Witney Integrated Transport and Land Use Study

Stage 2 Report

for

Oxfordshire County Council,
West Oxfordshire District Council and
Witney Town Council

Llewelyn-Davies
February1997

Contents

Executive Summary

Stage 2 of the Study presents options for meeting the objectives adopted at the end of Stage 1. These options have been evaluated for their ability to secure significant and lasting environment benefits throughout Witney, and especially in the town centre.

The work included town centre surveys, public consultation exercises and computer modelling of traffic impacts.

Traffic and environmental conditions in the town are expected to deteriorate in the future if no counter action is taken. A decision is therefore needed on the approach to be taken if the objectives adopted in Stage 1 are to be met.

Major improvements to the trading and pedestrian environment of the town centre can be achieved without any further road building in the town, and without any serious adverse traffic impact. Closure to general traffic of High Street between Buttercross and Witan Way, and the eastern ends of Corn Street and Welch Way, are achievable in the short term.

A more limited option of closing High Street just between Welch Way and Buttercross, with possible extension to include the eastern end of Corn Street, has also been considered. While such measures have valuable benefits in themselves, this option would worsen still further the relative environmental and trading conditions of the northern end of High Street.

The surveys and consultation exercises indicate that pedestrianisation and the associated "drive to, not through" policy for the town centre can command wide support.

Existing proposals for new road building have been examined for their ability not only to cope with new traffic arising from further housing development in north east Witney, but also to deliver wider traffic and environmental benefits. The Cogges Link and the North East Distributor roads by themselves will not lead to any reversal of declining traffic and environmental conditions in the town as a whole. Additional measures are needed to ensure their contribution to the Study objectives.

It is essential, therefore, that the new road capacity which they provide is matched by a reduction of capacity on the roads leading to the existing river crossing on Bridge Street. The options considered range from traffic management measures to limit traffic in Bridge Street, to full closure to general traffic at Staple Hall, Mill Street and Witan Way. All of these will present drivers with new choices, including diversion via Cogges Link and roads outside the town such as Dry Lane and the A40. Whatever approach is taken (partial or full closure of Bridge Street) it will be necessary to introduce complementary traffic management over a wider area to avoid undesirable traffic diversion, especially through Crawley, New Yatt and North Leigh villages.

Attempts to accommodate the full unrestrained growth of car travel in the town up to the year 2011 will cause major deterioration in traffic and environmental conditions in and

around the town, and will prejudice the ability to provide improvements to alternative means of transport.

Reliance must therefore be placed on achieving a reduction of car travel demand. We recommend that the policy context within which specific measures and projects sit must be one of maximising the potential for securing a switch of mode of transport from the private motor car to journeys by foot, bicycle and public transport, while protecting and enhancing the town centre.
The Study assumes that a significant switch from car to alternative means of travel can be achieved mainly for trips within Witney, and for trips to Oxford. Surveys have revealed considerable potential for mode switch by Witney residents for such journeys. It is accepted that residents of surrounding villages will for the most part continue to be dependent on the car for travel to Witney.

Measures put forward to achieve mode switch include "soft measures" to persuade different travel decisions at source, and traffic infrastructure measures to increase the **relative** attractiveness of non-car modes. The latter includes new bus, pedestrian and cycle facilities. In addition, road closures are suggested to make travel by bus, cycle and foot more direct, and even quicker, than by car.

Controls over the supply and use of parking to influence demand for car access to the town centre will also be developed in Stage 3 of the Study. On-street parking should be removed in the pedestrianised areas, and restricted to residents only on Church Green. Time controls and charges in off-street car parks can be used to keep supply and demand in balance, as an alternative to devoting more town centre land to parking.

For travel between Witney and Oxford, the importance of bus priority to protect buses from delays is emphasised. Further consideration will also be given to a West Oxfordshire park and ride scheme associated with bus links to Oxford on the A40. Possible sites outside or at the edge of Witney will be considered in Stage 3. The approach for Witney residents, however, is to provide convenient access on foot or cycle to the Oxford bus services.

Measures are also proposed to create better non-car access between Witney and nearby villages and countryside. At least ten villages lie within three miles of Witney town centre, and cycling could be encouraged for movements between them, for leisure and other purposes.

It is recommended that Option 2 road closures are adopted as a matter of policy, for further development in Stage 3.

In addition, it is recommended that measures be taken to secure the environmental and other benefits for Bridge Street and its approaches made possible by the Cogges Link and North East Distributor roads. Further consideration needs to be given to the scope for limiting traffic flows on Bridge Street, so that a decision can be made about the feasibility of alternatives to full closure.

1 Introduction

1.1.1 This report is the output from the second stage of the Witney Integrated Transport and Land Use Study (WITLUS) which has been commissioned from Llewelyn-Davies and GIBB Ltd by Oxfordshire County Council, West Oxfordshire District Council and Witney Town Council.

1.1.2 The first stage of the Study involved a review of relevant policy, literature and data, as well as a number of surveys and two public consultation exercises. This information was used to produce the Stage 1 report which set out the objectives for the Study.

1.1.3 This report refines the Study objectives in the light of further public consultation. It then reviews traffic forecasts for Witney and identifies the potential for change in the town. The basic approach for the Study flows from these factors. Within this approach, the report develops options which consist of packages of measures which could be used to meet our objectives. These measures are tested to find out how well they perform against the objectives, how easy they will be to implement, and if they have any undesirable side effects. Finally, the measures are packaged into integrated options.

1.1.4 The third stage of the Study will involve working up the preferred option in detail and an exhibition to inform the public about the output of the Study.

2 Objectives and Issues

2.1 *Broad objectives*

2.1.1 The broad objectives for the Study were defined in Stage 1 and are as follows:

1 *Reduce the adverse impact of motorised traffic within the town as a whole, especially the most sensitive parts including the Conservation Area.*
2 *Protect and enhance the vitality and attractiveness of the town centre.*
3 *Improve accessibility to facilities within the town, especially those within the town centre, for all people including those whose mobility is limited.*
4 *Create a better environment for people on foot and good conditions for people whose mobility is limited.*
5 *Promote safer, more pleasant and more convenient conditions for cycle traffic.*
6 *Improve accessibility to Oxford.*
7 *Improve accessibility between Witney and the surrounding countryside for recreational purposes.*
8 *Promote the efficient operation of all types of traffic and related activity, including parking.*
9 *Reduce road danger throughout the town, and reduce the number and severity of road casualties.*

2.2 *Specific issues*

2.2.1 Within the areas covered by these broad objectives, our public consultation exercises in both Stages 1 and 2 have highlighted particular issues which the Study should seek to address. Details of public consultation carried out in Stage 2 is set out in Appendix A. The issues arising are set out below.

Town Centre

2.2.2 Discussions about reducing the impact of motorised traffic within the Conservation Area and protecting and enhancing the attractiveness of the town centre have highlighted the following issues:

- Witney suffers from a high number of HGVs driving through Bridge Street and the town centre which are not delivering within the town centre and could avoid it;
- traffic congestion is particularly acute on Bridge Street and its approaches causing constant noise and air pollution, possibly damaging buildings through vibration, and making the street unpleasant and unsafe for pedestrians and cyclists while bus services suffer delays;

- some people feel that parking on the High Street and Church Green seriously detracts from the attractiveness and convenience of the town centre for pedestrians. However, others feel that convenience for the car user is paramount and that car drivers should be able to park wherever they want;
- the taxis which park on Market Square with their engines idling generate air pollution, and cause problems for people with mobility impairments by over-spilling into disabled parking spaces;
- some people feel that the narrowings in Corn Street and the speed humps in High Street cause confusion and irritate drivers. Any new traffic calming schemes should investigate alternative measures;
- there is a lack of vitality at the northern end of the town centre, north of Welch Way. Various suggestions have been made to remedy this including: developing vacant or underused sites in this area; reducing traffic to improve the environment; and improving pedestrian connections between this part of town and the Woolgate car park; and
- there is potential to increase the vitality of Market Square, and other parts of the town centre, especially after shop closing time. There are concerns, however, about anti-social behaviour in the town centre in the evenings.

People with mobility impairments

2.2.3 People with mobility impairments were well represented at our public consultation exercises. They made the point that improvements to the accessibility of facilities throughout the town and improvements to the pedestrian environment must be designed for people with mobility impairments. Creating a better pedestrian environment for people with mobility impairments will ensure that a better pedestrian environment is created for everyone. To this end, a local group, the TRYARDS, is carrying out a detailed study of access issues in the town centre.

Residents of villages outside Witney

2.2.4 Witney operates as a traditional market town, serving a large population drawn from the surrounding villages. The residents of these villages have expressed concern about the future accessibility of the town should pedestrianisation and traffic restraint measures be introduced. They generally feel unable to use modes of transport other than the car for most trips, especially given current levels of provision. Their need for access to Witney is acknowledged, but provision for it must take account of the needs of Witney residents, and the aim of improving Witney town centre.

Future growth

2.2.5 Given that it is more difficult to provide alternatives to the car between Witney and the surrounding villages, the greater the focus of new housing in Witney itself, the easier will be the achievement of the key Study objectives. The recent Inspector's report on the West Oxfordshire Local Plan appears to run counter to this principle.

Attitudes to travel

2.2.6 Many people have mentioned that it is very difficult to get people out of their cars and onto their feet, bike or the bus. Suggestions that the number of car trips could be reduced by switching to other modes are often met with scepticism. Many examples have been given of people regularly driving very short distances. Surveys conducted as part of the Study nevertheless reveal that about 1 in 4 car trips made by Witney residents could switch to another mode. This indicates that infrastructure and service improvements for alternative modes are unlikely to be sufficient to bring about changes in behaviour and deterrents to car use will be needed, as well as inducement to use other modes. 'Soft measures' involving information, awareness and promotion can be taken to maximise the benefits of both.

Implementation

2.2.7 Another common comment is that it is all very well discussing transport strategies and carrying out studies, but will anything actually happen as a result? Many people feel that they have been asked about the same issues over a period of years and are starting to doubt whether anything will be done. This is a comment which has been repeatedly made about the Cogges Link. The majority of consultees now feel that the link should be built, but many are sceptical that it will actually happen.

2.2.8 The ease with which measures can be implemented is therefore a key factor, and the study should explore vigorously what measures can be put in place before the Cogges Link and other expensive projects are carried out. This would do much to maintain public confidence in planning in Witney.

3 Travel Patterns Now and in the Future

3.1 *Introduction*

3.1.1 Before deciding what measures can be taken to deal with the issues we have identified, it is necessary to consider how people meet their travel needs at the moment and what might induce them to change. We also have to consider what might happen in the future if nothing is done. The measures we propose will have to address these future conditions as well as present day ones. Key issues for the Study therefore are:

- how to respond to predicted growth in the demand for travel;
- what the scope is for shifting travel demand by car to other modes, and for avoiding some of it altogether; and
- how to provide for whatever demand remains in a way which improves environmental conditions in the town.

3.1.2 In this chapter we consider the likely impact of traffic in Witney in the future. We then consider what kind of overall policy responses are appropriate to these circumstances, bearing in mind the objectives of our Study. Finally, because our recommended response is a strong shift in emphasis away from the car, we consider what scope exists for switching present and future travel for certain categories of travel demands to alternative modes, and for reducing total travel demands by land use planning. This provides the context for the development, in Chapter 4, of specific measures.

3.2 *Traffic growth in Witney to 2011*

Sensitive routes

3.2.1 In order to find out which routes will be most adversely affected by traffic growth, we have defined which routes are most sensitive. These are the routes with frontage development where people live, work, shop and carry out other "living" functions. Other routes without or with less frontage development are less sensitive to heavy traffic.

3.2.2 Roads that are sensitive to traffic are:

- in the town centre - High Street and Market Square, Church Green, the east end of Welch Way, Corn Street and Mill Street,;
- the north side of town - Bridge Street, West End, Newland, Oxford Hill, Woodstock Road and New Yatt Road around Woodgreen; and
- residential streets throughout the town.

3.2.3 Less sensitive roads, but roads with residential development along them are:

- in West Witney - Curbridge Road, Tower Hill and the west end of Welch Way; and
- on the north side of town - Woodstock Road and New Yatt Road (north of Woodgreen), Hailey Road and Crawley Road.

Present day travel patterns

3.2.4 Current travel data for Witney were reviewed in Stage 1 of the Study. We also carried out a survey of visitors to the town centre in Stage 2, the results of which are in Appendix B. The relevant main findings of both these exercises were:

- the 1991 modal split for Witney residents was 60% of trips by car, 28% of trips on foot, 7% of trips by bicycle and 5% of trips by bus;
- over half the visitors to Witney town centre come from within the town. One quarter come from within 5 km of Witney and the remaining 23% come from more than 5 km away;
- most trips to the town centre from within Witney are made by foot, while most trips from other places are made by car. Cycling, taking the bus, and other modes account for only 12% of the reported journeys;
- commuting into and out of the town are greater than commuting within the town; and
- 1994 vehicle counts indicate that Bridge Street has the largest volume of traffic, carrying almost twice the volume of the next busiest road, Welch Way. Other busy roads are Ducklington Lane and Station Lane, although these have less frontage development.

The effects of traffic growth up to 2001

3.2.5 We modelled the forecast traffic growth in Witney in the Friday afternoon peak using the JAM software suite. Full details of the modelling are included in Appendix C.

3.2.6 Figure 1 shows the predicted changes in traffic on the network between 1996 and 2001. The 2001 scenario assumes that the Cogges Link and North East Distributor have been built, and that there has been further residential development in the town, particularly in the North East Development Area. The figure shows two effects: firstly the increase in traffic arising through growth (both in the population size of Witney and in the amount of car use per capita); and secondly changes in the distribution

of traffic likely to follow the construction of the Cogges Link and North East Distributor roads.

3.2.7 As expected, Figure 1 shows a general picture of traffic increases, but a reduction in the north-south vehicular movement through the town centre via Bridge Street. However, traffic remains high on Bridge Street and the High Street with two-way flows of around 2,000 and 1,000 vehicles respectively. Traffic relief is evident on the A40 east of Ducklington Lane. Overall, the model suggests that vehicle kilometres in the town will grow by 24%.

3.2.8 We also modelled the effect of traffic growth on the scenario envisaged by the Local Plan. This includes the construction of the West End Link as well as the Cogges Link and North East Distributor. Figure 2 indicates that this also shows relief on the main north-south axis of the town, within a general pattern of growth. Relief in the High Street is greater under this scenario, but Bridge Street is still busy with flows around 1,670 vehicles two ways. The addition of the West End Link reduces traffic on West End and Oxford Hill, but encourages a north-south movement through the town to the west of the town centre.

3.2.9 The results in Figures 1 and 2 relate only to the Friday evening peak hour. Traffic reductions on the Bridge Street route are unlikely to be as great at less busy times of the week since this remains a direct route to and through Witney town centre.

Growth to 2011

3.2.10 An attempt was made to predict the effects of further growth in traffic in Witney up to the year 2011. At this point the network became so saturated with traffic that the model was unable to provide a reliable simulation of its effects.

3.2.11 The fact that the model cannot accurately simulate traffic conditions for 2011 is significant. The model works on peak flows and increases in these peaks means that the traffic rises to a level that in practice could not be accommodated. In reality, people may respond in a number of ways. Some trips may be suppressed with people deciding to travel to alternative destinations. Some people may switch to other modes. People may decide to travel at different times so that peak hour traffic levels will increasingly be experienced throughout the day. There may be longer term changes in peoples' behaviour such as moving house to be nearer to work. The model does not take any of these changes into account.

