

# DD272

## Norwich Area Transportation Strategy



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# Executive Summary

## Introduction

Norfolk County Council agreed this transportation strategy (NATS4) for the Norwich area in October 2004. It replaces the previous version of the strategy (NATS3), which was adopted in 1997. This strategy has reviewed NATS3, and takes many of its successful themes forward.

**Note:** In 2010 the county council agreed a NATS Implementation Plan, setting out how the strategy would be implemented on the ground. In developing the implementation plan, the opportunity was taken to re-align a small number of the NATS policies to reflect developments in national policy and the Joint Core Strategy for Greater Norwich, and to amend the NATS area to that of the Norwich Policy Area for consistency with the Joint Core Strategy. These changes, shown in red, were agreed by Norfolk County Council's Cabinet at their meeting on 6 April 2010.

## Key Elements of the Strategy

The transport strategy has been designed to help deliver the growth that will happen within the Norwich area and address the problems, such as congestion. The strategy should ensure that Norwich develops as a sustainable urban community, with a transport system that meets its needs. The strategy promotes travel choice, recognising the need to maintain the economic health of the Norwich area, and does not propose radical restrictions on vehicular access. It carries forward the previous policy of accommodating the growth in number of trips by means other than the car. NATS4 will achieve this through promotion and improvements of other modes, including public transport.

A Northern Distributor Road has been identified as an important element to enable growth within and around Norwich. A new road will be delivered in conjunction with traffic management measures in residential roads and minor rural roads around the north of Norwich, to lock in the benefits from a new road.

The pedestrian dominated area will be extended within the city centre. Initially traffic management schemes will be implemented on a number of essential pedestrian routes, and in the longer term through traffic will be removed from the centre. This is likely to be achievable only with further improvements to the Inner Ring Road and delivery of a Northern Distributor Road.

A Road Hierarchy will be identified. This will put priority where it is most needed, for example to pedestrians in the city centre and traffic on the main roads. Congestion will be tackled through improving efficiency of the road network and intensive implementation of soft measures.

Further expansion of park and ride will be considered, taking into account usage and further potential demand.

## **Overall Strategy**

The overall strategy links to Government guidance and the draft Regional Spatial Strategy. It:

- Recognises the Norwich area as a centre where growth will be focussed. (Likely growth includes a major urban extension to the north east of Norwich and growth of Norwich International Airport.) The strategy looks to provide the essential infrastructure needed to accommodate this growth, including a Northern Distributor Road.
- Supports the Norwich area as a sustainable community, complementing development by measures to provide a high quality urban experience. It includes policies to reduce the impact of traffic, extend the pedestrian dominance of the city centre (identifying that ultimately through traffic can be stopped, in conjunction with an Northern Distributor Road), reduce traffic impact on residential side-streets and roads around the north of Norwich, make the best use of the road network and ensure that transport schemes meet their desired outcomes using high quality design
- Supports Norwich's role as a Regional Interchange Centre: strengthening the role of interchange, improving bus travel in the urban area, improving links to other urban areas and improving interchange within Norwich between modes
- Promotes travel choice: enabling people to make personal choices of travel mode.

## **Accessibility**

The strategy is to improve accessibility for all by increasing travel choice. This includes:

- Improving facilities for walking and cycling, concentrating on the core networks
- Improving public transport routes, information, frequency and reliability, concentrating bus priority improvements on the core bus network. A Northern Distributor Road will facilitate provision of a potential Park and Ride site at Taverham / Drayton
- Improving traffic movement through policies on combating congestion, and through providing short-stay parking in the city centre
- Providing long-stay parking at the Park and Ride sites. Take a wait-and-see approach before considering expansion, or further sites at Trowse and / or Taverham / Drayton. The strategy identifies that services should principally operate 'non-stop'
- Providing access for everyone through appropriately designed infrastructure and promoting buses with access for people with disabilities.

## **Congestion**

Government has set out that in larger urban areas (over 250,000 population), congestion should be monitored and targets set to reduce it. Although Norwich has not been identified as such an area in the Guidance on 2nd Local Transport Plans, this strategy proposes that it be treated as if it were, and sets out a strategy to tackle congestion:

- It proposes revisions to the mode hierarchy: A road hierarchy is proposed within the outer ring road.
- The focus on the main routes will be to tackle congestion, through measures including junction improvements and soft measures.
- The efficiency of the network will be improved, including by
  - Developing the Urban Traffic Control system, maximising the benefits from BusNet, and use of telematics generally to manage the network
  - Considering trials of allowing Powered Two Wheelers, freight vehicles and / or high occupancy vehicles to use bus lanes
  - Improving signing and information to motorists
- More intensive development of soft measures, including travel planning and personalised journey planning.

