than residential activities; the perception that it is dangerous to walk in; and the separation of the two sides of the street

Maintaining the present quantity of parking;

Making specific provision for buses serving KHS, and for children travelling to/from school other than by car

Measures in The Butts:

Several of these measures contribute to more than one of the objectives and principles, but they are grouped under their main purpose:

For people on foot and safety:

Wider pavements where possible, and especially outside residential frontages.

'Informal' crossings denoted by change of surface texture / colour on key 'lines of desire'; improving routes for people on foot and acting as speed reducers.

Providing a pavement where none exists on the west side at the south end of the street.

To mitigate the narrowness of each end of the street:

Alternate one-way flow at the south end of the street, by moving the traffic light approaching Eastgate back to by the gym entrance to KHS; timing to allow exit from between alternate direction flows. This, with the new pavement, improves safety for people on foot at the end of Jury Street

Leaving unchanged the narrowest part of the north end of the street, which is wide enough only for two very narrow pavements and for two cars (but not larger vehicles) to pass; but formalising the priority for northbound traffic; and reducing the impact on southbound traffic by eliminating the 'dead end lane' and sharp turns out of it approaching the Punchbowl.

'No right turn' at the top of The Butts into Priory Road to reduce the conflict between this movement and southbound traffic - reducing congestion in the north end of the street; alternative routes around the Northgate roundabout, or via Eastgate and Chapel Street.

Considering substantial change in the middle part of the street:

Introducing a double bend as a speed reducer.

Providing a proper pavement between the car park and the wall of the College Garden, instead of mixing up cars and people on foot close to the carriageway.

Improving access to the College Garden and the appearance of it.

Considering using part of the car parking on the east side of the street at certain times of day for KHS buses - made possible by proper enforcement.

Reducing traffic volume and the resulting air pollution, noise and vibration.

Wider pavements, slower speeds, mitigating conflicting moves and queuing within the street contribute to these objectives.

They, and the overall measures of a 20mph zone and declassed main roads, may not achieve sufficient reduction in the impact of traffic in this street - but further reduction would depend first on better measurement of the problem and then on more radical measures.

Cycling encouraged by lower traffic speeds and volumes, rather than by segregation.

The group is happy for this proposal to be passed on as an agreed recommendation to the Forum and the County Council

Annex C6 St Nicholas' Church Street

Recommendation to allocate design resources to essential measures

This annex summarises the conclusions of a discussion involving St Nicholas Church Street stakeholders. It is recommended that design resources should be allocated to develop and cost the proposals in more detail.

A map showing the outline proposals will be available at the Area Committee meeting.

- 1 The St Nicholas' Church Street Stakeholders' Group has considered 'street-by-street' proposals for the street itself and given preliminary consideration to the junctions at each end of it, St John's and Castle Hill.
- 2 In the street itself, it proposes widening the pavement on the west side at the north end, and south of the entrance to Brooke Mews. It recommends installing bollards at several points on this western pavement to eliminate the danger caused by vehicles mounting it to 'queue-jump'. These measures would be consistent with whatever measures might next be proposed for the junctions at each end.

The Technical Group considers that these measures are essential for the safety of people on foot, and recommends that design resources should be allocated for their detailed development.

- 3 Stakeholder concern at congestion in the street during the morning peak was one of the sources of the proposal to alter the flow of traffic in Chapel Street (Annex C1). Concern has arisen that freeing-up the peak traffic flow out of St Nicholas' Church Street at the Castle Hill roundabout, which should result from making Chapel Street one way, may be insufficient, compared with the flow of vehicles into it at St John's, to reduce congestion and pollution in St Nicholas' Church Street. It may therefore be appropriate to regulate the flow of vehicles in this direction at St John's by adjusting the operation of the traffic lights. This would be technically and operationally feasible, and should be considered, as an operational matter, by the traffic signals group of WCC.
- 4 The Stakeholder Group also proposes an increase in the number of on-street parking spaces on the west side towards the end of the street, by reducing the length of the street which carries two lanes of moving traffic. The Technical Group recommends that, if this cannot be considered separately and sooner with proposals for the Castle Hill junction, it should be considered with the planned review of parking arrangements after the initial period of civil enforcement.
- 5 The Stakeholder Group is keen to play a full part in the immediate future in helping to develop proposals for the junctions at each end of the street, and the Technical Group welcomes this involvement.