Fig 1: Traffic in 2001 compared with today

2001 with Cogges Link and North East Distributor vs 1996 base [DIFF A]

Friday p.m. peak hour

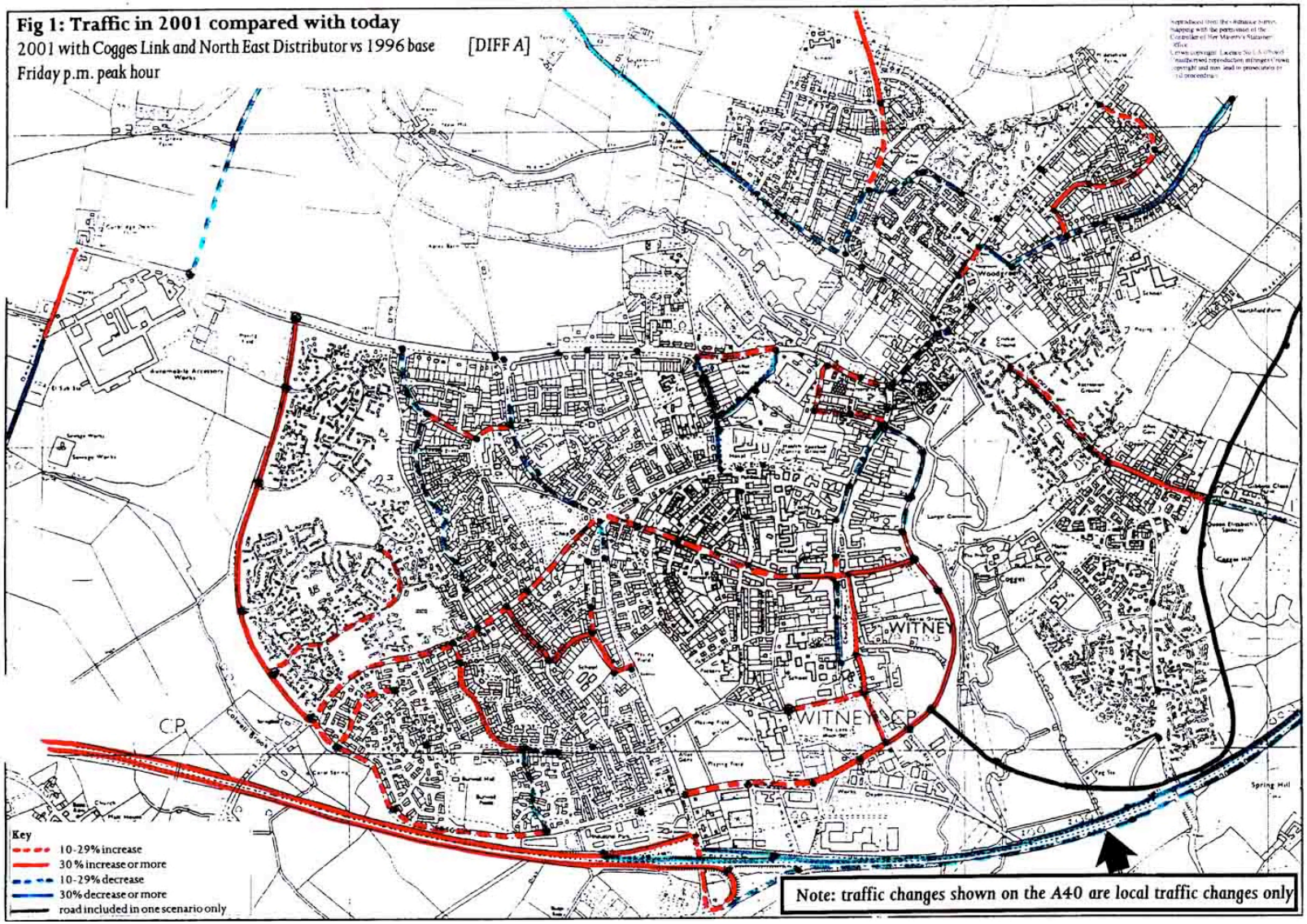
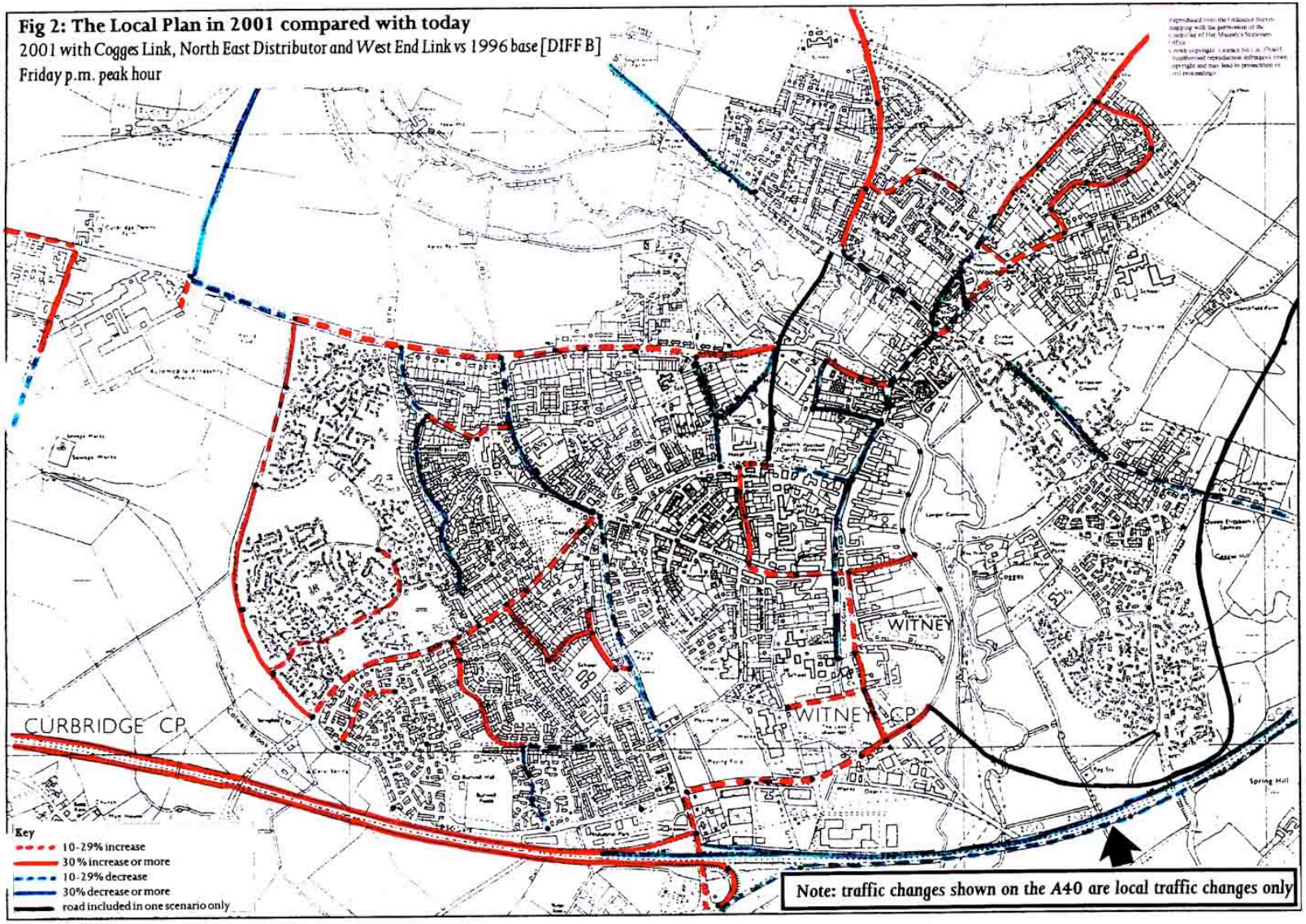


Fig 2: The Local Plan in 2001 compared with today

2001 with Cogges Link, North East Distributor and West End Link vs 1996 base [DIFF B]

Friday p.m. peak hour



3.2.12 **The main conclusion is that road building alone will not bring about significant or lasting impacts to meet the Study's objectives. The short-term effects appear to be mixed, with traffic increasing on some key routes and decreasing on others. The network, even with the new roads, will essentially be saturated within the next decade or so, unless measures which achieve a reduction of car demand are introduced.**

3.3 *Finding an appropriate policy response*

3.3.1 The results from our modelling exercises have indicated that traffic in Witney will grow to a critical level within the next 10-15 years. The planned new roads will not be sufficient to cope with the unrestrained growth in traffic, and this growth will quickly erode any short-term relief provided on the Bridge Street route. This means that we must move away from a "meet all demands" approach towards a "demand management" approach. Instead of just observing and predicting traffic levels, and then planning new roads to accommodate them, our approach is to reduce motor vehicle trips and vehicle kilometres driven.

3.3.2 **We recommend that the policy context within which the specific measures and projects sit (see Chapter 4) must be one of maximising the potential for securing a switch of mode of transport from the private motor car to journeys by foot, bicycle and public transport, while protecting and enhancing the town centre.** The mode switch approach is very important. Encouraging the use of cycles and buses and walking without equivalent reductions in car use would consume resources but produce little if any overall benefit. For example, if increasing cycling simply meant people walk less, there would be no benefit. In addition, without measures to reduce car travel, such alternatives would be unlikely to attract funding via the TPP process.

3.3.3 Assuming that car travel can be reduced, it will still be necessary to accommodate the resulting traffic in the least damaging way, taking it away from sensitive areas. For this to be achieved, it will be necessary to divert traffic from Bridge Street and the High Street, to adopt a 'drive to not through' policy for the town centre, and to traffic calm all town roads with frontage development.

3.3.4 The options developed in this report are concerned primarily with influencing travel within Witney, and by Witney residents. Ways of bringing about substantial mode shift away from the car for travel between Witney and many of the surrounding villages have not been discovered. The

exception to this is for travel along the main east-west corridor between Carterton and Oxford, where there is considerable potential for increasing the proportion of travel by bus. The potential for cycling and walking as alternatives to the car for the 10 villages which lie within 5 kilometres of Witney should not, however, be ignored.

3.4 *Potential for mode shift in Witney*

3.4.1 The Study's basic approach is to reduce car trips by switching some trips to other modes: walking, cycling, or the bus. However, not all trips are convertible to non-car modes. The majority of trips into Witney from surrounding villages are not readily convertible to non-car modes. Equally, a proportion of trips made by Witney residents around the town or to outlying locations are not readily convertible to non-car modes for reasons such as: having to carry groceries or other luggage; needing the car for work; or needing to take passengers.

3.4.2 We used the data gathered by our survey of Witney residents to find out what proportion of their car trips could be converted to other modes. The questionnaire asked respondents about their most recent car trip, and asked for up to two reasons about why this trip had not been made by bus, bike or on foot (i.e. the "green" modes).

3.4.3 The answers to these questions were analysed in detail to find out what proportion of trips could be converted to the three "green" modes if various measures were taken. These would include measures such as: improving the bus service; providing and improving cycle and pedestrian infrastructure; and awareness campaigns and education.

3.4.4 In total, 538 car trips were reported. The answers given by respondents about why they did not use other modes for their reported car trip were considered. The obstacles to using "green" modes were coded according to whether they could be removed or not. The coding is set out in Appendix D. All material constraints such as carrying luggage, age, weather and passengers were considered to be unremovable obstacles to trip conversion. If any of these constraints were mentioned by a respondent for any mode, that car trip was counted as non-convertible to a "green" mode. If no reason was given for not using a "green" mode, this was also recorded as a non-convertible trip. Thus our estimates of convertible trips are conservative. In addition, no account has been taken of possible changes in trip origins or destinations, and this also means that the recorded convertible trips are an underestimate of what is achievable in practice.

Table 3.1: Convertible trips to various destinations

	Number of trips	Number convertible	% convertible
Witney Town Centre	208	42	20%
Elsewhere in Witney	117	36	31%
Witney Total	**325**	**78**	**24%**
Oxford	62	37	60%
Elsewhere	150	20	13%
Total in Survey	**538**	**135**	**25%**

Note: one respondent did not give a destination for the reported trip

3.4.5 Overall, one quarter of the reported car trips were convertible to a "green" mode. For the trips within Witney, around one quarter of the trips were convertible, and 60% of trips to Oxford were convertible. Only 14% of trips to other destinations were counted as convertible. (Many of these latter destinations are in rural areas where it is unlikely that a regular bus service would be practical, and trips which reportedly were only convertible to the bus (62 trips) were not included). Figure 3.1 shows the modes to which trips could be converted.

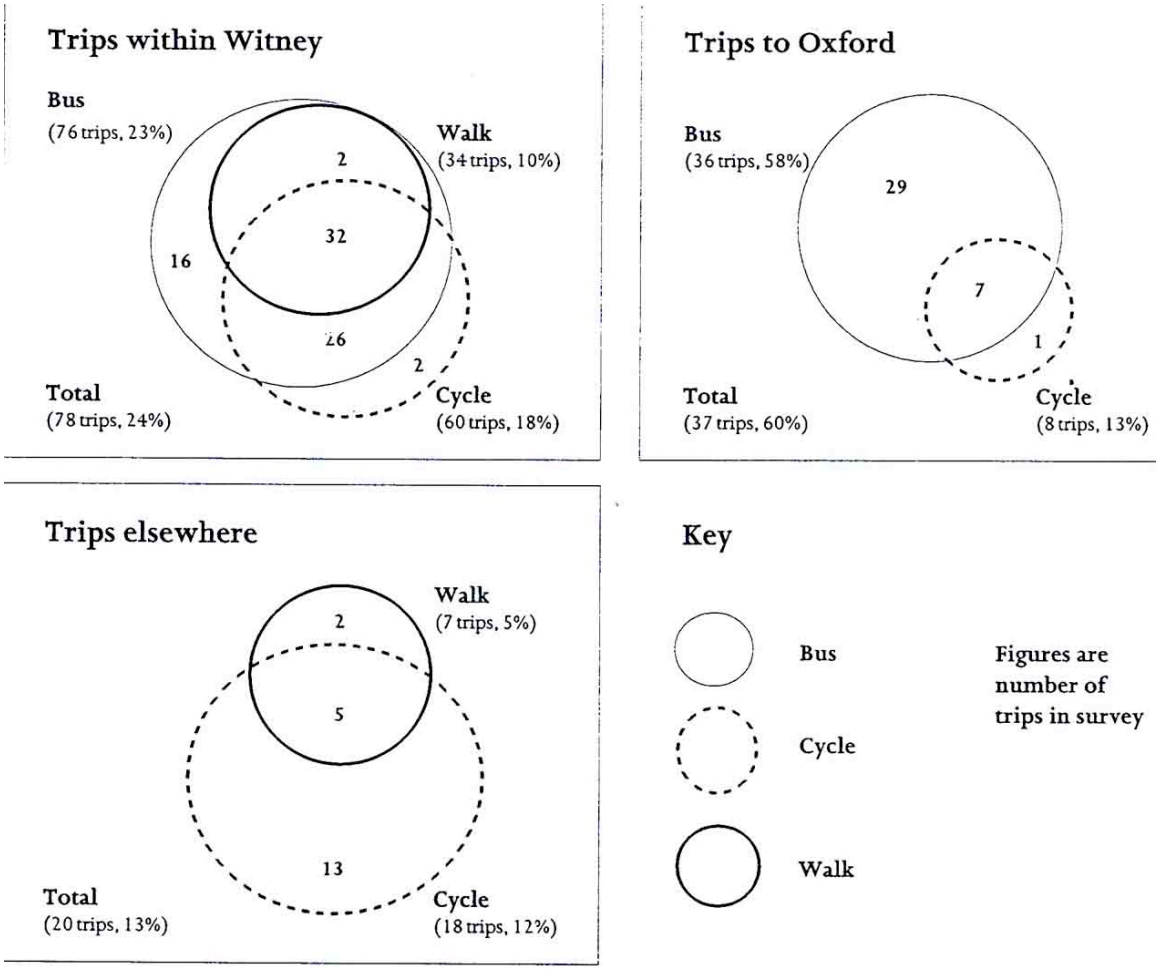
3.4.6 According to respondents' answers, nearly one quarter of the car trips within Witney are convertible to the bus, and nearly a fifth are convertible to foot or cycle. For trips to Oxford, 58% are reportedly convertible to the bus. Of the reported car trips to other destinations, 5% are convertible to foot and 12% to cycle.

3.4.7 Our survey data indicates that there is potential for converting trips from the car to other modes. Improving and extending bus services involves co-operation with bus operators and may be difficult to implement, although it would be fruitful according to the data. For the route to Oxford, major quality improvements could be achieved through infrastructure and bus priority measures, and these are within the scope of local authority and Department of Transport action. The survey suggests that there is great potential for shifting car trips between Oxford and Witney onto the bus.

3.4.8 Within Witney, while the provision of better bus services should be explored, the main effort should go towards improving cycle and pedestrian infrastructure. The survey data suggest that improvements to pedestrian and cycle infrastructure would maximise the potential for conversion of 19% of car trips within Witney and 13% of car trips to destinations outside Witney. While improvements to pedestrian and cycle infrastructure are most important within the town, improvements to links to surrounding

villages will also be important in encouraging people onto their feet or their bikes.

Figure 3.1: Modes to which present car trips could be converted, by destination group



Note: Figure 3.1 shows diagrams for the number of different types of car trips which could be converted to other modes. Where the circles overlap, a trip could be converted to either mode. For example, for trips elsewhere, 2 trips can be converted to walking only, 13 could be converted to cycling only and 5 could be converted to either walking or cycling. "Total" percentages relate to the proportion of convertible trips for that destination.

3

4 Developing the Options

4.1 *Introduction*

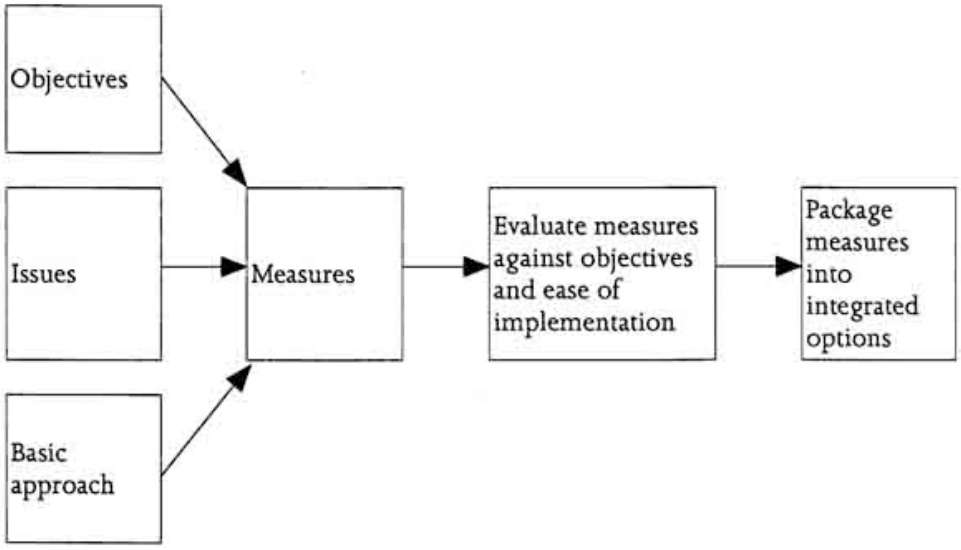
4.1.1 In the previous chapter, we set out a policy stance which we recommend the Councils adopt in relation to transport and land use in Witney. In this chapter we consider specific measures which could be put into effect in pursuit of the objectives, all of which fit to some extent within the overall policy umbrella of modal switch, travel reduction and avoidance, and environmental improvements and protection. The chapter describes how the measures were developed from the objectives and from our analysis. Later in the report their performance is evaluated.