## **Pollution**

The strategy for tackling pollution includes:

- Tackling problems of air quality using traffic management measures
- Promoting use of vehicles, including buses and authorities' own fleets, using clean fuels, or low carbon fuels and of less-polluting driving methods
- Minimising, and where necessary, mitigating impacts of transport infrastructure on townscape, landscape, open space, wildlife habitats and water resources

## **Safety**

The strategy includes:

- Casualty reduction measures
- Reducing speeds
- Education and training
- Enforcement: the strategy suggests that possibilities for further decriminalisation of parking and moving traffic offences be examined, allowing enforcement to be better matched to achieving the objectives of the transport strategy. These objectives relate not only to safety but also helping to tackle congestion (e.g. parked or queuing vehicles blocking traffic flow) or accessibility (e.g. parked vehicles blocking pavements).

## **Economic vitality**

The strategy has close links with the draft Regional Spatial Strategy. It:

- Recognises the need for bringing forward transport infrastructure, including public transport, cycling and walking facilities to new development, and the importance of such infrastructure to existing development, such as the airport and city centre
- Identifies the need to consider areas where there is likely to be significant change as a whole, so that the necessary infrastructure can be planned and secured
- Provision of a high standard route for heavy goods vehicles, avoiding the congested urban area and minor rural roads, through a Northern Distributor Road.

## **Liveability and Community**

The strategy:

- Recognises the need for good design
- Has strong links with reducing crime and the fear of crime on transport infrastructure, including streets, public transport and car parks
- Tackles social exclusion through policies designed to improve access for all and help people to access essential services.

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October 2004

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# Chapter 1: Introduction

## Background

### Introduction

1.1. This document sets out a transportation strategy for the Norwich Area until 2021. A long-term approach has been adopted so that the transport strategy can link up with the land-use plans for the area and to allow the necessary planning and procedures for large-scale projects, such as a northern distributor road, which can take many years from inception to delivery.

1.2. The Norwich Area Transportation Strategy (NATS) covers the city of Norwich, its suburbs and the first ring of surrounding villages. This is shown on Plan XX. It is an area approximately 22km by 18km and includes the Norwich City Council administration area and parts of the Districts of South Norfolk and Broadland.

1.3. The strategy has been prepared by Norfolk County Council, in partnership with Norwich City Council, Broadland District Council and South Norfolk Council. Extensive public consultation on a Preferred Strategy was carried out in the autumn of 2003. Views from this consultation have fed into this, the final strategy.

### History of the Norwich Area Transportation Strategy

1.4. This strategy is the fourth iteration of the Norwich Area Transportation Strategy (termed as NATS4). It replaces the one adopted by the County Council in 1997, and published in October 1998. The revised strategy seeks to build on successful elements, such as Park and Ride, increased patronage on buses and reduction in levels of traffic crossing the inner ring road into the city centre. It also has to meet the challenges likely to be faced during the plan period and address areas of new concern.

1.5. The policies and proposals of NATS4 have been designed so that they form an overall, holistic strategy, with policies that complement and support each other.

## The Norwich Area

### Introduction

1.6. Norwich is the county town of Norfolk and an important focus in the region for a range of services, as well as the administrative and operational headquarters for a number of organisations. It is a city of considerable historic importance and the city centre, in particular, retains many historic features. It is the largest medieval walled city in the country, with over 1,500 listed buildings, including a Norman castle and two cathedrals. The historic core has a pattern of narrow streets within the city walls lined by many medieval and Georgian buildings and churches. There is landscape of significant national and local value, which is also important for recreation.