Annex C7: North Rock, Saltisford, Birmingham Road:

Recommendation to investigate potential for lowering level of road surface under railway bridge to permit passage of slightly taller HGVs

This Annex is a preliminary report on 'work in progress'. Proposals for 'street by street' measures require a further round table discussion, with the participation of local businesses as well as residents. Two preliminary meetings have explored the possibilities, and led to an important recommendation to investigate the possibility of increasing the available height beneath the railway bridge. This might provide a major benefit by relieving Cape Road, Victoria Street and Albert Street or Northgate and North Rock of the need for HGVs to and from Sainsbury's to use them. It is therefore recommended that the (limited) resource necessary to assess the possibility is allocated urgently.

An introductory meeting was held on 26 February 2007, when 15 residents/members of the Technical Working Group (TWG) discussed vehicular and pedestrian traffic along the busy A4177 road to A46 bypass and then on to Solihull. The 1:500 map of the street was drawn on which various aspects of traffic calming were agreed.

The second meeting was held on 20th March 2007, with local residents, but without members of the TWG. There were 15 attendees. Despite invitations being given locally to some of the businesses, none attended.

RAIL BRIDGE 13'6"

It was agreed that this group would ask the Highway Authority to investigate re-proofing of the road surface on the approaches to the bridge clearances nearer to the Department of Transport standard. It is recognized that there are limitations of treatment options below the bridge as Network Rail drains surplus water from the rail line, through pipes within the archway supports into a culverted stream apparently running under this bridge.

The low mounting of the protective warning panels of yellow & black striped steel buffers means J Sainsbury's HGVs are prevented from accessing the store several times every day. These HGVs are diverted to Cape Road and then rat run along very narrow Victoria and Albert Street to the annoyance of local residents.

Their recommended JS route is, currently, via Cape Road with a narrow Victorian canal bridge, three sets of speed cushions, over a steep Victorian rail bridge to a congested town centre t-junction at historic Northgate, having passed a huge WCC staff car park. At Northgate the HGV has to undertake a difficult right turn and come down North Rock to a roundabout, then passing the store to enter the goods service yard via Vittle Drive.

In our view, once the road surface has been examined and a rectification scheme adopted to re-profile the road longitudinally and reduce the wearing surface depth J Sainsbury's HGVs will use the shorter run from the A46 to their unloading bay, as was probably the requirement in the original planning permission and store traffic plan.

Warwick Area Committee - 10th July 2007

Warwick Town Centre Traffic Management Review

Traffic Management Measures

Demand Management

Purpose:- To introduce measures to limit the demand (i.e. desire) for drivers to drive into and through the town centre to a level which can be better accommodated without adverse impacts and without limiting the physical ability (i.e. freedom of choice) of drivers drive to and through the town should they choose to.

Methods	Examples	Application in Warwick
Parking	Location – Restriction of long stay parking availability to out of town centre locations, so encouraging commuters to park outside of more sensitive areas and freeing the availability of more convenient parking to maximise benefit to the retail economy.	There are no particular problems with the implementation of these strategies in Warwick and they already being pursued under Decriminalised Parking Enforcement, proposals to deliver Park and Ride and in liaison with Warwick District Council (who control off-street car parking).
	Pricing Control – Use of higher parking charges for longer stay and more central parking, so encouraging people use alternative means of access, car share, use less central car parks or travel at less sensitive times of day	More stringent application of these parking management strategies could be pursued to achieve a greater effect, however, there are potential issues with the coordination of County and District Council parking policy and there are potential revenue stream implications for the District Council (for whom parking revenue forms a substantial income stream, helping reduce their reliance on Council Tax).
Road User Charging_	Schemes have been introduced in London and Durham with some success and are currently being considered for a range of major urban areas including Manchester, Birmingham and Coventry, as well as towns of a more similar size to Warwick such as Shrewsbury. There are a range of approaches that can be taken to implementing Road User Charging which are highly dependant on the technology employed and the revenue earned. The basic principle is that surplus revenue earned is ploughed back into the local transport network to improve it.	This is currently a highly contentious issue and is being debated nationally as well as regionally. There are <u>no</u> proposals either locally or regionally to introduce Road User Charging in Warwickshire. It is raised in this report as it has been the subject of recent national debate and is presented because it is a legitimate option under the 'Demand Management' element of transport management theory and economics. On a practical level, as Warwick only has a limited number of approach roads and a relatively compact town centre, the amount of equipment required is potentially limited and, therefore, the capital cost of introducing a scheme is also potentially limited.