4.1.2 The measures are intended to fit together in complementary packages. This does not mean that all the measures have to be implemented in one go, but that certain measures work best in certain combinations. For example, **building the Cogges Link without any traffic restraint in the town centre will have little, or no, effect on environmental conditions in the town centre. The existing Bridge Street route will not receive much benefit from the Cogges Link unless new road building is combined with traffic restriction or restraint measures on the Bridge Street approaches.**

4.1.3 Some measures will involve clear choices. For example, should we pedestrianise part of High Street or all of High Street? Should on-street parking be removed from High Street? Other measures are clearly desirable like improving the pedestrian and cycle network. The choice in these cases is how far to go rather than whether or not the measure is worthwhile. Cost will inevitably be a factor in making this judgement.

4.1.4 Even after a choice has been made about each set of measures, the different types of measures can be combined in numerous different ways. Given this complexity, this chapter first considers each type of measure in turn. After the individual measures have been tested (Chapter 5), they are considered in packages to produce integrated options (Chapter 6). Figure 4.1 shows the process.

Figure 4.1: Developing the options



4.2 *Types of measures*

4.2.1 As Figure 4.1 shows, the first step is to generate types of measures from the objectives set out in Chapter 2 and the more specific issues which have emerged from our analysis and from consultation. Many of the suggested measures contribute to meeting more than one objective, so we have grouped objectives under headings for ease of presentation. The measures are discussed in detail at various points throughout the chapter.

4.3 *Town centre*

4.3.1 Objectives which are relevant to the town centre are:

1 *Reduce the adverse impact of motorised traffic within the town as a whole, especially the most sensitive parts including the Conservation Area.*
2 *Protect and enhance the vitality and attractiveness of the town centre.*
3 *Improve accessibility to facilities within the town, especially those within the town centre, for all people including those whose mobility is limited.*
4 *Create a better environment for people on foot and good conditions for people whose mobility is limited.*

4.3.2 As we saw in Chapter 2, public consultation has highlighted the following specific issues:

- Bridge Street and its approaches is the area which suffers most from the adverse impact of motorised traffic, including HGVs;
- air pollution and inconvenience caused by taxis idling on Market Square;
- parking on High Street and Church Green detracting from the town centre environment;
- confusion caused by speed humps on High Street and Corn Street; and
- lack of vitality at the northern end of the town centre.

4.3.3 A study entitled 'Public Spaces and Life in Witney Town Centre' was carried out by F Cassani. This study analysed the quality of the town centre's public spaces and the ways in which they are used. The main findings of the quality analysis were:

- Market Square and the Woolgate Shopping Centre are the only car-free public spaces. Market Square is underused on non-market days;
- the Buttercross is an important landmark which is isolated and surrounded by traffic;
- the majority of the High Street's footways and the eastern end of Corn Street are cramped and uncomfortable for pedestrians; and
- the Woolgate Shopping Centre and parts of the High Street have attractive street frontages, but other areas such as the eastern end of Welch Way and parts of Market Square have poor frontages with buildings in poor condition and closed or unattractive facades.

4.3.4 The study found distinct patterns of pedestrian traffic. The Woolgate Shopping Centre is the focus of pedestrian activity. High Street as far as Welch Way is also an important area for pedestrian activity with the east side being busier than the west. The north end of the High Street is usually less busy than the rest of the High Street. These findings area supported by our town centre survey.

4.3.5 Cassani's study also investigated the types of pedestrian activities that are carried out in different parts of the town centre. The town's *social activities* (people moving around in the same place as passive or active participants in the social scene) occur at the Buttercross, the Town Hall, in Market Square, in the Woolgate Centre and on the High Street in front of the Post Office. On the other hand, other parts of the town centre are just used for *necessary activities* such as walking to the car, visiting a shop and waiting for the bus. These areas are the passage between the Town Hall and Market Square, the area around the bus stops by

the Town Hall, the west side of the High Street and the High Street north of Welch Way.

4.3.6 The main findings of the town centre survey were:

- there are many opportunities for urban enhancement projects in the town centre;
- the north end of the High Street is underused with low volumes of pedestrian traffic and few social activities, despite attractive street frontages; and
- the Buttercross is a meeting place for young people, but is isolated and surrounded by traffic.

4.3.7 As we saw in Chapter 3, our surveys of Witney residents suggests that there is considerable potential for shifting trips to the town centre from the car to other modes. There is also the potential for closing some areas of the town centre and Conservation Area to traffic altogether.

4.3.8 The types of measures that will address the objectives and issues set out above are:

- pedestrianisation to exclude all or most motorised traffic from parts of the town centre and making some routes access only;
- construction of the Cogges Link and North East Distributor (and possibly the West End Link) to allow traffic to be diverted away from Bridge Street;
- traffic calming to reduce vehicle speeds and reduce the adverse impact of motorised traffic;
- improvements to non-car modes (bus, cycle and walk) to reduce the number of car trips to the town centre;
- removing parking from High Street and non residents' parking from Church Green as part of a parking management strategy;
- 'soft measures' to encourage people to use non-car modes; and
- land use planning measures to ensure that facilities are provided in the town centre, and to ensure that new housing is concentrated within or next to the town and not spread through outlying villages.

Pedestrianisation

4.3.9 There are a number of ways in which any pedestrianisation scheme could be organised. **Pedestrianisation does not necessarily mean that all vehicular traffic is banned at all times.** Special arrangements can be made for delivery vehicles,

business traffic, orange badge holders, motorised scooters, residents' vehicles and so on. Vehicular traffic restrictions can be enforced at certain times of day or on certain days of the week, and can provide exemptions for buses and bicycles.

4.3.10 In the short term, there are two basic options for pedestrianisation. The first, Option 1, consists of pedestrianising High Street between Corn Street and Welch Way. A variation of Option 1 is to pedestrianise the eastern end of Corn Street in addition. The second, Option 2, consists of pedestrianising all of High Street up to Witan Way, the eastern end of Corn Street, and Welch Way as far as the public car park. The western side of Church Green is also closed to traffic. The remaining parts of Welch Way and Corn Street become local access roads. People will be able to drive to the car parks on the edge of the town centre, and will then park their cars and walk to the shops. A possible addition to this option is the closure of Curbridge Road to through traffic to create a 'green route'. Residents of the west Witney estates would divert to other routes for car trips into town, making walking, cycling or taking the bus more direct.

4.3.11 It is recognised that Option 2, which aims to benefit the town centre core, will do little if anything to alleviate the poor environmental conditions on Bridge Street and its approaches. Further measures to reduce motorised traffic in this area can therefore be added, and in combination with the pedestrianisation scheme are referred to as Option 2 PLUS. Unlike Option 2, Option 2 PLUS is dependent on the creation of a new river crossing (i.e. the Cogges Link).

4.3.12 There are a number of possibilities for the PLUS element of Option 2 including:

- closure to some types of traffic, e.g. HGVs;
- closure to some traffic at certain times;
- controlled entry to the route using traffic signals or other physical measures;
- reducing the number of approach routes (e.g. via Mill Street, Woodstock Road).

4.3.13 An "environmental" level of traffic could be identified and flows restricted to that level. All these possibilities need to be assessed not only in terms of Bridge Street, but also the likely impact on other roads such as Dry Lane and New Yatt Road, which also have problems deserving of attention.

4.3.14 The third option for improving the town centre, Option 3, is only possible in the medium term. This is because it requires the

construction of the Cogges Link and the North East Distributor Road. In addition to the pedestrianisation described for Option 2, Option 3 provides a priority route for buses, cyclists and pedestrians between High Street and Staple Hall. The eastern end of Mill Street and all of Bridge Street are closed to general traffic and the Cogges Link provides the new river crossing. Burford Road and Tower Hill become local access roads only with through traffic being diverted round Deer Park Road, Station Lane and the Cogges Link. A possible addition to Option 3 is the closure of Curbridge Road to through traffic to make it a 'green route'.

4.3.15 A pedestrianisation scheme would present the opportunity to carry out urban enhancement measures in the town centre. These can improve the public realm in a number of ways. Barriers to pedestrian movement are removed so that people can move freely within the pedestrianised area. Spaces can be created for a number of 'living' functions such as markets, street cafes, entertainment, etc.. Pedestrianisation also enables the removal of visual clutter associated with motorised traffic such as parked cars, traffic lights, markings and signs. Removal of traffic means that the town centre's environment is relatively free from noise and air pollution. The town centre also becomes safer.

Parking management

4.3.16 Parking management is required to ensure efficiency, and to help achieve the desired balance between access to the town centre by car and by other modes. It is important to ensure that expressed parking demand does not exceed around 85% of available supply at any given time; this is to avoid "searching traffic". Three aspects of parking will need to be determined, namely: the total supply; its locational distribution; and its control in terms of time, price or other discrimination. The factors governing these choices will include the potential for mode switch within Witney, the lack of reasonable alternatives to the car for many non-Witney residents, and the relative value (to the town centre) of different categories of parking.

4.3.17 The principle of "drive to, not through" will operate efficiently and reduce vehicle kilometres in the town centre if a space can be guaranteed to drivers at the nearest car park to their point of origin. Excess demand in a particular location (e.g. Welch Way) may cause lengthy diversion around the town centre and should be avoided through demand management measures. The alternative is to increase parking supply, but this will run counter to other objectives, including mode switch, and improvement of the town centre environment.

4.3.18 Although some consultees have stressed the importance of the car for bulk-buy shopping, such trips should not be overstated. Our survey of visitors to the town centre indicated that 13% of car trips to the town centre are bulk-buy shopping trips, and these account for only 7% of all trips to the town centre.

4.3.19 On-street parking in the town centre is an important issue. Parking in locations such as High Street and Church Green detracts from the quality of the town centre as a visitor attraction and as a trading environment. In addition, the availability of such parking attracts traffic into the centre, even if drivers are unsuccessful in finding a parking place.

4.3.20 The removal or relocation of on-street parking will have implications for demand in off-street car parks, and in neighbouring streets. Any controls must take account of such diversion effects. One solution is to create a "buffer zone" of residents' parking around the town centre. This would apparently be welcomed by residents in streets to the west of the town centre, which are often occupied by the cars of students attending the FE college in Holloway Road. Parking which restricts footways and crossings is also noted as a problem, and this can be tackled through a combination of design and regulation.

4.3.21 In Stage 3 of the Study, a parking management strategy for the town centre will be developed, appropriate to the chosen option and overall approach. This will take account of the factors described above, and will include further consideration of the following:

- parking standards and requirements associated with new developments;
- removal of parking in pedestrian priority areas;
- possible "buffer zone" of residents' only parking to ensure diversion to off-street car parks;
- management of demand in off-street car parks through time, price or permit controls; and
- signing to ensure efficient operation of the "drive to, not through" policy.

Road building

4.3.22 The road building schemes considered are:

- the Cogges Link;
- the North East Distributor Road; and
- the West End Link.

4.3.23 The Cogges Link and North East Distributor are designed to work together to serve the new development in the North East Development Area and to provide an alternative river crossing to Bridge Street. The West End Link would also provide an additional river crossing and would serve new development in the Comprehensive Development Areas to the west of the High Street. Both are included in the Local Plan and the County Council's major Transport Schemes Capital Programme, are intended to be funded from developer contributions.

4.4 *Mode shift and travel reduction*

4.4.1 The aim of mode shift from the car to bus, cycle and foot is to create more pleasant and safer conditions in the town as a whole, without limiting access opportunities or population growth. The relevant adopted objectives are:

1 Reduce the adverse impact of motorised traffic within the town as a whole, especially the most sensitive parts including the Conservation Area.

3 Improve accessibility to facilities within the town , especially those with in the town centre, for all people including those whose mobility is limited.

4 Create a better environment for people on foot and good conditions for people whose mobility is limited.

5 Promote safer, more pleasant and more convenient conditions for cycle traffic.

8 Promote the efficient operation of all types of traffic and related activity, including parking.

9 Reduce road danger throughout the town, and reduce the number and severity of road casualties.

4.4.2 As we saw in Chapter 3, our surveys suggest there is potential for increasing levels of cycling and walking in Witney. Reducing vehicular traffic on key routes will mean that cycling and walking can be made safer, more pleasant and more convenient. Surveys of the pedestrian and cycle networks undertaken in Stage 1 have highlighted areas for action.

4.4.3 The measures which will meet these objectives are:

- improvements to the cycle and pedestrian networks;
- reducing the volume of traffic on key routes and in key areas through pedestrianisation and road closures;
- bus service improvements and priority schemes to protect them from traffic delays;
- reducing the speed of traffic through traffic calming measures;

- routes for walk, cycle and bus which are more direct and convenient than routes for car users;
- 'soft measures' to encourage people to use non-car modes and keep to speed limits; and
- land use planning measures to ensure that new development is located in areas close to or within the existing built up area, and to ensure that new development is well connected by cycle paths and footways.

Improvements to the pedestrian network

4.4.4 Witney is ideally shaped to encourage walking trips. It is a compact town with no destination being more than a mile and a quarter from the town centre. This means there is great potential for increasing the proportion of trips by foot. Our survey also showed that at least around 10% of all reported car journeys within Witney are readily convertible to foot.

4.4.5 Stage 1 of WITLUS identified the key links in the pedestrian network. We surveyed these links to investigate their quality in terms of the 'five Cs':

- connected - how extensive the network is and if any gaps exist;
- convenient - if routes are direct, if kerb transitions are smooth, if crossings are direct, etc.;
- convivial - how attractive and safe routes are;
- comfortable - width of footways, quality of surface, etc.; and
- conspicuous - how easy routes are to find and follow and if destinations are clear.

4.4.6 Figure 4.2 summarises the results of this survey. The survey did not include the town centre, which was considered by Cassani's study (see paragraphs 4.3.3 to 4.3.6). Detailed pedestrian issues in the town centre have also been reviewed by a survey by a local group, as described below (paragraph 4.4.8).

4.4.7 Our survey of the pedestrian network identifies what we see as the priority for pedestrian infrastructure improvements. The public have highlighted particular areas of concern which have been incorporated into our findings. While there may still be some omissions, Figure 4.2 sets out most of the key issues and areas on the pedestrian network which require improvement to give all the residential areas good pedestrian access to the town's facilities. The types of measures required are:

- improving pedestrian provision at heavily trafficked junctions;

- providing crossing facilities for pedestrians;
- improving the surface of footways;
- widening paths;
- removing obstructions on footways;
- providing lighting for footways;
- improving footway signage;
- providing cyclists with alternative facilities so that they do not use footways; and
- reducing traffic levels and speeds on roads which are important pedestrian links.

4.4.8 A local group representing people with mobility impairments (the TRYARDs) are carrying out a survey of problem areas in the pedestrian network for people with mobility impairments. Their preliminary results have highlighted a large number of specific, detailed issues in the town centre. The survey is currently being extended and their results should be combined with ours to produce a comprehensive review of all the problems on the pedestrian network.

4.4.9 Figure 4.2 also shows links to the countryside. These were also analysed as part of Stage 1 (see the Stage 1 report for a fuller depiction of the pedestrian network). Improvements are required to many of these recreational routes. The route south west from Thorney Leys is interrupted by the A40. Others, like the route off Deer Park Road, are difficult to get to because of fast moving traffic and the lack of any crossing facility. Some routes are difficult to find such as the route south east from Cogges. Others have discouraging signage such as the route north off Burford Road by Early's factory. Poor signage and lack of other information may mean that people are unaware that recreational routes exist.