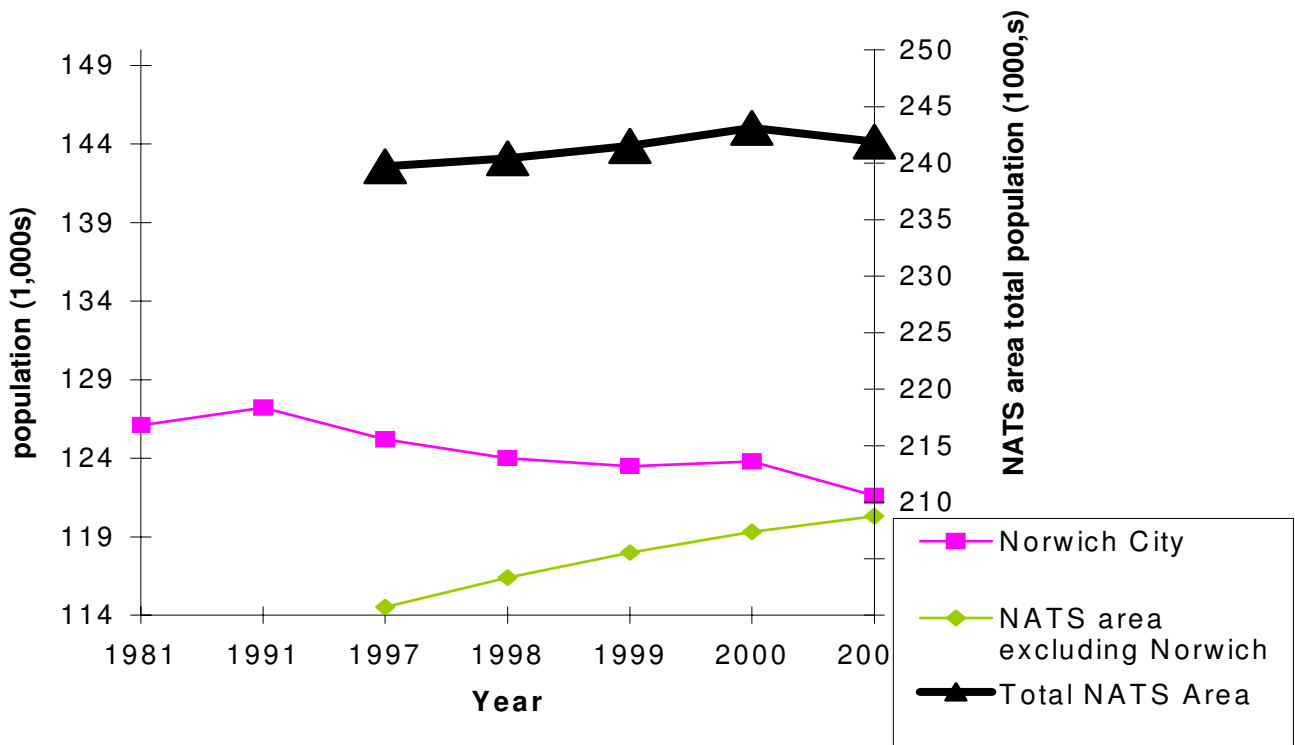
1.7. Transport plays an important part in allowing the Norwich Area to fulfil its potential, but can also cause problems, such as traffic congestion or environmental impacts. A transportation strategy is an important tool, setting out not only how any problems are minimised, but it will also ensure that transport can bring the maximum benefits to the area.

**Population in the Norwich Area**

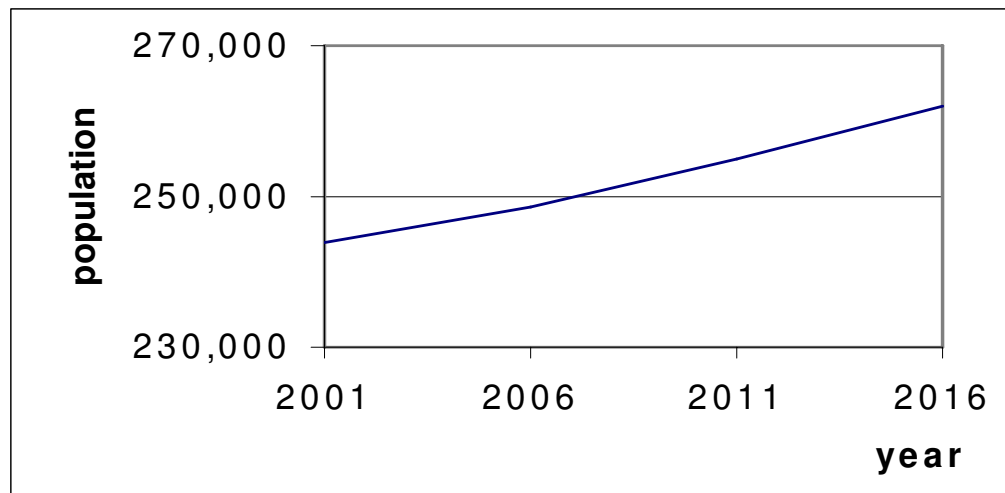
1.8. The population of the Norwich transportation strategy area is approximately 250,000. About one quarter is aged over 60 and another quarter under 20. The city has a higher proportion of 20 to 30 year-olds, compared to the rest of the country.