Methods	Examples	Application in Warwick
	Charges can be applied to all, or just specific, journeys through a particular area. Generally the more targeted specific charges are the more they cost to gather and hence the surplus and so additional benefits are reduced.	However, the total number of vehicle movements is limited which restricts potential revenue income from the scheme and hence the availability of further benefits via additional investment in local transport.
	If all vehicle movements are charged for then targeted rebates can be applied, for example via 'Smart cards' which can provide local bus travel and parking discounts.	The effect on traffic would probably be a major reduction in traffic volume in the targeted area as, particularly in the context of the Longbridge improvements, alternative routes outside the urban area do exist.
	The effect of introduction can be expected to produce a significant reduction of traffic movements within the targeted group of vehicle movements.	This option may, however, be able to deliver capital funding from the DfT's Transport Innovation Fund (TIF) to achieve the capacity improvements which would be necessary on alternative routes, e.g. to alleviate the problems at Greys Mallory and at M40 Junction 14. TIF funding could also be used to fund other improvements such as additional Park and Ride, public transport, etc. Furthermore, a road user charging scheme could generate revenue which would support additional bus services or a subsidised Park and Ride.
VMS	Variable Message Signing for car parking and directional signage for cars – where an electronic sign	A VMS system for car parking in Warwick is currently being pursued and should be implemented by Christmas 2007.
	provides up to date information based on the current status of roads or car parks to enable drivers to make better route choices and reduce unnecessary mileage.	The best locations for further signage for drivers accessing the town would be along the A46 and M40, which are both controlled by the Highways Agency. The current informal position of the Highways Agency is that VMS signs on the trunk road network should be limited to those providing strategy journey information to enable drivers to make choices about which trunk road to use and they do not favour new signs aimed at benefiting local traffic movements. Further discussions with the Highway Agency would be held if the introduction of VMS signs on the A46 or M40 were adopted as part of the traffic management strategy for Warwick.
Road reclassification	The classification of a road (A, B or C, trunk road, primary road or local road) could alter the route choice of drivers unfamiliar to a local area. Down grading the classification of the road would be reflected in road atlases and route navigation systems.	In Warwick the A429 (Stratford Rd through High St and Jury St to Emscote Rd) is an A road designated as a primary route of regional importance. This designation is set by Government, but can be altered if considered appropriate by DfT following an application by the County Council.



Methods	Examples	Application in Warwick
		It has been suggested that 'de-priming' the route though Warwick would reduce traffic volumes in the town centre, however, although there may be some positive effect this is unlikely to be significant. It has been suggested that GPS navigation systems rely on road classification as a proxy for traffic speed and this has certainly been the case with older systems. However, as the technology and information improves this reliance is being reduced (operators of the systems use non-personal tracking information to produce journey time data and inform the route choice data as well as congestion and road works information). Therefore, the case and evidence for pursuing this in Warwick appears limited.
'Soft' measures	These are approaches which make no or very limited physical or pricing intervention such as: • Education – Focused on transport issues, choices and effects – both at an adult level and in schools. This can help promote a cultural change in attitude. • Publicity and information – making people better aware of the services that are available, many people believe they have less travel options available to them than they actually do and in the light of better information may make a more sustainable travel choice. • Green Travel Plans – An action plan and targets which every significant new employment development is required to have and which sets out how their traffic impact and car trip generation will be limited. If targets are not met the Local Authority can impose penalties. Voluntary GTPs are also being adopted by numerous organisations who are conscious of their traffic impact and who wish to reduce it, the targets for voluntary plans are not subject to penalties if not met.	There are no barriers to the introduction of any of these in Warwick and many are pursued as part of the County Council's current LTP delivery. The County Council has a Green Travel Plan itself and employs a number of staff to assist any company needing to, or wishing to, adopt one. The extent to which education, publicity and improved information can be provided and promoted is limited by available budget. If further resources were available (potentially from other demand management measures such as Parking Controls or Road User Charging) it is likely greater effect could be achieved with these measures.



Supply Management

Purpose:- To alter the amount of highway available for different activities and modes in order to restrict or increase the ability of drivers to drive into and through the town centre, so affecting driver route choice and altering the level of traffic in the town.