4.4.10 Measures to improve recreational access to the countryside could therefore include:

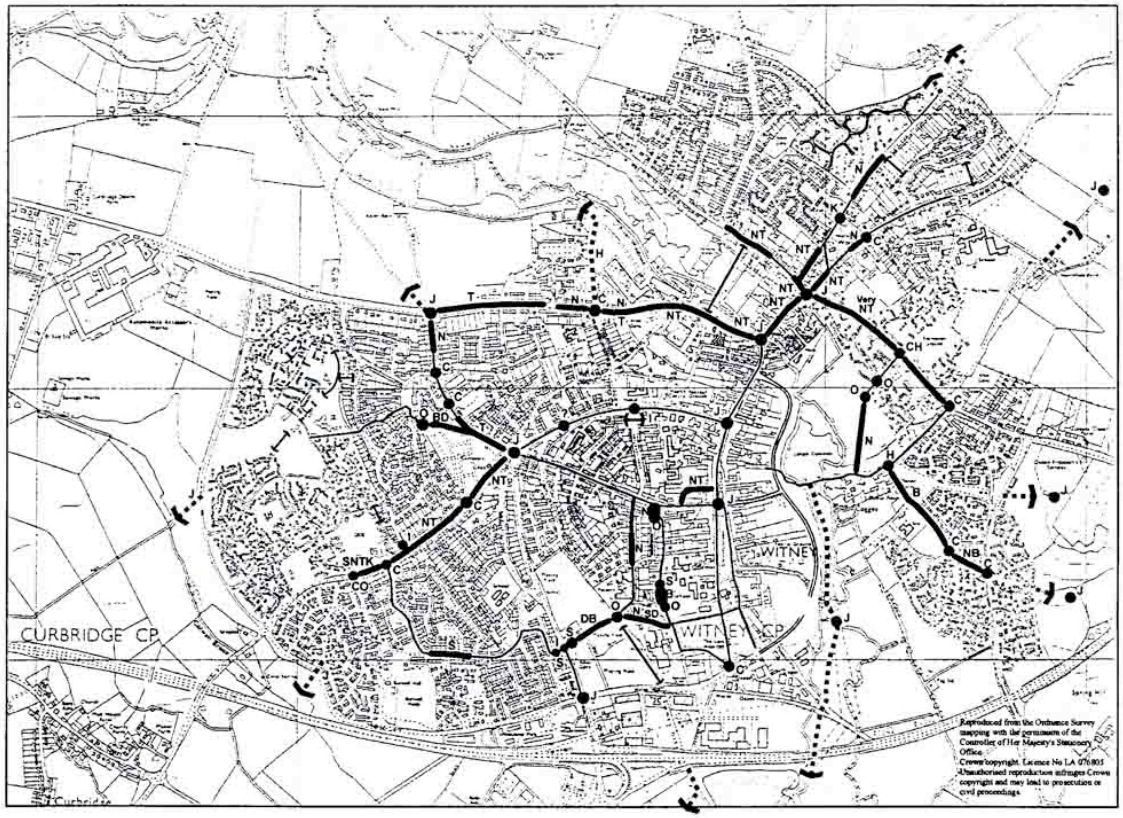
- extension of routes where appropriate;
- restoration and maintenance works to the routes themselves;
- crossing points to improve access to routes;
- signage to indicate routes and removal of discouraging signage;
- the distribution of information packs through a travel awareness campaign (see below); and
- consideration of upgrading routes for cyclists and horseriders alongside footpaths.

Improvements to cycle facilities

4.4.11 Witney is ideally shaped to encourage cycling. Indeed the current level of cycling in the town is higher than the national average. Witney is compact and relatively flat making it ideal for cycling. Cycling in Witney is not restricted to certain age groups. Children and elderly people regularly use their bikes. Our survey of Witney residents showed that at least 16% of reported car trips within Witney (and 12% of trips to other destinations) were readily convertible to cycling.

Figure 4.2

Key Issues on the Pedestrian Network



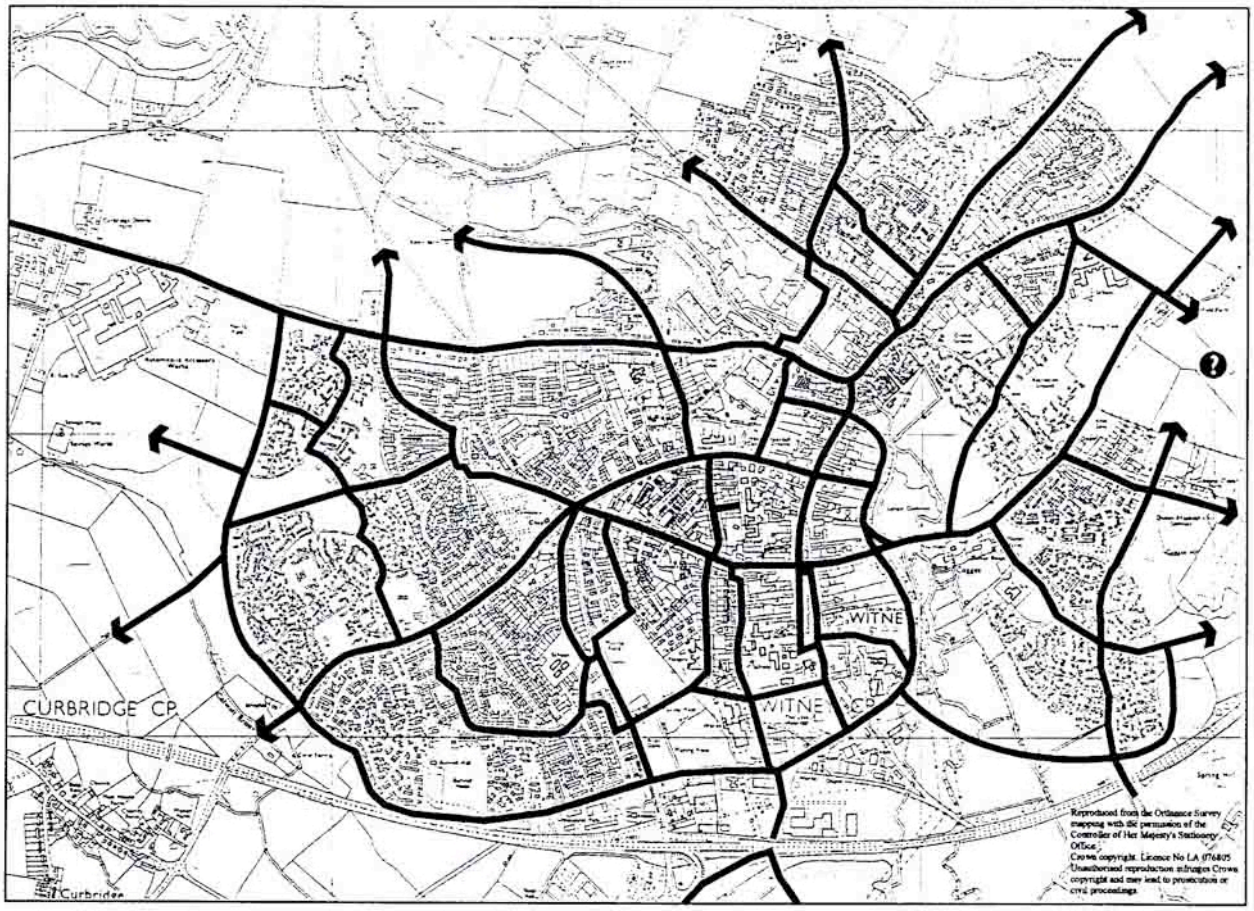
KEY

- Missing Links
- Problem Point
- Problem Area
- I Crossing Inconvenient
- J Problem Junctions
- C Crossing Required
- S Surface Poor
- N Path Narrow
- O Obstruction (Fence, Bollards, other obstructions)
- T Conflict with Vehicular Traffic
- D Not suitable for use at night
- ? Path indicates crossing at inappropriate place
- B Conflict between cyclists and pedestrians
- H Path not obvious / no signage
- Routes into the country (with junction problems with new roads to be resolved)

NB: Details of links in central area (High Street and Church Green to Witan Way) not shown.

Figure 4.3

Target Cycle Network



KEY

Cycle Routes

Routes to be planned with new development

Possible routes linking with neighbouring villages, countryside and new development

4.4.12 Stage 1 of this study involved an analysis of cycle facilities in Witney to identify key cycle routes and to evaluate their quality. Our public consultation exercise also highlighted particular issues and problem areas. The analysis and public consultation showed that there are considerable problems on Witney's cycle network. Designated routes are generally of good quality, but they are few and far between. Many key links are on heavily trafficked roads. This either makes cycling dangerous and unpleasant for cyclists who stick to the road, or encourages cyclists to use footways causing problems for pedestrians. Some junctions such as Staple Hall, the five arm roundabout at the top of Ducklington Lane and the Station Lane/Ducklington Lane junction are also dangerous and inconvenient for cyclists.

4.4.13 Figure 4.3 sets out a target cycle network for Witney. The form that this network takes depends, on many routes, on the volume and speed of traffic on the roads. Roads with a small volume of slow moving traffic could operate as safe and comfortable cycle routes. Large volumes of fast moving traffic mean that cycling is unpleasant and unsafe and separate cycle provision is required.

4.4.14 Figure 4.3 also shows some new links including a link between north Witney and Mill Street as indicated in the Local Plan. Also indicated are existing and potential links to the neighbouring villages of Ducklington, Curbridge, Minster Lovell, Crawley, Hailey, New Yatt, North Leigh, High Cogges, South Leigh and Eynsham. All of these except Eynsham are within 5 kilometres (3 miles) of Witney town centre and are thus within easy reach by bicycle for journeys to work, shop and education. In addition, these links provide important facilities for recreational cycling.

Improvements to bus services

4.4.15 There is potential for increasing bus ridership in Witney. Our survey of Witney residents showed that 23% of reported car trips in Witney were convertible to the bus and around 58% of trips to Oxford are convertible. While in practice it is unlikely to be possible to realise all of this potential, there is certainly scope for improving ridership.

4.4.16 We reviewed Witney's bus services in Stage 1. The main points were:

- there is a good, frequent service between Witney and Oxford which includes a late night and Sunday service. Congestion on the approaches to Oxford and Witney is a

major problem for the otherwise fast service, adding 15 minutes to the journey at peak hours;

- town services are more limited with the northern and southern parts of Witney and Cogges having irregular or infrequent services. Employment areas on Burford Road and Station Lane are poorly served;
- town services are subsidised by 33p per passenger. The operator estimates that to double frequency of service and break even, an increase of 150% in passenger numbers would be required;
- the operator is of the clear opinion that buses should continue to operate in Witney High Street, a view supported by the consultants; and
- Thames Transit operates a policy of 'hail and ride' in Witney, but believes that bus stops are important to maintain a visible presence on the street and to encourage passengers to wait at safe locations.

4.4.17 Possible improvements to Witney's bus services fall into three categories:

- improvements to the town routes;
- improvements to the Oxford service; and
- possible improvements to surrounding villages.

4.4.18 Figure 4.4 indicates some possible improvements to the town services. It shows 'dumbbell' shape town services operating on a 'hail and ride' system except in the town centre. Buses would run on these routes every 30 minutes. It is not easy to assess the impact of such improvements on passenger demand. However, the aim might be to double demand for the town services without any increase in passenger subsidy (reducing the subsidy for passengers from 33p in 1996 to about 17p). Further consideration of the passenger demand will be given in Stage 3 of the Study. The two routes shown are:

- the Cogges - Tower Hill route linking the North East Development Area and Woodgreen school, via the Cogges Link, sports centre, Sainsbury's and town centre, to the Tower Hill estate and Burwell Drive; and
- the north and west route linking the north Witney estates and employment, via the town centre, sports centre, and Sainsbury's, to the Station Lane employment area, the west Witney estates and the Windrush Industrial Estates.

4.4.19 The service to Oxford could be improved by:

- the provision of a segregated bus route to Oxford along the A40, and possibly via a new busway into the centre of Oxford;
- bus priority in Witney town centre; and
- provision of park and ride facilities.

4.4.20 Both town and external bus services would benefit from measures to protect them from traffic congestion by priority parking, signals or other means. Key routes in the town can be designed as "green routes" where through movement is confined to buses, cycles and pedestrians. Examples might be Curbridge Road and Bridge Street.

4.4.21 Park and ride car parking could be provided in a number of locations including: on the edge of the A40 (for example at Downs Road, Ducklington interchange or at the Shores Green junction). A town centre / edge of centre location along the bus route is not favoured because it would draw traffic into the town, and take up land better used for other purposes.

Soft measures

4.4.22 Traffic can only be reduced if people change their travel behaviour. To bring about such a change, we need to raise awareness of the benefits to the town, and the alternatives available. This could be achieved through soft measures, namely the creation of a 'Mobility Centre' in the town, to pro-actively persuade people to switch mode from the car to walk, cycle or bus. Methods to be employed would be:

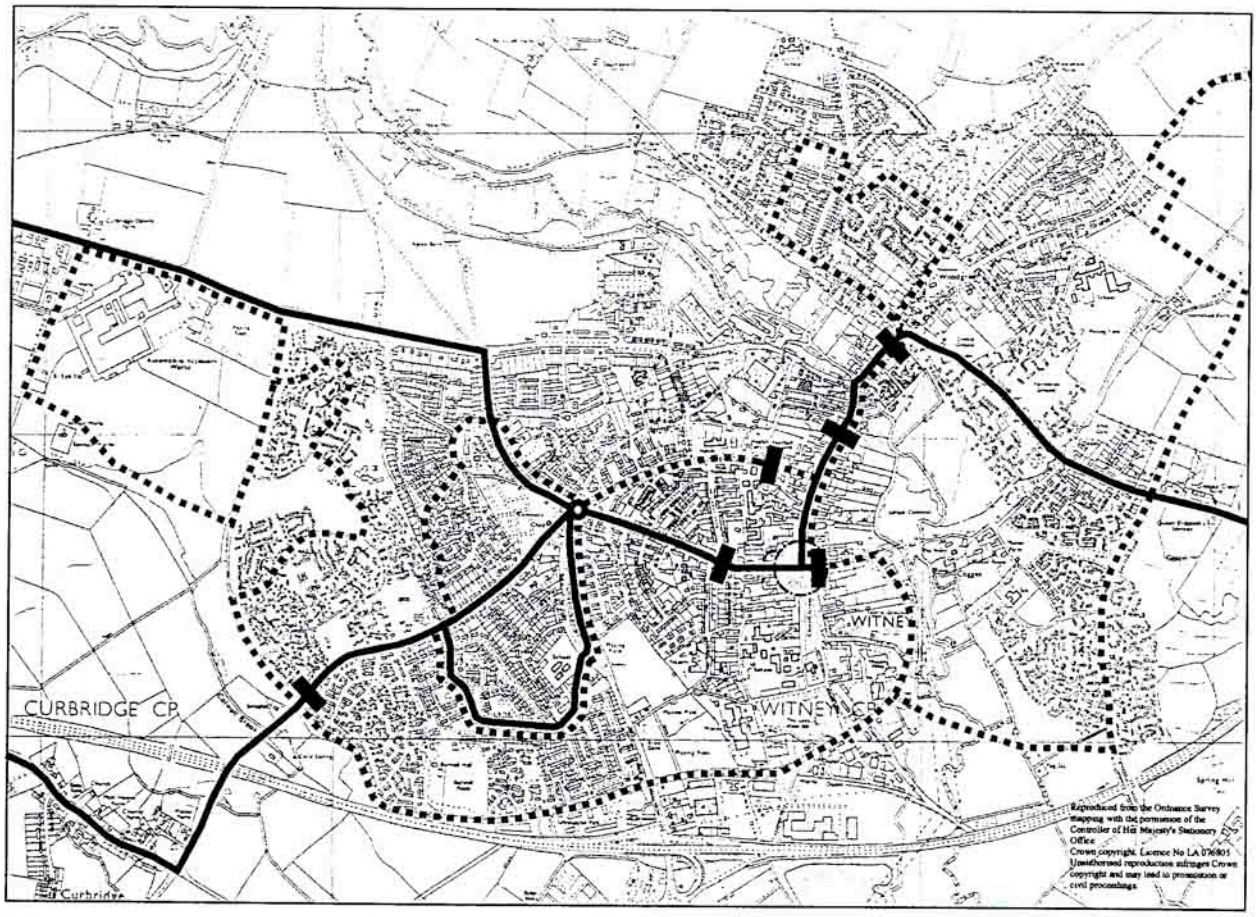
- Travelwise campaigns (walk to work, poster, etc.) to raise awareness of the issues of traffic, environment and safety;
- Safe Routes to School projects;
- Green Commuter Plans with employers;
- shop delivery scheme promotion; and
- on-line telephone information about recreational routes and events, bus services, air quality and accident trends.

4.4.23 The mobility centre could develop further initiatives, such as promoting better access to the countryside on foot or cycle, and identifying further bus passenger demand. Funding of such a centre will, however, be crucial, as the effectiveness of such initiatives will only become clear following an experiment or demonstration. Such initiatives are being tried in Germany, and these are being considered.

Figure 4.4

Possible Improvements to Bus Services

(Town and Trunk Services Shown)



KEY

- Trunk (express) to Oxford
- Indicative hail & ride services
- Interchange
- Possible bus gates/bus priority

Bus routing is indicative of the principles explained in paragraphs 4.4.15 to 4.4.18 showing "dumbbell" type routes linking to new areas and a high degree of priority for Oxford routes. Further consideration will be given to precise routings in Stage 3.

Land use planning measures

4.4.24 There is the potential for reducing or avoiding travel through land use planning measures. Many of these measures are already in place and do much to ensure that the need for travel is minimised. These should continue in the future, concentrating on the following:

- reduce the need to travel by concentrating new development close to existing facilities and employment;
- increasing land use diversity in the town centre, encouraging multi-purpose trips;
- increasing housing in the town centre and living over the shop schemes;
- retaining the FE college in the town centre, where it is easily accessible by non-car means, and where ancillary facilities are available within walking distance;
- designing new housing areas in a compact form, and with a layout which favours travel on foot, bicycle and by bus; and
- provision of communal rather than private parking, with standards appropriate to location and land use.

4.5 *Improve accessibility and promote efficient operation of all types of traffic*

4.5.1 The specific study objectives are:

3 Improve accessibility to facilities within the town, especially those within the town centre, for all people including those whose mobility is limited.