1.9. Since 1990, there has been a decline in the population within the District of Norwich City, although this trend may have reversed in recent years (Graph 1). In the Norwich Area, the population is rising outside the city boundary. This will affect travel patterns, with a possible increase in commuting into the city centre from the suburbs.

**Graph 1: Population Projection in Norwich area**



**Graph 2: Population Projection in Norwich area**



### **Housing**

1.10. There are just over 100,000 dwellings in the Norwich Area. New housing completions average about 1,150 per year. The draft Regional Spatial Strategy requires the development rate to increase to 1,475 per year, so there will be considerable housing growth in the area within the period of this strategy. In accordance with the draft Regional Spatial Strategy, this is likely to include a significant mixed-use urban extension on the north-east fringe of Norwich, somewhere between the B1150 North Walsham Road and the A47 at Postwick.

### **Major Employment**

1.11. There are some 140,000 jobs in the Norwich area, with 94,000 jobs within the city. Major employers include Norwich Union, Marsh and at the Norwich Research Park, including the University of East Anglia.

1.12. Areas where significant expansion of existing uses may occur include Norwich International Airport, the Norwich Research Park (including research institutions, the University of East Anglia and the Norfolk and Norwich University Hospital) and Business Parks close to the A47 at Thorpe St Andrew and Longwater. These are all on the periphery of the urban area and make access without a car difficult.

### **Retail & Leisure**

1.13. Norwich is consistently placed within the top ten retail centres in the UK, in terms of the quality and range of its facilities. The nearest comparable retail centre is 100 miles away. Tourism and leisure form an increasingly important part of the city's economy. Norwich has a thriving night-time economy, which attracts up to 30,000 people a night. There is considerable potential for further growth of the area as a tourist destination.

## Social Changes

1.14. Society is moving towards more flexible working patterns and a 24-hour economy. The effect of this on travel is likely to be that trips are spread more evenly throughout the day (and night). The availability and affordability of travel has led to a dramatic rise in the extent of travel: businesses and individuals are travelling more often and further afield than before. Increasing incomes and activities that are more diverse add to the growth in travel. Combined with the trend for people to live further from their workplace (and other facilities), this could mean that people are more inclined to use cars, rather than public transport. This is amplified by the rural nature of Norwich's surrounding area, which is difficult to serve by public transport. There has also been a trend towards smaller households, which affects the need for new housing and can result in higher car ownership (Table 1). As technology changes, more people could work from home.

**Table 1: Journeys by mode by residents of Norwich Area**  
(Source: Norfolk County Council mode share monitoring 2000/2001)

<b>Mode</b>	<b>All journeys</b>	<b>To Work</b>
<b>Walking</b>	18%	13%
<b>Bike</b>	5%	9%
<b>Bus / Coach</b>	7%	8%
<b>Park &amp; Ride*</b>	0%	0%
<b>Rail</b>	1%	1%
<b>Taxi</b>	1%	1%
<b>Car</b>	49%	54%
<b>Car passenger</b>	16%	6%
<b>Motorbike</b>	1%	2%
<b>Homeworking</b>	1%	5%
	<b>100%</b>	<b>100%</b>

*\*NB Rounding results in this being shown as 0%.*

# Chapter 2: Vision and Objectives

## Introduction

2.1. The Vision and Objectives were agreed early on in development of the revised NATS strategy. They were agreed by the Norwich Area Strategic Transport Forum, a panel made up from elected representatives of the County Council, Norwich City Council, South Norfolk Council and Broadland District Council. The Vision and Objectives do not start from a blank sheet: they take forward the Vision and Objectives of NATS3, the previous iteration of this transportation strategy. The Vision and Objectives guided the development of the review of the strategy.

## Policy Context

### National Transport Policy

2.2. In July 2004, Government published its White paper, "The Future of Transport a Network for 2030." This sets out Government's aspirations to meet the shared priority for transport.

#### Shared priority for transport

"Improved access to jobs and services, particularly for those most in need, in ways which are sustainable: improved public transport, reduced problems of congestion, pollution and safety."

2.3. In broad terms the national strategy is underpinned by three key themes:

- Sustained investment over the long term, but also maximising value for money;
- Improvements in transport management to achieve better value for money from both existing and new infrastructure. Through this, the Government is particularly keen to see measures such as congestion charging coupled with a step change in public transport provision; and
- Planning ahead, this recognises that Britain cannot build its way out of its transport problems, and so is proposing moving forward with the debate on national road pricing. Through this theme the Government also explains its plans for sharing decision making at the regional level, moving towards a system whereby regions decide on their transport priorities, and allocate budgets accordingly, based on their priorities, deliverability and affordability

2.4. The White Paper indicates that 'soft measures' (for example, travel planning) can make a major difference in achieving the shared priorities and sets out the importance of producing plans that achieve national and regional priorities.