Methods	Examples	Application in Warwick
Increased provision of alternative modes to the car	The wholesale provision of facilities and measures designed provide an attractive alternative to the car so that people will choose to switch mode. Good examples include the introduction of park and ride, reintroduction of tram systems, improved bus frequency, bus lanes, cycles lanes, more formal and informal crossings, new rail stations, improved motorcycle and	A number of measures have already been introduced, including numerous new cycle facilities and bus improvements (such as Route 66 and enhanced frequency on the X17). Further measures such as the bus interchange (improving journey reliability and reducing journey time) and SPARK are also being pursued.
	bicycle parking etc. For pedestrian and cycle movements it is often suggested that simply reducing traffic volumes and speeds is all that is needed to sufficiently encourage use. However, in relation to cycling there are often differences of view between those that currently cycle and those that don't, but might if a suitable environment was available – the former often wanting to cycle safely on the road, the later often wanting separate facilities and cycle lanes.	However, road space in the town centre is severely constrained and the ability to improve journey time reliability for buses and improve pedestrian and cycle facilities by reallocating road space is limited without removing whole traffic lanes (when often only one currently exists). A significant reallocation of road space is likely to require major changes to the operation of junctions and potentially changes to traffic flow direction, both of which are contentious.
	For public transport, bus services can be increased in frequency, which can be beneficial, however, to make a real difference service reliability and journey times need to be improved. This can often only be achieved by providing specific bus facilities such as dedicated lanes (which requires either new road construction or the use of road space currently allocated to the car). Clearly rail systems require separate facilities and land (which for new provision is often prohibitively expensive in the urban area), except in the case of tram systems, although these are often challenging due to safety issues and costs.	If significant road space was reallocated to pedestrians, cyclists and public transport it could be expected that considerable additional congestion and delay would be experienced for cars accessing the town. If this was not managed in a coordinated manner, or at least held away from more sensitive areas, congestion would worsen, potentially to the detriment of the environment and economy of the town. Public attitude and perception as well as practical realities mean that, whilst improved alternative provision may encourage some to switch mode from car use, improved provision alone (i.e. without some demand management or 'stick' measure) is unlikely to make a step change reduction in car use in Warwick.

Decrease in highway capacity

The reduction in capacity either within an urban area or at the peripheries in order to physically restrict the ability of vehicles to gain access. Largely indiscriminate in who the measures impact, although potentially cheap to implement. Can be affected by the introduction of measures to support other modes, such as cycle lanes, formal pedestrian crossings, bus priority. Three main strategies:

Gating – The introduction of restrictions around the periphery of an area with the intention of restricting access. The restrictions may be in the form of traffic signals, physical barriers, give-way arrangements to exiting traffic or, less effectively, narrowings and chicanes.

Restriction of capacity at junctions — The removal of lanes, lengthening of red signal times at traffic signals, restrictions of visibility at priority junctions etc. Again this can be achieved through the delivery of other improvements if desired. If capacity is reduced at junctions central to the area of concern without the introduction of other measures the most likely effect is increased congestion within the area concern.

Restriction of capacity along highway 'links' – The introduction of narrowings, shuttle working (alternate give-way arrangements), chicanes, removal of turn lanes etc. These can cause traffic to slow significantly and make routes less attractive. Effectiveness depends on the severity of measures used and availability of alternative reasonably attractive routes.

All of these strategies are likely to have a similar staged effect on traffic volumes (assuming other factors remain the same):

- Initially: increased congestion at restriction points as all existing traffic still attempts undertake 'normal' journey patterns. Approx duration: 1-2months
- Medium term: drop in congestion as traffic either finds alternative routes, avoids travelling or travels by other means.
- Longer term: Cost of other journeys increases and congestion slowly increases again as some traffic returns and some new journeys are made. Congestion remains below original level.

Any of these measures can feasibly be introduced in Warwick, although experience from previous proposals where a gating strategy was employed demonstrates they can be controversial.

In Warwick, due to the relatively compact town centre and close proximity of junctions, capacity reductions at central junctions (in the absence of other demand reducing measures) will simply increase congestion in the most sensitive areas. Link restrictions will have similar effect.

Funding would be required from existing sources to implement this type of scheme. Furthermore, funding would need to be found to carry out improvements on alternative routes or to support alternative modes of travel, as there is no comparable initiative to the Transport Innovation Fund (described above).



Increase highway capacity

Removing restrictions to capacity and building additional highway (either localised widening or whole route improvement)

Released highway capacity in urban areas will tend to be taken up by additional traffic over a relatively short period of time if other measures are not introduced to make use of that capacity in another way, i.e. for the benefit of public transport, pedestrians, cyclists or environmental enhancement.

This is not feasible for many movements within the urban area of Warwick, but the proposed improvements at Longbridge should help. Possible improvements could be made to exterior routes (potentially including southern routes to and from the M40 Junctions 14 and 13 and along Europa Way)