6 Improve accessibility to Oxford.

7 Improve accessibility between Witney and the surrounding countryside for recreational purposes.

8 Promote the efficient operation of all types of traffic and related activity, including parking.

4.5.2 The measures which address accessibility and efficiency objectives are:

- improvements to cycle and pedestrian networks, including links to the countryside;
- improvements to bus services, particularly the bus service to Oxford;
- parking management to ensure that parking demand is in balance with supply, that parking does not inconvenience pedestrians (especially those with mobility impairments) and to ensure that additional traffic is not generated as drivers search for a parking space;
- reduce motorised traffic in sensitive areas through pedestrianisation and road closures;

- 'soft measures' to encourage people to use non-car modes and be considerate when parking cars; and
- "drive to, not through" policy to avoid re-parking within the town centre.

4.5.3 The details of these measures are set out above.

4.6 *Safety*

4.6.1 The objective is:

9 Reduce road danger throughout the town, and to reduce the number and severity of road casualties.

4.6.2 Road safety is seen as an issue throughout the town. This can be tackled at source through reduction of motorised traffic, as well as by seeking to reduce the number of accidents and casualties through remedial measures. Problems at particular locations will be tackled by improvements to pedestrian, cycle and traffic management facilities, while the roads will be made safer by a lower volume of traffic travelling at a slower speed. Although not all schemes can be implemented in the short term, the planning of traffic calming measures will need to be carried out on an area-wide basis to avoid possible traffic and accident migration effects.

4.6.3 The measures which will address road safety issues are:

- traffic calming to reduce vehicle speeds and influence driver behaviour; and
- reduction in the volume of traffic on roads within the town, and restricting car access within the town centre.

Traffic calming

4.6.4 In Stage 1 we analysed the current function of Witney's roads. Roads were classified into the following categories:

- "traffic areas" (main through routes and access routes where motor traffic has priority);
- "mixed priority areas" (priority is split between traffic and "living" functions on through routes near major generators of pedestrian traffic);
- "collector areas" (roads linking local residential areas and facilities); and
- "living areas" (residential or commercial areas where walking, cycling and other living functions have priority over vehicular traffic).

4.6.5 The priority (or lack of it) given to vehicular traffic on a road should match the development and activities which are carried out along it. For example, roads lined with residential development should be "living areas" and not "traffic areas".

4.6.6 There are a number of roads in Witney where the traffic priority does not match the function of the road. For example, High Street north of Welch Way, Bridge Street, Mill Street, West End and Oxford Road currently all function as "traffic areas". All these streets are lined by residential and/or commercial development. There is a lot of pedestrian activity and the need for frequent crossing points. Thus these roads should be "mixed priority areas" where vehicular traffic shares priority with pedestrians.

4.6.7 Matching traffic priority and road function can be achieved by reducing traffic speeds. Vehicular traffic can be calmed to the point where the speed vehicles travel at respects the development and activities along the road:

- in "living areas", "mixed priority areas" and "local collector roads" vehicles should travel at 20 mph or below; and
- in traffic areas, the usual 30 mph limit should apply.

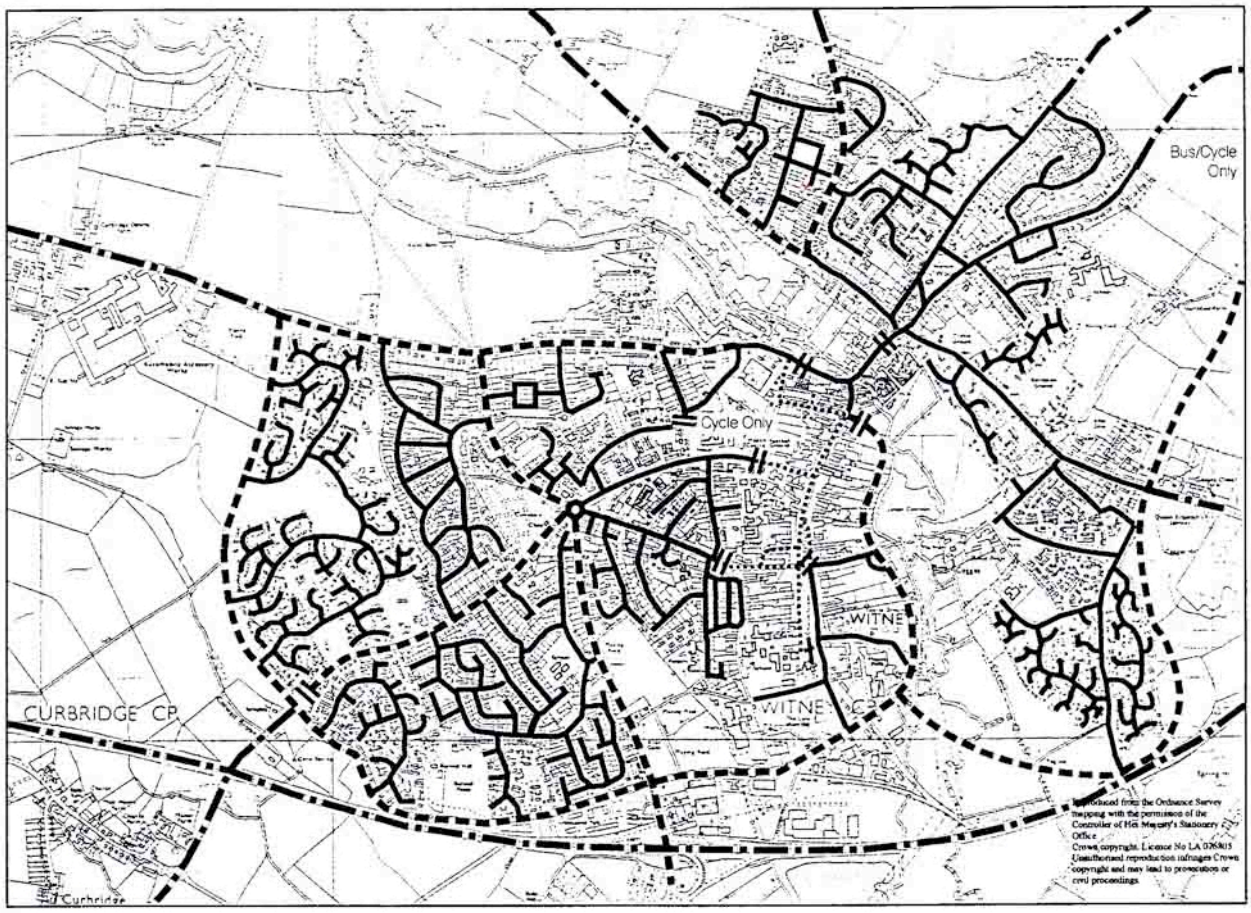
4.6.8 Traffic calming in "living areas" and "mixed priority areas" will also discourage their use by through traffic. Figure 4.5 shows an indicative speed management strategy for Witney. Some classifications (such as Tower Hill and Curbridge Road) will depend on the chosen option for pedestrianisation and road closures.

4.6.9 Speeds of 20 or 30 mph should be self enforcing and (currently) can be achieved only by introducing physical measures to slow down drivers. Many measures are available ranging from humps and other vertical deflections in the carriageway, to planting, surface treatments and public education. Twenty measure types have been identified in Devon County Council's "Traffic Calming Guidelines" (1991). In addition, in Witney traffic calming measures will be required to encourage non-car traffic and to enhance environmental quality. The extent to which this can be achieved will be determined primarily by the level of funding available.

4.6.10 There are advantages and disadvantages of individual measures such as their effectiveness in reducing vehicular speeds, noise, discomfort, and access for emergency services. During our public consultation exercises many consultees stated that road humps are unpopular and cause

Figure 4.5

Suggested Speed Management Strategy



KEY

- ····· 10 mph
- ——— 20 mph
- – – 30 mph
- – – – De-restricted
- ═══ Road Closure (whole or partial)

discomfort for people with certain impairments such as back injuries. New traffic calming measures should investigate using one or more of the many other alternatives. Local consultation and attractive overall design can serve to increase acceptance of traffic calming measures.

4.7 *Summary*

4.7.1 Many of the measures have been mentioned more than once. The summary list consists of nine types of measures:

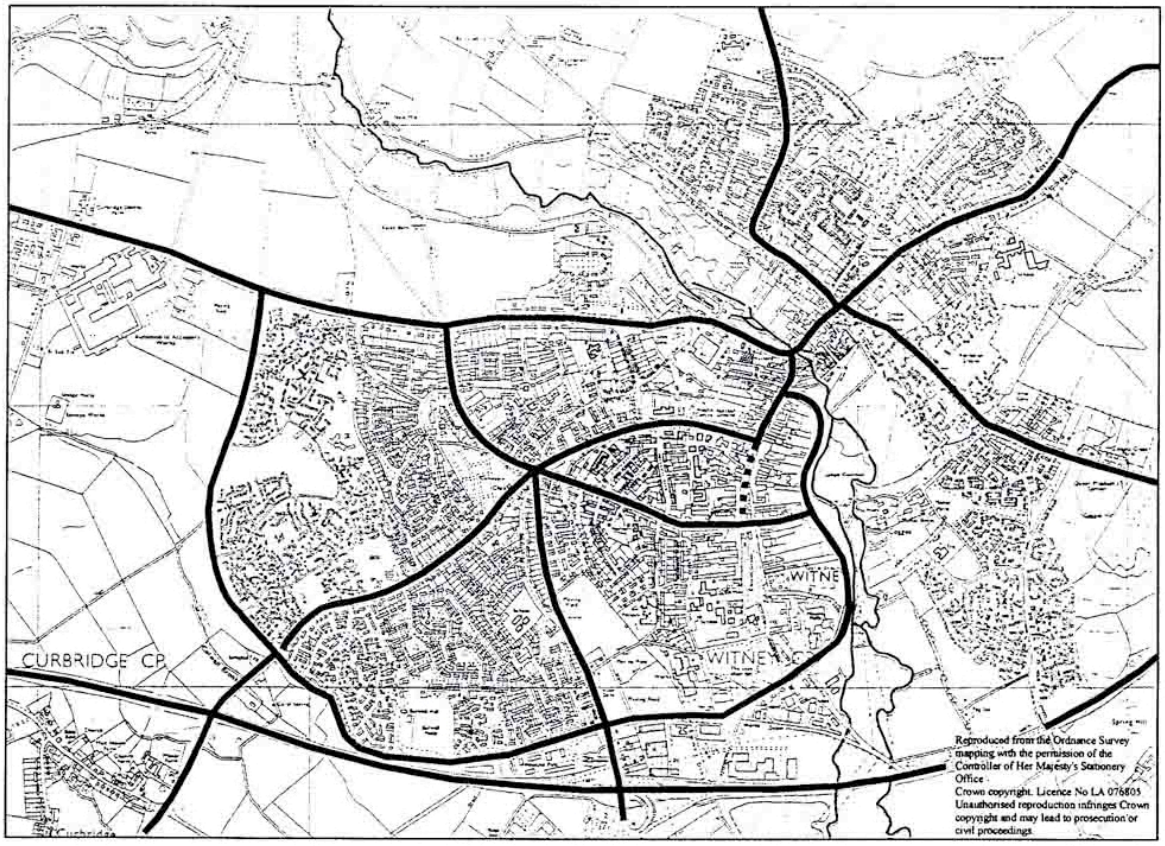
- pedestrianisation and road closures;
- improvements to cycle facilities;
- improvements to the pedestrian network;
- improved bus services;
- traffic calming;
- parking management;
- road building;
- soft measures; and
- land use planning measures.

4.7.2 An integrated combination of these measures in some form will meet all our objectives. Chapter 5 evaluates how well the measures perform against the Study objectives. It should be emphasised, however, that performance depends in part on assumptions about how different measures are combined, and how well they function together. The packages presented in Chapter 6 are therefore crucial in determining the preferred approach. The most important factor is the extent to which measures **in combination** will achieve a desired level of mode switch away from the car to bus, cycle and foot.

The three main options are illustrated on the next three pages.

Option 1

Closure of high Street / Market Square to general traffic



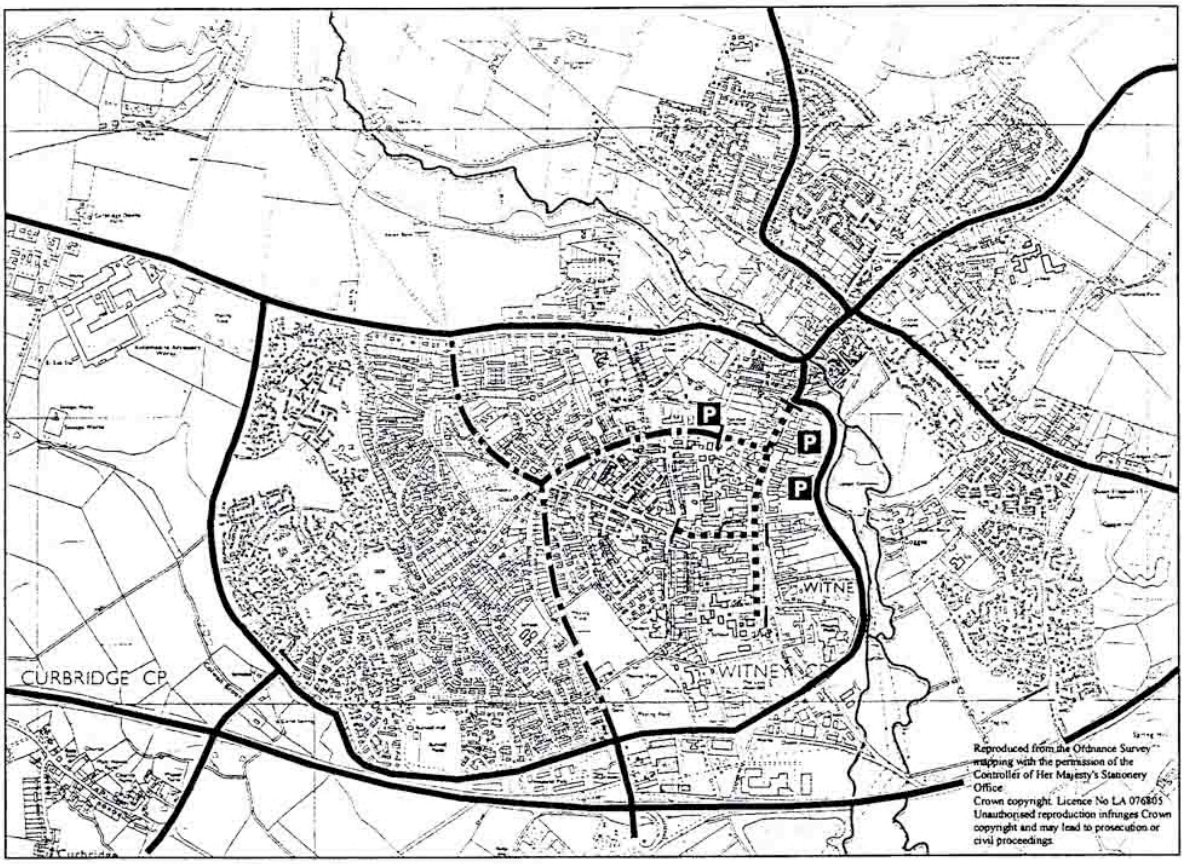
KEY

Main Roads

Pedestrian/Cycle/Bus Priority

Option 2

Closure to general traffic of town centre roads

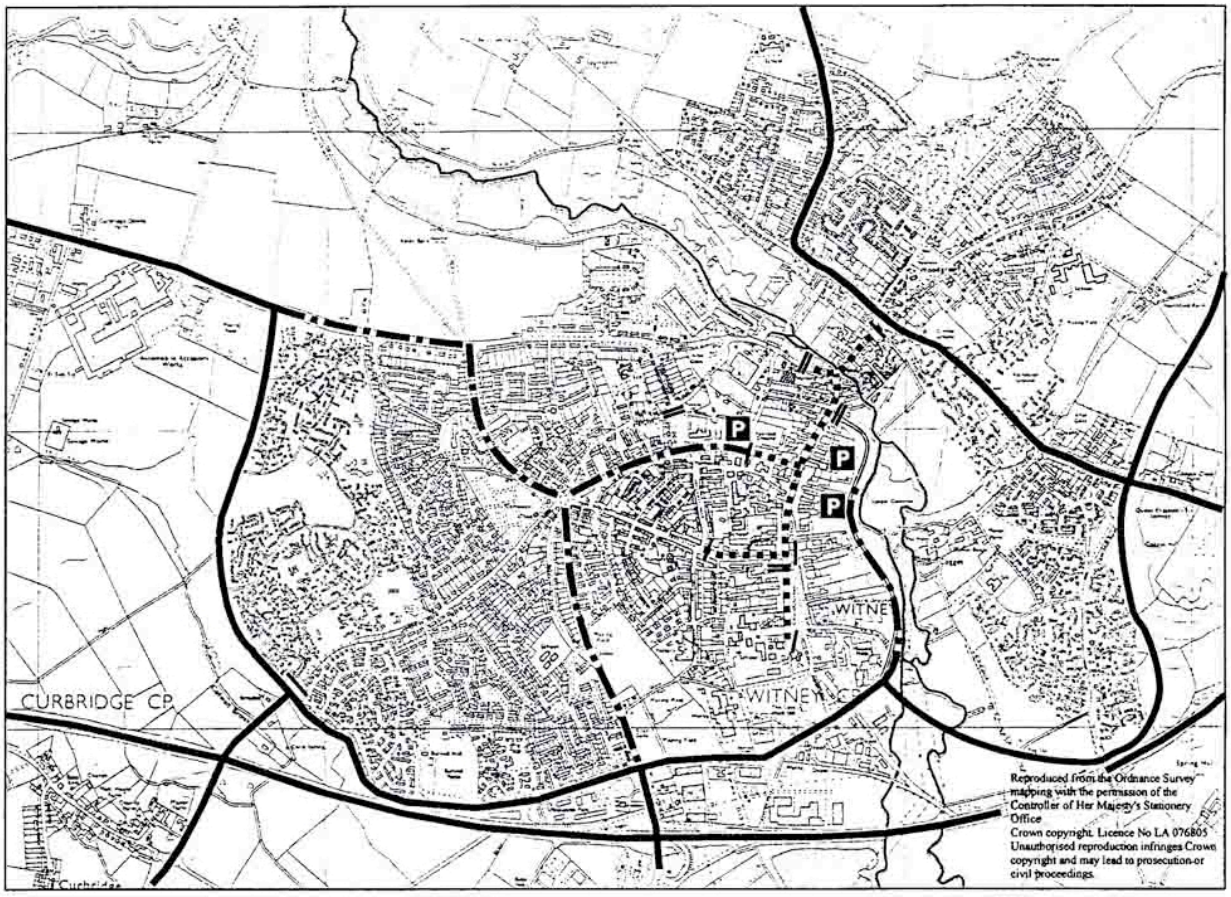


KEY

- Main Roads
- Access Routes to Welch Way car park
- Pedestrian/Cycle/Bus Priority in town centre
- P Public town centre parks
- Closure to general traffic

Option 2

Closure to general traffic of town centre roads and Bridge Street



KEY

- Main Roads
- Access routes to town centre car parks
- Pedestrian/Cycle/Bus Priority in town centre
- Full Closure (except cycle)
- Closure to general traffic
- P Public town centre car parks

5 Evaluation of Component Measures

5.1 *Introduction*

5.1.1 The measures described in Chapter 4 are set out in detail below and their performance is tested against the Study objectives. Where relevant, a comment is made about public attitudes expressed towards measures during our various public consultation exercises. The assessment also highlights any important side effects which the measures may induce, for example some of the more significant traffic impacts caused by pedestrianisation. Finally, implementation issues are discussed for each measure. A summary of the testing exercise is provided at the end of the chapter.