### **Other policy drivers**

2.5. Government is committed to achieving sustainable development. In its strategy: A Better Quality of Life, a Strategy for Sustainable Development in the UK it sets out that sustainable development involves:

- Maintenance of high and stable levels of economic growth and employment
- Social progress that recognises the needs of everyone
- Effective protection of the environment
- The prudent use of natural resources.

2.6. Government's vision for sustainable communities is set out in Sustainable Communities, Building for the Future. It states that it is committed to creating communities that will stand the test of time, where people want to live and which will enable people to meet their aspirations and potential. The Government's Sustainable Communities Plan, 2002, sets out the long-term programme for delivering sustainable communities. One of its aims is to accelerate the supply of housing. Government has identified four growth areas, and although the Norwich Area is not identified as one, the Norwich urban area is set to have the largest amount of growth of any town or city in the whole of the East of England. The urban fringes in Broadland District could see 10,000 additional houses.

### **Regional Spatial Strategy**

2.7. The draft Regional Spatial Strategy has been 'banked' with the Secretary of State. This is likely to be adopted in 2006, following public consultation in winter 2004/05 and an Examination in Public in summer 2005. It covers the eastern region, including Norfolk, Suffolk, Cambridgeshire, Hertfordshire, Bedfordshire and Essex.

2.8. The draft Regional Spatial Strategy states that development will be focused in or adjacent to major urban areas where there is good public transport accessibility and where strategic networks (rail, road and bus) connect. It identifies Norwich as a key centre in which development and change will be focussed. The strategy recognises that the key locations for growth are likely to need significant infrastructure investment, and that best use should be made of existing infrastructure, rather than relying upon major new infrastructure investment.

2.9. The draft Regional Transport Strategy seeks to:

- widen travel choice: increasing and promoting opportunities for travel by means other than the private car, particularly walking, cycling and public transport, improving seamless travel through the provision of quality interchange facilities and raising travel awareness;
- promote the carriage of freight by rail and water and encourage environmentally sensitive distribution; and
- stimulate efficient use of the existing transport infrastructure, efficiently maintaining and managing existing road, rail, port and airport infrastructure.

2.10. The Norwich area has been identified as a sub-region in the draft Regional Spatial Strategy. Although further work is to be undertaken to clarify the boundaries, in the 'banked' document, the sub-region includes Norwich and extends as far as a ring of market towns within 30 minutes or less drive time. The Norwich area is at the centre of this sub-region.

2.11. The objectives of the sub-regional strategy include to:

- Facilitate the role of the area as the major focus for sustainable growth in the north east of the region;
- Secure the infrastructure required to assist in the sustainable growth and regeneration of the sub-region;
- Sustain and develop the regional role of Norwich, ensuring it realises its full growth potential as well as maximising the benefits of its role as the most significant city centre in the East of England;
- Provide a coherent basis for a sustainable transport strategy to benefit access by all modes of transport;
- Promote the development of Norwich Airport as a regional airport and international gateway with better surface transport links to the rest of the Region.

## **The Local Perspective**

### **Norfolk Ambition**

2.12. Norfolk Ambition is the first Community Strategy for the county, looking forward over 20 years to 2023. It has been developed by a countywide Strategic Partnership that aims to develop, improve and sustain the social, economic and environmental well being of Norfolk and Norfolk people. Among other things, this means helping to shape a distinctive, sustainable and healthy environment and a vibrant economy.

### **Norfolk Structure Plan**

2.13. Norfolk's Structure Plan was adopted in 1999. It set out the strategic land-use planning framework "to take Norfolk into the first decade of the new millennium." The transport objectives of the plan were set out as to:

- Provide for improved accessibility by means other than the private car; and
- Provide for strategic transport needs by road, rail, air and water.

2.14. The Structure Plan sets out that within urban areas, access must be maintained to support economic viability but it is essential that traffic congestion and intrusion do not undermine their efficiency and attractiveness. The approach, therefore, provides a means whereby non-essential car trips can be transferred to more environmentally friendly forms of transport, so that the growth in trips can occur without the adverse impacts associated with motorised traffic.

### **Norfolk's Local Transport Plan**

2.15. Norfolk County Council published its Local Transport Plan in July 2000. This sets out the plans and policies for transport in the county from April 2001

to April 2006. Currently, the Council is working on its Second Local Transport Plan, which will cover the period from April 2006 to April 2011. The Norwich Area Transportation Strategy will form part of the Local Transport Plan, setting out the focus for the Norwich area.



## Vision

To provide the highest possible level of access to and within the strategy area to benefit people's individual needs and enhance the economic health of the strategy area. To ensure that journeys minimise any adverse impact on people and the built and natural environment.

## Objectives

<b>Overall Strategy</b>	<ul style="list-style-type: none"> <li>• Promote a vibrant city centre, and other commercial centres, by improving accessibility for people and goods.</li> <li>• Cater for the travel consequences arising from growth aspirations. In particular, accommodate transport needs arising from future growth of the airport and the cluster of the Norwich Research Park, university and hospitals at Colney.</li> <li>• Maximise transport choice for all travellers.</li> </ul>
<b>Accessibility</b>	<ul style="list-style-type: none"> <li>• Reduce social exclusion through transport solutions and promote equal access to jobs, goods and services.</li> <li>• Enhance access for non-car modes</li> <li>• Promote sustainable means of travel, minimise the length of trips and encourage reduced car-use through land use policies, layout of development and promotion of travel plans</li> <li>• Improve integration and interchange</li> <li>• Reduce the need to travel</li> </ul>
<b>Congestion</b>	<ul style="list-style-type: none"> <li>• Minimise congestion and delays for all modes of transport by improving the efficiency of the transport network</li> </ul>
<b>Pollution</b>	<ul style="list-style-type: none"> <li>• Reduce CO2 emissions from transport by encouraging sustainable modes of travel and vehicles using fuels derived from renewable sources or waste.</li> <li>• Promote the use of alternative modes of transport and less polluting fuels, particularly within Air Quality Management Areas.</li> <li>• Minimise noise, vibration and visual intrusion from transport, particularly in the public, urban open spaces in the historic city centre.</li> <li>• Implement transport solutions that protect open space, wildlife habitats and water resources.</li> </ul>
<b>Safety</b>	<ul style="list-style-type: none"> <li>• Maximise safety and security for everyone</li> <li>• Minimise the number and severity of road traffic accidents</li> </ul>
<b>Economic vitality</b>	<ul style="list-style-type: none"> <li>• Improve the competitiveness of the Norwich area as a retail, tourist and business centre, whilst enhancing its image and maintaining a high quality environment.</li> </ul>
<b>Liveability and community</b>	<ul style="list-style-type: none"> <li>• Lower the incidence of crime experienced on the transport system and remove the perception of fear of crime for vulnerable people</li> <li>• Minimise fear and intimidation from traffic</li> <li>• Protect and enhance residential amenity and minimise community severance</li> </ul>

# Chapter 3: Policies

## Overall Strategy

### Development and Growth

3.1. The draft Regional Spatial Strategy sets out that development will be focussed in urban areas. There is likely to be extensive housing growth in the Norwich area between 2001 and 2021, including a significant urban extension in the north east fringes of the city. The draft Regional Spatial Strategy recognises that there is a severe infrastructure deficit in the region. The Norwich Area Transportation Strategy recognises that there is a need to provide essential transport infrastructure to support the development and growth that will happen in the Norwich Area.

#### **Policy 1: Development and Growth**

Transport improvements will be implemented which support and enhance the local economy and role of the Norwich Area as a regional centre, taking due regard of environmental objectives.

### Northern Distributor Road

3.2. A Northern Distributor Road is proposed as part of the strategy. A new road will:

- Reduce congestion on other parts of the network including the ring roads and radial routes in Norwich;
- With other measures, constrain traffic using unsuitable minor and residential roads around the north of Norwich;
- Make other parts of the strategy easier to deliver. For example it takes traffic from parts of the network, meaning that it is easier to deliver improvements to public transport;
- Improve strategic access from the north of Norfolk / Norwich, including Norwich International Airport, to the strategic road network; and
- Provide part of the essential infrastructure to deliver major growth.

3.3. It will be vital to ensure that a new road scheme does not introduce severance to communities, or restrict opportunities for walking, cycling, public transport or other activities such as horse riding.