5.1.2 A fuller account of the traffic effects of pedestrianisation options is presented in Appendix C, based on modelling work which has been undertaken. The model results should be treated with caution. The model is a fixed trip matrix model, which assumes that the pattern of origins and destinations in Witney will not change in response to different driving conditions. Only the routes chosen are assumed to change. In addition, only the Friday afternoon peak hour has been simulated, and once again the model assumes that the timing of journeys will not change however congested the roads become.

5.1.3 Because of these factors, the model will tend to overstate some effects and understate others. In particular:

- it may overstate the relief to be gained in Witney by road building, because it makes no allowance for some present-day demand for car travel which may be suppressed by congestion. Relieving this congestion by providing new road capacity elsewhere may simply release more latent demand onto the road network. Hence, for example, the limited relief predicted on Bridge Street after opening the Cogges Link may not actually occur unless it is enforced;
- it will tend to overstate the impact of traffic growth on peak hour driving conditions in Witney, because it does not allow for the fact that drivers may respond to congestion by making their journeys outside the busiest times; and
- it does not simulate the relief afforded by drivers switching to other modes of travel. Hence it does not offer a true reflection of the benefits of each option taken as a whole.

5.1.4 For these reasons the prediction of adverse traffic impacts by the model does not necessarily indicate that an option does not work,

or even that it requires modification. What the model can do, however, is to provide some indication of the comparative traffic conditions as between one option and another, under certain common assumptions.

5.1.5 As we saw in Chapter 3, there will be congestion in the Witney road network in the years after 2001 whatever happens. The model was not even able to cope with traffic growth in 2011. This must be borne in mind as we discuss the detailed impacts of road closures. As in areas throughout the country, there is a background of traffic growth and increasing congestion on the Witney network, even with new roads built and without any road closures. In the absence of mode switch from the car, therefore, traffic, safety and environmental conditions in the town will continue to deteriorate.

5.2 *Pedestrianisation*

Pedestrianisation Option 1

5.2.1 Option 1 is the minimum level of pedestrianisation. The core area of the town centre is pedestrianised, consolidating its status as the key shopping area. This scheme would concentrate retail activity in the southern part of the town centre and allow environmental improvements in just this core area. There are few adverse impacts on the road network, and the option does not depend on the building of any new road links.

Evaluation against objectives

5.2.2 Option 1 delivers benefits only to the pedestrianised area of the High Street and Market Square. In this area, the option reduces the adverse impacts of traffic, provides the opportunity for an enhanced town centre environment, improves conditions for pedestrians (and possibly cyclists, depending upon the scheme design), and improves road safety.

5.2.3 Because the option does not lead to significant changes in the traffic conditions of the surrounding area, it makes no contribution towards the achievement of any of the Study's objectives for the town as a whole, and will be unlikely to encourage any switch of mode from the car.

5.2.4 Option 1 delivers all the benefits of pedestrianisation to that part of the town centre which is already strongest in economic terms. It could potentially widen the gulf between this area and the northern part of the High Street north of Welch Way, hence marginalising the latter. In that case, the option would militate against the

achievement of viability and vitality throughout the town centre (objective 2).

Side effects

5.2.5 In 2001, with the Cogges Link and North East Distributor in place and some development in the town, Option 1 would not cause any significant change in traffic conditions. The traffic model suggests that traffic diverts to Corn Street, Holloway Road, either Welch Way or Moor Avenue to route around the High Street and away from town. These impacts could be avoided through local traffic management. Extension of the pedestrianised area to include the east end of Corn Street would reduce traffic diversion impact there, whilst providing additional town centre environment and safety benefits.

Ease of implementation

5.2.6 Given the small traffic impacts, Option 1 could be implemented in the short term. The impacts of Option 1 could be tested through a temporary closure using an Experimental Traffic Order.

Pedestrianisation Option 2

5.2.7 Option 2 shows how pedestrianisation could be extended. The benefits of removing traffic would be shared by businesses in Corn Street and the northern end of High Street. This would allow environmental improvements to be implemented as far as Witan Way and would help to extend retail and business activity to the northern end of High Street, balancing the town centre. Option 2 creates the opportunity to create a new pattern of pedestrian circulation, if the Woolgate car park is linked to the northern part of High Street.

Evaluation against objectives

5.2.8 Option 2 delivers benefits mainly within the area directly affected by pedestrianisation. The closure of intra-town centre routes will, however, contribute to the "drive to, not through" policy and could encourage some mode shift.

5.2.9 Its performance against the objectives is therefore better than Option 1. For the whole of the High Street between Church Green and Witan Way, and along parts of Corn Street, Welch Way and Church Green, Option 2 reduces the adverse impacts of traffic, provides the opportunity for an enhanced town centre environment (improves conditions for pedestrians, bus users and cyclists), and reduces road danger.

5.2.10 One significant advantage of Option 2 over Option 1 is that it provides the opportunity to substantially improve pedestrian flow in the weaker northern part of the High Street, encouraged by links to the Woolgate car park. This, together with the environmental improvements which pedestrianisation would facilitate, could bring economic benefits to this area. To that extent Option 2 serves the objective of protecting and enhancing the town centre much more fully than Option 1.

Side effects

5.2.11 We modelled the traffic impacts of Option 2 if it were implemented immediately. The traffic model suggests increases in flows on some routes as traffic diverts from the town centre, and complementary traffic management measures would be necessary to prevent traffic diversion onto unsuitable roads including Dark Lane/Moor Avenue/Moorland Avenue and Puck Lane/Gloucester Place.

5.2.12 The intention should be to encourage the use of Tower Hill (which shows a decrease in traffic) as the principal route onto Burford Road. Closure of Moor Avenue immediately north of the junction with Moorland Avenue is one possible measure to be assessed in Stage 3 of the Study. An alternative route for this traffic could be provided by the West End link, but this does not remove the need for local traffic management.

5.2.13 We also considered the traffic impacts of Option 2 if it is implemented in 2001 with the Cogges Link and North East Distributor in place. We compared Option 2 in 2001 with the same situation (i.e. Cogges Link and North East Distributor roads built) with no road closures. The traffic model showed relief on Corn Street, Holloway Road and Tower Hill, as well as the pedestrianised streets themselves. Although in this test the maximum queue length on Bridge Street up to Staple Hall was higher than the 2001 base scenario, the level was still lower than 1996 levels. These results must be treated with caution as Staple Hall is a volatile junction and values vary between iterations of the model. Remarks in the previous paragraph concerning Dark Lane/Moor Avenue and Mill Street and Gloucester Place also apply here.

Ease of implementation

5.2.14 The assessments carried out so far suggest that Option 2 could be implemented before the Cogges Link is constructed. The traffic model has, however, highlighted the need to mitigate increased

flows on some sensitive streets in the town. Further investigation is required in Stage 3 to assess the best means of achieving this.

Pedestrianisation Option 2 PLUS

5.2.15 While Option 2 contributes strongly to the achievement of the Study objectives for the core area of the town centre, it makes little contribution to the wider objectives for Witney as a whole. In particular, it does little if anything to alleviate conditions on Bridge Street, and would be unlikely to result in any large scale mode switch.

5.2.16 Conditions in Bridge Street and its approaches will continue to deteriorate in the future due to continuing growth in private motorised travel. Opening of the Cogges Link and North East Distributor roads will provide some traffic diversion away from the Bridge Street route, but this benefit will be relatively small, and will be short-lived.

5.2.17 The concept of Option 2 PLUS is therefore to secure significant and lasting benefits on Bridge Street and its approaches. The scope for improvements in the short term is limited. The Cogges Link will, however, both provide the opportunity to divert motor traffic away from Bridge Street, and at the same time require action to ensure that this is achieved.

Evaluation against objectives

5.2.18 The performance of Option 2 PLUS against the Study objectives lies somewhere between Option 2 (without Cogges), and Option 3, in which Bridge Street is closed to all traffic except the "environmental combination" of bus, cycle and foot traffic.

5.2.19 It is reasonable to assume that the greater the traffic reduction secured on Bridge Street, the greater will be the need to mitigate traffic diversion impacts, for example in Crawley, and on Newland/Oxford Hill. At the same time, restrictions on car traffic in Bridge Street could encourage mode shift, especially for travel to and from north Witney, and provided that the alternative modes become relatively more attractive.

Ease of implementation

5.2.20 Some possibilities for reducing traffic in Bridge Street were set out in paragraph 4.3.12. While some measures may be easily achieved, those which would achieve substantial traffic reduction are likely to pose technical difficulties and operation uncertainties.

In this respect further work in Stage 3 would be needed to establish the feasibility of Option 2 PLUS.

Pedestrianisation Option 3

5.5.21 Option 3 extends the benefits of a traffic reduced environment to Bridge Street and Mill Street. Environmental improvements would be possible throughout the town centre and Conservation Area. Option 3 is based on the creation of a "green route" from Staple Hall junction to High Street, and also along Mill Street to Burford Road. This "green route" will provide a safe and attractive route for bus, cycle and pedestrian traffic. It also ensures that traffic conditions do not deteriorate in future. The enhanced conditions for bus, cycle and foot traffic together with the creation of more circuitous routes for car traffic should result in a significant switch of travel away from the car. The option could provide the opportunity to enhance the role of the bridge and river. The closure of Bridge Street could allow access to the river to be created, and would provide the opportunity to organise new development to enhance the riverside environment. All through traffic would by-pass the town centre completely, and town centre visitors would park in the edge of centre car parks and walk to the shops and businesses.

Evaluation against objectives

5.2.22 Unlike Option 1 and 2, Option 3 induces a radical alteration in traffic conditions throughout most of the town. This is primarily due to the closure of Bridge Street which is presently a pivot for many traffic routes through the town. Under Option 3, traffic is reduced on many, although not all, of the sensitive links in Witney.

5.2.23 Because of this, Option 3 meets the objectives of reducing the adverse effects of traffic and reducing road danger much more fully than the more limited pedestrianisation schemes. It also provides a more widespread improvement in conditions for pedestrians, cyclists and bus users. Accessibility for non-drivers to facilities is improved, and the scope for protection and enhancement of the town centre is extended to Bridge Street, presently one of Witney's most severely compromised assets.

5.2.24 The traffic model indicated some major increases in traffic on some roads if Option 3 is introduced without any complementary traffic reduction measures (see below and in Appendix C). Some of these increases are on sensitive roads in and around Witney and would therefore militate against the achievement of the Study's environmental and safety objectives. The scale of such impacts

appears to be reduced if Option 3 is combined with the West End Link, but this approach also appears to dilute the benefits.

5.2.25 The conclusion from the above is that whilst Option 3 offers by far the greatest potential for achieving the Study's objectives, it can only succeed in combination with a comprehensive package of measures aimed at traffic reduction and the achievement of mode switch. The packaging of measures is discussed in Chapter 6. In Stage 3 it is intended to explore what residual effects might remain once traffic reducing and management measures are in place, and at this point it will be possible to make a recommendation about the possible role of the West End Link.

Side effects

5.2.26 We ran two tests to investigate the traffic impacts of Option 3, one with the West End Link and one without. The test without the West End Link (but with the Cogges Link and North East Distributor) showed a broad pattern of traffic reduction in the town centre and beyond. The closure of Bridge Street requires traffic to skirt around the town using Thorney Leys, Station Lane and the new roads. More use is also made of the A40 by local traffic, although this basically just returns traffic to 1996 levels on the east bound link. Traffic is reduced in the town centre and to the west in the Holloway Road, Dark Lane, Corn Street and Welch Way areas. Traffic is also reduced around Woodgreen, Woodstock Road and Farmers Close.

5.2.27 The significant reductions on many routes are reflected by increases on others as the model reassigns the traffic. There is, of course, no certainty that such diversion would in fact occur, but the model indicates the potential major impacts which would need to be addressed The model indicates significantly increased flows on West End, Oxford Hill and Hailey Road. There are also increases in south west Witney with traffic increasing on Burwell Drive and Meadows and Church View Road / South Lawn. The model also shows increased queues at the Station Lane / Ducklington Lane junction. There are also impacts on the network outside Witney. Areas affected include Curbridge, Ducklington, Crawley and New Yatt.

5.2.28 The results of this test suggest that Option 3 ought properly to be considered in the context of a broader panoply of complementary measures whose combined effect is to provide traffic reduction by encouraging other modes of travel. These measures are essential in any case, given the predicted unrestrained traffic growth and likely congestion in the years after 2001. Option 3 may precipitate

these effects on some routes, but it also provides significant benefits in large areas of the town. The modelling results also suggest that some fine tuning will be required to stop traffic rat running through inappropriate routes (e.g. around Burwell Drive) and possibly to reduce queues at the Station Lane/ Ducklington Lane junction.

5.2.29 We also investigated the traffic impacts of implementing Option 3 with the West End Link in place as well as the Cogges Link and North East Distributor. In general terms, the addition of the West End Link appears to dilute the positive and negative impacts of Option 3 both within and outside Witney. Less traffic is pushed to the south of the town because cross-river movements are split between the town new bridges rather than being concentrated on the Cogges Link, but this will make it harder to achieve mode shift because car access remains convenient.

5.3 *Improvements to the pedestrian network*

Evaluation against objectives

5.3.1 Improvements to the pedestrian network will contribute to meeting a number of the Study's objectives. Improving the network is an objective in itself (objective 4). It will also improve accessibility to facilities (objective 3) and improve accessibility to the countryside (objective 7).

5.3.2 In addition, improving the pedestrian network will help meet other objectives. Making the network safe, convenient, comprehensive and pleasant to use will maximise the potential to shift car trips to walking trips. Thus improvements to the pedestrian network will help to facilitate the reduction of traffic in the town. This will help in turn to reduce the adverse impact of motorised traffic (objective 1). Improvements to pedestrian facilities will reduce road danger directly by providing safer crossing points, etc. and indirectly by facilitating a reduction in traffic (objective 9).

5.3.3 Not surprisingly, there is widespread support for improving the pedestrian network. 20% of respondents to our residents surveys identified walking as the mode which they would most like to see improved. There is particularly strong support from groups who represent people with mobility impairments. The time and effort provided by the TRYARDs free of charge in carrying out their survey is testament to this.

Ease of implementation

5.3.4 Any of the suggested improvements could be undertaken as separately justified schemes, but in practice they are likely to fulfil greater potential as integral measures as part of the chosen package. Improvements to the pedestrian network do not have to be carried out in one go. Improvements can be made whenever the opportunity presents itself. Pedestrianisation of High Street, for example, will provide the opportunity to address all the issues highlighted by the TRYARD's survey. The suggested improvements to the pedestrian network can be made whenever works are being carried out to roads or foot ways.

5.3.5 Equally, there will be opportunities for improving and extending the pedestrian network when new developments are built. New developments should be planned to ensure that direct, convenient and safe pedestrian routes are provided linking housing, facilities and the town centre. Contributions to these links should be sought from developers of new schemes and projects.