#### **Policy 2: Northern Distributor Road**

A Norwich Northern Distributor Road will be developed for implementation, in conjunction with other measures including

- Traffic mitigation measures on minor rural and suburban residential streets around the north of Norwich
- Provision of facilities for cycling and walking

3.4. See links to Policy 6: Residential streets and minor rural roads around the north of Norwich.

### **City centre traffic management**

3.5. The city centre is the focus for the retail, business and leisure experience. The transport network within the centre has a focus on delivery of people and goods, combined with short, distributive trips within the centre, most often by foot from the point of arrival e.g. car parks or the bus station. The transport network within the centre needs predominantly to cater for the function of the city centre (business, retail, tourism, leisure etc) rather than as part of the transport network for the area as a whole. For cycling and, to a lesser extent, walking and public transport, however, the network within the city centre will also need to cater for trips across it.

3.6. Norwich has traditionally branded itself a 'Fine City' and has many assets including its medieval street pattern and historic buildings. However, many areas suffer from a domination of vehicular traffic. City centre retail areas are bisected by busy through traffic routes resulting in pedestrians having second best of the infrastructure. The open spaces in the city are also poorly defined. There has been pressure from major city centre retail interests to bring schemes forward, such as to improve pedestrian links between John Lewis and the new Chapelfield development.

3.7. NATS4, together with other plans, will make the city a more liveable space, taking account of the role of the city centre, the built environment and patterns of movement and land-use. NATS4 supports the draft Regional Spatial Strategy objective to sustain and enhance the vitality and viability of town centres, and Norwich City Council's developing Spatial Strategy.

#### **Policy 3: City centre traffic management**

In the city centre, the focus will be on improving the pedestrian environment and improving the movement of public transport.

3.8. This will be achieved by:

- Extending the pedestrian dominated area where there is a demonstrable demand
- Identification of pedestrian links and overcoming points of conflict with vehicles
- Identification of bus (and taxi) and cycle routes
- Identification of main vehicular routes (to car parks, servicing for shops and to businesses, etc...). These will be those routes that are necessary to provide access to places like car parks, servicing for shops or other business requirements of the city.
- Motorised traffic crossing the city without stopping will be discouraged
- Using the street space for open space, improving the built environment.

#### **Discouraging through traffic from the city centre**

3.9. Removing motorised through traffic from the city centre is an essential element in support of policies to make the city centre a more liveable space.

In the short term (the period of the second Local Transport Plan), a number of road closures will be brought forward. It will be necessary to ensure that any schemes brought forward do not have unacceptable impacts on the surrounding road network, including, in particular, the Inner Ring Road. It may be necessary to undertake certain highway improvements before some of the schemes can be brought forward.

3.10. In the longer-term, through traffic will be prevented from cutting across the city centre. It is unlikely to be possible to achieve this in full until a northern distributor road is constructed. A new road will give motorists an acceptable alternative route.

**Policy 4: Discouraging through traffic from the city centre**

Vehicular traffic will be discouraged from driving through the city centre where appropriate in order to deliver a more pedestrian friendly environment.

This policy has been changed from its original wording when NATS was agreed in 2004, to that shown above – see note in Executive Summary.

The reasons for this are:

To reflect the realities of delivering a city centre environment which meets the needs of all road users, ie there is no one solution that will meet the needs of all users on every road. It will allow much more flexibility in order to ensure that the most appropriate measures are implemented.

**Residential streets in the built up area**

3.11. NATS4 identifies a road hierarchy (see section 3.101). This identifies the main roads, onto which traffic would be distributed. Away from the main roads, the hierarchy identifies roads to access residential areas and individual properties. These residential streets form the backbone to the local residential communities, although too often, busy roads break up communities: by speeding traffic, by excess volumes of traffic or by the size of the traffic.

3.12. The strategy identifies that the quality of life in these areas could be greatly improved by ensuring that they are not dominated by traffic. Traffic management measures such as traffic calming, or measures to increase pedestrian and cyclist priority, will be carried out to overcome problems, and to provide a high quality environment in residential areas. Homezones or access restrictions may be appropriate in some instances, although vehicular access will be maintained to all residential and business premises.

**Policy 5: Residential streets in the built up area**

On roads identified as access roads in the road hierarchy, the traffic impact will be reduced by

- increasing the pedestrian and cyclist priority
- traffic management measures to reduce vehicle speeds to 20mph or less
- vehicular access restrictions, where appropriate

**Residential streets and minor rural roads around the north of Norwich**

3.13. One of the main problems in the Norwich Area is the use of unsuitable routes by traffic travelling around the north of the city. A Northern Distributor Road has been identified as a solution to these problems. However, it is unlikely that the road would attract all of the traffic that travels around the north of Norwich. The strategy proposes restrictions on minor rural and suburban roads around the north of Norwich to 'lock in' the benefits of a new road. Restrictions would be introduced when a northern distributor road is built.