5.4 *Improvements to cycle facilities*

Evaluation against objectives

5.4.1 Promotion of safer, more pleasant and more convenient conditions for cycle traffic is an objective in itself (objective 5). It will also improve accessibility to facilities (objective 3) and improve accessibility to the countryside (objective 7). Cycle routes would also ensure that cyclists do not use footways, thereby improving conditions for pedestrians (objective 4).

5.4.2 In addition, the argument which applies to improvements to pedestrian links also applies to cycle provision. Improving provision will maximise the potential for mode shift which will help contribute to reducing the adverse impact of motorised traffic (objective 1) and reduce road danger (objective 9).

5.4.3 The public have shown strong support for improved cycle facilities. 32% of respondents to our residents survey picked cycling as the mode of travel they would most like to see improved. When we asked about the factors which would make residents visit the town centre more often, provision of safe cycle routes and cycle parking was the third most popular answer. Attendees of our workshops felt that there is a lack of safe, convenient cycle routes and cycle parking. Some attendees stated that they would cycle more if cycle facilities were better. Additional cycle parking at Waitrose was mentioned.

Ease of implementation

5.4.4 As with improvements to the pedestrian network, improvements to the cycle network do not have to be carried out in one go and can be implemented separately or in combination with the broader options identified. The possibilities and scheme designs will vary in key locations such as Bridge Street, Welch Way and Curbridge Road. Opportunities to improve facilities will arise as works to roads are carried out and new developments are built.

5.5 *Improve the bus services*

Evaluation against objectives

5.5.1 Improvements to the bus service to Oxford will assist in improving accessibility to Oxford (objective 6). The transfer of car trips to the bus will help to reduce car traffic on the A40. A segregated bus lane will mean that buses avoid hold ups on the edge of Oxford. The provision of parking for park and ride users could also increase bus use, but might induce more car trips to Witney than might otherwise occur. Demand for park and ride to Oxford, and the impact on town centre traffic will depend on the location chosen.

5.5.2 A park and ride facility would operate differently depending on its location. A town centre site would be most accessible to most people and would encourage bus users to make combined trips, visiting town centre shops when they get off the Oxford bus. However, this would also draw traffic into the town centre. A peripheral location might have less traffic impacts on routes to the town centre, but would not allow bus riders to make combined trips. A peripheral site would be cheaper than a town centre site.

5.5.3 The intention should be to maximise Oxford passengers who walk and ride from Witney. As a large proportion of Witney falls within 400m of a direct Oxford service, park and ride will serve more purpose if it caters primarily for village residents rather than Witney residents. A location outside the town centre is therefore favoured. Different locations for a park and ride facility will be examined in Stage 3 in consultation with the bus operator.

5.5.4 Improvements to local bus services will maximise the potential for a shift from car trips to bus trips. If this potential can be realised, this will help to reduce traffic and contribute to reducing the adverse impact of motorised traffic in the town (objective 1). It will also improve accessibility to facilities within the town (objective 3) for the 19% of Witney households who do not have a car. Increasing

bus ridership and reducing car traffic will also contribute to reducing road danger (objective 9).

5.5.5 There is widespread support for improving bus services. 20% of respondents to our survey of Witney residents picked the bus as the mode of travel they would most like to see improved.

5.5.6 The options for re-organising bus infrastructure were discussed at the workshops. Lack of bus shelters in the town centre was highlighted as a problem and the current hail-and-ride policy was questioned. The possibility of using the Buttercross as a key bus stop was discussed. The issue of whether buses should be retained in a pedestrianised High Street reveals conflicting objectives for environmental and pedestrian improvements, and access appropriate for the non-car user.

5.5.7 Provision of buses which could be used by people with mobility impairments, e.g. low floor buses, has also been explored. Thames Transit stated that while the technology for these buses is currently new and expensive, prices are likely to fall in the future. However, providing kerb facilities for these buses would not be possible for 'hail and ride' services.

Ease of implementation

5.5.8 Now that public transport has been deregulated there is no opportunity for local authorities to compel operators to provide a service. Service improvements can be achieved through discussion and negotiation, by the local authority making a route more attractive (providing infrastructure, concentrating development), or by public subsidy (currently 33p per passenger for the Witney town services). It is not expected that any subsidy increase will be forthcoming in future.

5.6 *Traffic calming*

Evaluation against objectives

5.6.1 Traffic calming will contribute to meeting a number of the Study's objectives. Reducing speeds in residential and commercial areas will help to reduce the adverse impact of motorised traffic within the town (objective 1). It will also contribute to creating better conditions for cyclists and pedestrians (objectives 4 and 5). Slower traffic speeds will also be important in reducing road danger (objective 9).

Ease of implementation

5.6.2 Traffic claming can be introduced to Witney's living areas over a period of time in order to give flexibility in implementation. However, careful attention will need to be given to any unintended effects caused in the intermediate stages before full area-wide calming has been introduced. The main concern is the unintentional re-routing of vehicles from traffic calmed streets to other vulnerable streets awaiting calming, or even from one area to another.

5.6.3 Successful implementation relies upon attractive scheme design and extensive involvement of local residents, emergency services, bus operators and other interested groups. The statutory consultation requirements alone may be insufficient to ensure acceptance of a scheme. Traffic calming to speeds of 20 and 30 mph can only be achieved by physical measures as explained in Chapter 4. The different measures set out have different cost implications which would need to be considered in drawing up a detailed speed management strategy.

5.7 *Parking management*

5.7.1 A parking management strategy could include one or more of several measures as set out in Chapter 4. These mainly relate to the town centre and its immediate surroundings.

Evaluation against objectives

5.7.2 A parking strategy will contribute to meeting a number of the Study's objectives. Ensuring that parking is available will help to reduce the adverse impact of motorised traffic in the town centre by eliminating search traffic (objective 1). Removal of on-street parking in the town centre will contribute to improving the attractiveness of the town centre, while the supply of sufficient, easy parking will help the town centre to retain and improve its vitality (objective 2). Easy availability of parking will also promote the efficient operation of traffic (objective 8).

5.7.3 Providing more parking spaces has mixed effects on improving accessibility to town centre facilities (objective 3). While improving the availability of parking close to the town centre will ensure that car drivers have access to the town's facilities, using town centre land for parking will mean that less land is available for new facilities. Our survey of Witney residents indicates that this is a significant drawback. When asked what changes would encourage them to visit the town centre more often, the second most popular answer respondents gave was better shops. Stage 3 will involve

establishing an appropriate balance of demand and supply. The provision of park and ride schemes could reduce demand for town centre spaces.

5.7.4 If demands exceed supply and more space is not provided, restoring the balance between residual demand and supply will require some form of parking control or parking charge. In our survey of Witney residents, only 22% supported the introduction of parking charges. However, charges may be more acceptable for residents, businesses and motorists if they are introduced gradually. The details of charging possibilities will be explored in Stage 3 of the Study.

Ease of implementation

5.7.5 Constructing more parking spaces in the town centre is a costly solution. Although the District Council does own sites in the town centre, this is valuable land with a considerable opportunity cost to its development for parking. The District Council has control (either out right at Welch Way or through a freehold at the Woolgate car park) on much of the town centre parking. If the Council did introduce some form of charging system, it may be that Sainsbury's would follow suit.

5.8 *Road building*

Evaluation against objectives

5.8.1 The results of the traffic modelling exercise suggest that the Cogges Link, North East Distributor and West End Link will help to meet the first two objectives of the Study, but only in combination with capacity reductions on existing roads. If implemented without restraint, the model suggests that they will provide limited short term benefits in some areas, but will not deliver lasting, Witney wide benefits. Provision of these new links, combined with appropriate restraint measures in the town centre, will reduce the impact of motorised traffic in sensitive parts of the town (objective 1), and protect the attractiveness of the town centre (objective 2). Diversion of traffic from the town centre onto these new routes will also facilitate improvements to pedestrian and cycle conditions in the town (objectives 4 and 5). Transfer of traffic onto the new links and away from town centre roads will also help to reduce road danger (objective 9), and will be conducive to achieving mode switch away from the car.

5.8.2 We have considered the impact of building just the Cogges Link and North East Distributor and compared this with adding the West End Link. Notwithstanding the comments in paragraph 5.8.1, the

impact of adding the West End Link is mixed and will depend on the road closures and traffic management measures associated with it. While it would provide relief in some areas in the short term, it encourages a north-south movement to the west of the town centre. This affects its performance against the Study's objectives, so that they are met more fully in some areas of town and less in others. The West End Link would also undermine potential for mode shift, by maintaining the relative attractiveness of private car use.

Ease of implementation

5.8.3 The construction of the Cogges Link and North East Distributor depend on contributions from developers of the North East Development Area. The current debate over the number of dwellings included in this area could affect the amount of funding available. The linking of construction of these roads to the development of adjoining areas also constrains the timing of road construction. If funding for the North East Distributor is not forthcoming in the short term, it may be possible to construct the Cogges Link as a bus only route, to be opened to all traffic when the North East Distributor is built.

5.8.4 The West End Link would also be funded by contributions from development. It is currently not clear what the nature or timing of that development might be. While the West End Link may offer benefits (and disbenefits) with respect to meeting the Study objectives, given its uncertainty, the Study should not generate options which depend on its construction.

5.9 *Travel awareness measures*

Evaluation against objectives

5.9.1 Persuading people to switch some of their trips from the car to other modes is important if the full benefits of the infrastructure improvements are to be realised. Persuading people out of their cars and onto their feet, bikes or the bus will help us meet objectives 1 and 2 (reducing the adverse impact of traffic and protecting and enhancing the town centre) by reducing car traffic. The same is true of reducing road danger (objective 9). Information about recreational routes will increase accessibility to the countryside (objective 7).

Ease of implementation

5.9.2 A mobility centre would function best from a central location. Although the capital start up costs could be low, the centre would

require revenue funding to cover its yearly running costs. Options for reducing these costs include:

- running the centre in partnership with local businesses and / or bus operators;
- focusing on existing campaigns like Travelwise; and
- involving local interest groups.

5.9.3 As an innovative measure, there may be funding opportunities from the Passenger Commission or other alternatives to the TPP process.

5.10 *Land use planning measures*

5.10.1 Land use measures which can be pursued include:

- concentration of development in the larger urban areas in preference to dispersal;
- promotion of mixed development with housing and community facilities on the town centre CDAs;
- retention of the FE College in the town centre; and
- promoting LOTS schemes.

5.10.2 Additionally, development should be provided with good pedestrian, cycling and bus connections.

Evaluation against objectives

5.10.3 Land use planning measures are long term measures which will provide the backdrop for meeting a number of the Study's objectives. By concentrating development close to existing facilities and ensuring that new developments have a mix of uses, land use planning measures reduce the need to travel. Secondly, by ensuring that new developments are well served by good pedestrian, cycle and bus links, land use planning measures help to reduce car travel.

5.10.4 These two basic factors mean that land use planning measures help to reduce the impact of motorised traffic by reducing traffic (objective 1), improve accessibility to facilities within the town (objective 2) and contribute to improvements in conditions for pedestrians and cyclists (objectives 4 and 5). Land use planning measures will also improve accessibility to the countryside by ensuring that new developments have recreational links (objective 7) and reduce road danger by reducing traffic and providing alternative travel modes (objective 9).

Ease of implementation

5.10.5 Land use planning measures are implemented by Oxfordshire County Council and West Oxfordshire District Council through the Structure and Local Plans. Many appropriate policies are already in these Plans. Points mentioned in Chapter 3 should be considered for future plan reviews.

5.11 *Funding opportunities*

Transport Policy and Programme Submission

5.11.1 The standard mechanism for assessing and allocating public funding to transport projects is the annual TPP submission to the Department of Transport. The TPP is an assessment procedure. The funds are allocated through Transport Supplementary Grant (for major road schemes), Section 56 Grant (for major public transport schemes) and through credit approvals within the DoE's Rate Support Grant allocation for other projects.

5.11.2 Government funding for transport projects has been restricted in recent years, and local authorities have been told not to expect to receive an allocation in 1997-8 in excess of their previous years' allocation.

5.11.3 To maximise the chance of success the TPP submission should comply with the guidance offered in Circular 2/96. The essential features which Government are looking for are:

- a package approach, where measures are related to an overall strategy;
- multi-modal approaches which provide for walking, cycling and buses, and which include demand restraint measures such as parking management;
- provision for the needs of people with mobility impairment; and
- linkage between TPP strategy statements and land use plans.

5.11.4 The package approach being examined in the Witney Integrated Transport and Land Use Study fulfils these requirements, and the specific measures which are being tested chime with the more detailed guidance given in Circular 2/96. Even so, the shrinking funding and in particular the reluctance to fund major new capital projects in 1997-8 mean that other sources must also be explored. Whilst there is little chance that WITLUS measures will receive Transport Supplementary Grant, there may be opportunities for loan sanction.

5.11.5 It should be noted that TSG eligible projects can be substituted within packages. However, resources cannot be taken from approved TSG projects to pay for projects which have not been approved. Within a local authority's TPP package, therefore, the primary use of the substitution facility is to bring approval projects forward.

Car Parking Charges

5.11.6 The product of town centre parking charges could be recycled into town centre improvements and other aspects of the strategy. The revenue yield from a charging policy can be calculated in Stage 3.

Regeneration Funding

5.11.7 Funding is available under the Single Regeneration Budget Challenge Fund (the Challenge Fund) for regeneration and economic development initiatives involving partnership between local authorities and other stakeholders. SRB programmes often include transport infrastructure and environmental improvement schemes. However, the fund is directed to those areas where significant regeneration benefits are expected. Witney is not such an area and funds will not be available.

European Funds

5.11.8 The European Regional Development Fund is administered under a series of objective headings, each of which applies to geographical areas of the Community. These are in addition a series of non-geographical Structural Funds targeted at specific measures such as inner city renewal (URBAN), local rural development (LEADER) and transfrontier co-operation (INTERREG). The WITLUS proposals would not receive priority under any of the ERDF packages and funds will not be available. There may, however, be European funding for innovative proposals, though this could involve partnership with other towns and authorities and a major research element.

Private Finance

5.11.9 The main scope for levering private investment into Witney's transport package is through planning obligations. This is the principal way in which transport infrastructure in Witney has been funded over the last 15 years. This is the approach being taken in respect of the Cogges Link and North East Distributor Road, which are being funded through developer contributions from adjoining development.

5.11.10 Some aspects of the Witney package could be funded from development in this way: for example the provision of new pedestrian and cycle links into the town network from a previously

undeveloped and unconnected area, or contributions from town centre developers to off site car parking, service access, pedestrian safety measures and bus facilities.

5.11.11 Private investment is likely to work well where new measures can be incorporated as an integral part of a development project. For example, an integrated pedestrian and cycle network could be built up in stages from facilities incorporated into each new development, with the WITLUS providing the co-ordinating network.

5.11.12 There may be scope to fund environmental improvements through sponsorship by local business. This approach has been pioneered in Salisbury and Berkhampsted, where landscaping schemes were paid for, or contributed to, by local stakeholders.

Lottery Funding

5.11.13 The Lottery Funds include a Sport Fund and a Heritage Fund. Elsewhere in the UK the fund administrators have indicated in principle that cycle and pedestrian routes linked to the Sustrans National Cycle Network may qualify for lottery funding. This would provide up to 50% matching funding. The Heritage Fund may consider some specific environmental measures in Witney involving treatment of the town's historical fabric.

DOT demonstration projects

5.11.14 Innovative schemes such as the provision of a segregated bus lane along the A40 and on the railway line at Oxford may qualify for special funding alongside as a demonstration project by the Department of Transport. The County Council and the Department of Transport are currently funding a feasibility study for the provision of this bus lane.

Conclusion

5.11.15 Alternative funding sources will continue to be explored throughout the study programme. However the primary source of funding remains development funding and the TPP/loan sanction, and it is therefore crucial that the WITLUS proposals are framed within the spirit of Circulars 16/91 and 2/96.

5.12 *Summary evaluation of measures against objectives*

5.12.1 Table 5.1 gives a summary of the evaluation of the measures against the Study objectives. [SEE PART 2 – SEPARATE FILE]

Table 5.1 Summary of Evaluation Measures Against Objectives

Objectives >	**1. Reduce adverse impact of motorised traffic**	**2. Protect / enhance town centre**	**3. Improve accessibility to facilities**	**4. Improve conditions for pedestrians**	**5. Promote better conditions for cyclists**	**6. Improve accessibility to Oxford**	**7. Improve accessibility to the countryside**	**8. Promote the efficient operation of all types of traffic**	**9. Reduce road danger**
Option 1	Only affects part of High St. Limited impact.	Consolidates economic advantage of businesses in south of town centre.	Only affects facilities on part of High St. Limited impact.	Accentuates differences in pedestrianistation conditions between north and south parts of High Street.	Depends on form of scheme. Possible limited benefits on High St.				Limited impact on safety. Only 17% of accidents occur in town centre.
Option 2	Reduces traffic on High St and Corn St. Dark Lane/Moor Av and Puck Lane/Glos Place to be protected. Increases on Mill Street.	Spreads economic benefits to northern end of town centre by improving pedestrian circulation there. Allows re-integration of Church Green.	Improves accessibility for pedestrians and cyclists to town centre from south by re-organising the Buttercross. Improves access to businesses on north of High St. Limits car drivers to car	Improves pedestrian facilities though High St and Corn St. Allows free circulation of pedestrians in north end of High St and across Buttercross. May increase traffic flows in some areas, leading to	Depends on form of scheme. Benefits on High St and Corn St, and other parts of town centre. May increase traffic flows in some areas, leading to deteriorating cycling conditions.				Limited impact on safety. Only 17% of accidents occur in town centre.

Table 5.1 (cont)

Option 2 PLUS	Performance against objectives depends on degree of traffic restraint on Bridge Street. Performance will be between that of Option 2 and 3.								
	1. Reduce adverse impact of motorised traffic	**2. Protect / enhance town centre**	**3. Improve accessibility to facilities**	**4. Improve conditions for pedestrians**	**5. Promote better conditions for cyclists**	**6. Improve accessibility to Oxford**	**7. Improve accessibility to the countryside**	**8. Promote the efficient operation of all types of traffic**	**9. Reduce road danger**
Option 3 (CL + NED)	Affects most of town's sensitive roads. Model shows vehicular traffic increases on Oxford Hill and West End and parts of the wider network. Traffic management required.	Spreads economic benefits throughout town centre. Allows re-integration of Church Green and Bridge St.	Improves accessibility to pedestrians and cyclists to facilities throughout town centre and in wider area. Limits car drivers to car parks. Increased traffic on some routes may compromise vehicular accessibility.	Allows free circulation of pedestrians throughout town centre. Traffic reduction on town-wide routes leads to a better pedestrian network throughout town, especially from the north. May increase traffic flows in some streets, leading to deteriorating pedestrian conditions.	Depends on form of scheme. Possible benefits throughout town centre. Benefits on most key cycle routes into town from traffic reduction, especially from the north. May increase traffic flows in some streets, leading to deteriorating cycle conditions	Reduced traffic on key bus routes would improve bus accessibility to Oxford. However, some links (e.g. Oxford Hill) remain busy.	Reduced traffic on many routes would improve pedestrian and cycle access to countryside routes .	May encourage mode shift by making some car trips less convenient than walking or cycling. Reduced vehicular traffic congestion would improve travel efficiency.	Improves safety in many areas of town by reducing vehicular traffic on many routes. May decrease road safety in other areas as vehicular traffic increases.

Table 5.1 (cont)

	1. Reduce adverse impact of motorised traffic	2. Protect / enhance town centre	3. Improve accessibility to facilities	4. Improve conditions for pedestrians	5. Promote better conditions for cyclists	6. Improve accessibility to Oxford	7. Improve accessibility to the countryside	8. Promote the efficient operation of all types of traffic	9. Reduce road danger
Option 3 + (CL + NED + WEL)	Generally dilutes impacts (positive and negative) of Option 3 (CL + NED) both within and outside Witney.	Spreads economic benefits throughout town centre. Allows re-integration of Church Green and Bridge St.	Mixed changes to accessibility for pedestrians and cyclists to facilities throughout town centre. Less dramatic changes than for Option 3 (CL+NED).	Allows free circulation of pedestrians throughout town centre. More limited benefits/disbenefits through limited traffic flow changes elsewhere.	Depends on form of scheme. Possible benefits throughout town centre. More limited benefits/disbenefits through limited traffic flow changes elsewhere.	Reduced traffic on key bus routes would improve accessibility to Oxford. However, some links (e.g. Oxford Hill) remain busy.	Dilutes impacts of Option 3.	Dilutes impacts of Option 3.	Dilutes impacts of Option 3.
Improvements to pedestrian network	Facilitates mode shift, reducing vehicular traffic and its impacts.	Improves public realm	Improves accessibility for pedestrians.	Directly improves conditions by providing better facilities, and indirectly through mode shift and vehicular traffic reduction.	Indirectly improves conditions for cyclists by facilitating mode shift and vehicular traffic reduction.		Improves links to the countryside.	Facilitates reduction of vehicular traffic congestion by mode shift.	Directly by providing pedestrian facilities (e.g. crossing facilities) and also facilitates mode shift , reducing car traffic and its impacts.

Table 5.1 (cont)

	1. Reduce adverse impact of motorised traffic	2. Protect / enhance town centre	3. Improve accessibility to facilities	4. Improve conditions for pedestrians	5. Promote better conditions for cyclists	6. Improve accessibility to Oxford	7. Improve accessibility to the countryside	8. Promote the efficient operation of all types of traffic	9. Reduce road danger
Improve cycle facilities	Facilitates mode shift, reducing traffic and its impacts.		Improves accessibility for cyclists.	Improves conditions for pedestrians by ensuring that cyclists do not use footways. Facilitates mode shift and vehicular traffic reduction.	Directly improves conditions by improving facilities, and indirectly through mode shift and vehicular traffic reduction.		Improves links to the countryside.	Facilitates reduction of vehicular traffic congestion by mode shift.	Facilitates mode shift , reducing car traffic and its impacts, and improves safety through provision of specific facilities.
Improve bus services	Facilitates mode shift by reducing vehicular traffic and its impacts.		Improves accessibility for bus riders.	Indirectly by facilitating mode shift and reducing vehicular traffic.	Indirectly by facilitating mode shift and reducing vehicular traffic.	Particularly with provision of segregated bus lane and park and ride.		Facilitates reduction of vehicular traffic congestion by mode shift.	Facilitates mode shift, reducing car traffic and its impacts, leading to safer streets.

Table 5.1 (cont)

	1. Reduce adverse impact of motorised traffic	2. Protect / enhance town centre	3. Improve accessibility to facilities	4. Improve conditions for pedestrians	5. Promote better conditions for cyclists	6. Improve accessibility to Oxford	7. Improve accessibility to the countryside	8. Promote the efficient operation of all types of traffic	9. Reduce road danger
Traffic calming	Reduces the adverse impact of vehicular traffic by reducing speeds.			Improves conditions for pedestrians by reducing car traffic speeds.	Improves conditions for cyclists by reducing car traffic speeds.				Reduces road danger by reducing motorised traffic speeds.
Parking management	Eliminates 'search' traffic in town centre.	Removes visual clutter by removing on-street parking.	Ensures parking is available in town centre car parks but removes on-street parking. Providing more spaces reduces town centre land available. Parking charges avoid valuable land take.					Allows vehicular traffic to function efficiently.	

Table 5.1 (cont)

	1. Reduce adverse impact of motorised traffic	2. Protect / enhance town centre	3. Improve accessibility to facilities	4. Improve conditions for pedestrians	5. Promote better conditions for cyclists	6. Improve accessibility to Oxford	7. Improve accessibility to the countryside	8. Promote the efficient operation of all types of traffic	9. Reduce road danger
Cogges Link and North East Distributor Road	Alone will not provide long lasting Witney wide benefits. Reduces impact of vehicular traffic if combined with restraint.	Improves attractiveness of town centre if combined with restraint measures.		Improves conditions for pedestrians if combined with restraint to divert town trips to outer roads.	Improves conditions for cyclists if combined with restraint to divert town trips to outer roads.				Reduces road danger if combined with restraint to divert town trips to outer roads.
Addition of West End Link	Reassigns traffic with mixed results, increasing flows in some areas and reducing them in others.			Reassigns traffic redistributing benefits to pedestrians of reduced flows.	Reassigns traffic redistributing benefits to cyclists of reduced flows.				Reassigns traffic redistributing safety benefits of reduced flows.
Travel awareness measures	Reduces vehicular traffic by encouraging modal switch.	Reduces vehicular traffic by encouraging modal switch.		Reduces vehicular traffic by encouraging modal switch.	Reduces vehicular traffic by encouraging modal switch.	Could reduce A40 traffic by increasing bus ridership.	Improves access to the countryside by providing information.	Encourages mode shift, reducing vehicular traffic congestion.	Reduces road danger by encouraging modal switch.

Table 5.1 (cont)

	1. Reduce adverse impact of motorised traffic	2. Protect / enhance town centre	3. Improve accessibility to facilities	4. Improve conditions for pedestrians	5. Promote better conditions for cyclists	6. Improve accessibility to Oxford	7. Improve accessibility to the countryside	8. Promote the efficient operation of all types of traffic	9. Reduce road danger
Land use planning measures	Provide backdrop to ensure modal switch and travel reduction can occur. Retain and encourage mixed use in town centre to reduce need to travel and ensures new development has appropriate parking and is appropriately located.	Provide backdrop to ensure modal switch and travel reduction can occur. Retain and encourage mixed use in town centre.	Ensure new development is well served by facilities, appropriately located and connected.	Provide backdrop to ensure modal switch and travel reduction can occur. Ensure new development has good pedestrian facilities.	Provide backdrop to ensure modal switch and travel reduction can occur. Ensure new development has good cycle facilities.		Ensure new development has recreational links.		Provide backdrop to ensure modal switch and travel reduction can occur.

6 Packaging the Measures

6.1 *Introduction*

6.1.1 In order to provide an integrated and consistent policy approach for Witney it is necessary to combine the measures into a coherent package. In this section of the report we consider how an appropriate package can be built-up, looking first at the short-term, then into the longer term.

6.2 *Providing alternatives to the car*

6.2.1 The key unifying feature of the policy package is that it should be aimed at reduced car use. Therefore those measures which provide realistic, attractive alternatives to car travel must provide the essential backcloth for the other projects such as pedestrianisation.

6.2.3 It would be incorrect, however, to say that the car reduction measures are **necessitated** by pedestrianisation. Further modelling work is required, but it may be that a substantial amount of pedestrianisation could be introduced immediately with only modest changes induced to traffic flows on the surrounding network. The key factor, as shown in paragraph 3.2.12, is traffic **growth**, the impacts of which will demand a policy response sooner or later whether pedestrianisation in Witney takes place or not.

6.2.4 Therefore the foundation for the package in both short and long term is provided by the following measures:

- development of a road network which provides preferential routing for non-car traffic;
- development of a comprehensive pedestrian network;
- development of a comprehensive cycle network;
- establishment of a comprehensive intra-Witney bus network;
- a sustained and focused travel awareness campaign for Witney; and
- development of a parking demand management strategy for Witney town centre.

6.3 *Enhancing the town centre*

6.3.1 In the town centre it will be necessary to exclude traffic in order to deliver the scale of environmental benefits required to meet the

objectives of the Study. The most limited of the three pedestrianisation options (Buttercross to Welch Way) does not provide any environmental benefits to the economically less secure northern part of the High Street, and could serve to widen the gulf between the northern and southern parts. The intermediate pedestrianisation scheme (Church Green to Witan Way) would create the opportunity to promote a pedestrian circulation system which unites the northern and southern parts of the High Street and is therefore much preferred on both environmental and economic grounds. It is recommended for exploration in Stage 3 as the core component of a short-term package.

6.3.2 Subject to further investigation, it may be that this intermediate scheme is capable of implementation in the immediate future without aggravating traffic conditions elsewhere in the town. Therefore, the Cogges Link and North-East Distributor may not be needed as part of the short-term package.

6.3.3 The introduction of a pedestrian zone from Church Green to Witan Way (including parts of Corn Street and Welch Way) will go a substantial way towards the achievement of a "drive to not through" policy for Witney town centre. For this approach to work effectively, it will be necessary to ensure that parking demand and supply are broadly in balance on both sides of the town. Without this, cars will be forced to find routes around the centre from one side to another, adding to congestion and militating against the travel reduction objective.

6.3.4 A parking management strategy is therefore recommended as a complementary measure to pedestrianisation. In Stage 3 we will carry out further investigations to enable an appropriate strategy to be specified. The key requirement of the strategy is that parking supply in Witney should always be in excess of expressed demand and that any discrimination should favour the residential and commercial vitality of the town centre.

6.3.5 Urban enhancement schemes will be needed in order to extract the maximum benefit from a car-free town centre. These should include:

- re-design of the public realm to create usable, friendly spaces;
- a much enhanced environment at the bus stops;
- measures to secure access to and through the centre for the mobility impaired;
- removal of visual clutter;
- improved facilities for cycle parking; and

- better linking of the pedestrianised areas to other parts of the town.

6.4 *Traffic measures (short-term package)*

6.4.1 Measures to secure safe and attractive living streets are part and parcel of the improved pedestrian network mentioned under the heading "Providing alternatives to the car". We recommend the establishment of a comprehensive speed management policy within Witney, where the speeds are related to the function and priority of the roads. Such a strategy needs to be self-enforcing and is likely therefore to consist largely of traffic calming measures in those streets where current driving speeds exceed the desired maximum. An indicative strategy is suggested in Figure 4.5. This will be refined in Stage 3. Such a strategy might also help to deter inessential car journeys, or to redirect them to more appropriate routes. Hence traffic calming is a "backcloth measure", helping to serve several objectives in a combined package.

6.4.2 It should be noted that although the short term package delivers worthwhile benefits, it is unlikely to achieve significant changes to traffic patterns in the town as a whole, or to mitigate the rate of traffic growth.

Short Term Package

Providing Alternatives to the Car

- pedestrian network
- cycle network
- Witney bus network
- segregated bus route to Oxford

Town Centre Enhancement

- pedestrianisation from Church Green to Witan Way
- car parking management strategy
- urban enhancement projects

Traffic measures

- traffic calming

Soft measures

- travel awareness campaign

6.5 *Longer term package development*

6.5.1 Once the Cogges Link and North East Distributor are constructed, the opportunity arises to provide significant relief to the highly sensitive Bridge Street and, if possible, to other parts of the northern Conservation Area. So far, the only option which has been explored in detail is full closure to general traffic. The results of our Stage 2 assessment indicate that closure could yield major benefits not just in Bridge Street itself, but more generally in Witney because it pushes traffic to the edge of town, and is likely to promote mode shift away from the car.

6.5.2 The Stage 2 assessment also confirms that full closure of Bridge Street cannot be implemented in isolation because it would cause widespread adverse traffic impacts which would militate against some of the Study's objectives. This strongly underlines the need for a comprehensive package of traffic reduction measures within which the closure of Bridge Street can sit. Many of these measures will be in place once the short-term package (see Section 6.4) has been implemented, although their impacts may take some time to mature.

6.5.3 There remain questions, however, about the precise form of relief which should be secured in Bridge Street, and what is the best package of complementary network changes. In Stage 3 alternatives to full closure can be assessed (see paragraph 4.3.12). These options may cause fewer adverse traffic impacts, although it remains to be seen what their benefits are, or how practicable they are.

6.5.4 So far as the complementary network is concerned, the main outstanding choice is whether or not the West End Link should be included. The tests carried out in Stage 3 indicate that the West End Link might dilute both the benefits and the adverse effect of full pedestrianisation. The issue is likely to turn on the extent to which it is seen as desirable to relocate town centre traffic or discourage it, and to induce people to travel more on foot, bicycle and bus. However, the network effects with traffic restraint need to be studied more closely before a reliable conclusion can be drawn on the need for the West End Link, and the issue of what form of restraint is appropriate at Bridge Street also needs to be resolved as part of the same investigation.

6.5.5 We recommend that the following package of measures be investigated for the medium-to-long term: (see next page)

Post 2001 Package

Providing Alternatives to the Car

- pedestrian network
- cycle network
- Witney bus network
- segregated bus route to Oxford
- park and ride for Oxford journeys

Town Centre Enhancement

- pedestrianisation
- "green route" treatment of Bridge Street
- car parking management strategy
- urban enhancement projects

Road Schemes

- Cogges Link/North East Distributor (essential)
- West End Link (to be assessed)

Traffic Measures

- traffic calming

Soft measures

- travel awareness campaign

6.6 *Additional car restraint*

6.6.1 Looking beyond 2001, our traffic modelling work suggests that continuing growth in car use will create increasing problems on the road network. With the post 2001 package of measures in place, Witney town will be protected against many of the adverse effects of this growth. However, it is likely that some effects will be felt in the town, particularly in those areas (for example West End) where significant flows are still predicted.

6.6.2 So the long term prognosis indicates a need for additional restraint on car use. Indeed, without the package of measures which we

recommend, the need for restraint would arise even sooner, because there would be inadequate safeguards against the adverse impacts of traffic in Witney.

6.6.3 It is outside the remit of the WITLUS to recommend what form of restraint is appropriate, and some approaches need to be applied at the national level while others work best locally. The main options available include:

- fiscal policy;
- area licensing; and
- road pricing.

6.7 *Monitoring the effectiveness of the package*

6.7.1 The Study objectives, and the related issues which have been highlighted by the work carried out to date, provide a basis for generating and then evaluating the individual measures and the policy packages. This evaluation (presented in Chapter 5) is concerned with the **expected performance** of the measures in meeting the objectives, and it is a good enough procedure for comparing one policy approach with another.

6.7.2 When the measures are implemented, however, a more rigorous approach needs to be taken to monitoring their effectiveness in operation. To that effect, a number of performance targets for 2001 will be developed in Stage 3.

7 Next Steps

7.1.1 Chapter 6 presented two integrated packages of measures, one for the short term (the next 5 years) and one for the long term.

7.1.2 Stage 3 will involve working up these packages into firm proposals. This will include:

- refining the measures to resolve outstanding problems in their performance and implementability;
- re-packaging as necessary where this would improve overall performance;
- working up detailed aspects of the measures such as opportunities for urban enhancement provided by pedestrianisation;
- resolving conflicts between measures where they occur;
- a thorough investigation of funding possibilities;
- public exhibition;
- preparation of TPP submission; and
- development of appropriate targets to aid the implementation and monitoring process.