3.14. The strategy does not propose to introduce access restrictions without a Northern Distributor Road because the knock-on effect would be to displace traffic on to other, already congested or unsuitable roads.

3.15. Whilst the strategy recognises that access restrictions on roads around the north of Norwich are inappropriate without a Northern Distributor Road, there may be individual cases where measures are needed to overcome particular problems.

**Policy 6: Residential streets and minor rural roads around the north of Norwich**

Access restrictions will be introduced on minor rural and residential roads around the north of Norwich alongside a Northern Distributor Road scheme. Before a Northern Distributor Road, restrictions on individual roads may be appropriate, based on the individual merits of each case.

**Regional Interchange**

3.16. The draft Regional Spatial Strategy identifies Norwich as a Regional Interchange Centre. The objective in the draft Regional Transport Strategy is to secure a significantly enhanced level of public transport service provision to, from and within the Regional Interchange Centres. The draft Regional Transport Strategy puts considerable emphasis on enabling seamless journeys, to make it easy to change modes enabling use of the most appropriate mode for each leg of a journey. The draft Regional Transport Strategy states that development of public transport should be accompanied by increasing levels of traffic restraint to improve urban environments.

**Policy 7: Regional Interchange**

Public transport improvements, including improved interchange facilities, will be brought forward to enhance Norwich's role as a Strategic Interchange Centre.

3.17. This will be done by:

- Strengthening the role of interchange
- Improving bus travel in the urban area
- Improving links to other urban areas and
- Improving interchange within Norwich between modes.

### **Travel Choice**

3.18. One of the objectives of the draft Regional Transport Strategy is to improve opportunities for all to access jobs, services and leisure/tourist facilities. NATS4 seeks to do this by promoting travel choice: giving people the opportunity and information needed to travel by the most appropriate means.

3.19. Quality of life can be improved through the ability to get to places such as work, education, health care, shopping and leisure. If accessibility is made easier, attendance at school and work can be improved, and health care and work opportunities become available for more people. The transport policies need to address the needs of all, including people with disabilities, from low-income groups, younger people and older people. Although transport can help to make it easier to get to places, accessibility can also be improved by locating services close to where people need them, co-ordinating health appointment times with public transport timetables or providing services in different ways.

#### **Policy 8: Travel Choice**

The strategy seeks to improve accessibility in the Norwich Area by:

- i Improving facilities for all modes of transport;
- ii Improving access to support the economic health of the Norwich Area;
- iii Accommodating growth in the number of trips by means other than the car.

### **Social Inclusion**

3.20. The revised strategy looks to focus on improving social inclusion, supporting the draft Regional Spatial Strategy objective to improve social inclusion and access to employment and services and leisure and tourist facilities among those who are disadvantaged.

3.21. See links to Policies, including improving public transport, providing facilities for people with disabilities, improving residential areas, etc...

# Accessibility

## Introduction

3.22. The economic prosperity of the city relies on the ability of large numbers of people being able to get to the city, for work, shopping, leisure or tourist trips. The County Council has been working with other partners to improve accessibility both within the city, and the wider links to the rest of the Norwich sub-region and beyond. Policies for these wider links are set out in section 3.148. This section concentrates on an accessibility strategy for the Norwich Area. This may be summarised as:

- Improving facilities for walking and cycling, concentrating on the core networks
- Improving public transport routes, information and frequency and reliability.
- Concentrating bus priority improvements on the core bus network.
- Providing short-stay parking in the city centre and long-stay parking at the Park and Ride sites.
- Providing access for everyone through appropriately designed infrastructure and vehicles.

## Walking

### Introduction

3.23. Most trips involve some walking, although the bulk of the trip may be made by another mode. Walking helps people to access facilities, especially within the city centre, for shorter trips to local services like the corner shop and for those without access to a car, including young people. People who walk are likely to be healthier.

3.24. It is important that the environment for pedestrians is properly planned, not only so that there is physical infrastructure like pavements and crossings, but also to help pedestrians feel safe and secure.

### **Policy 9: Walking**

A connected, safe, convenient and attractive pedestrian environment that encourages walking will be created and promoted.

### **Core walking routes**

3.25. Convenient walking routes need to connect people to the places they need to get to. Too often, roads form a barrier, with pedestrians finding it difficult to cross. Safe crossings are essential. However, crossings introduce delays to vehicles including buses and other essential traffic. On main roads, a balance needs to be struck between the needs of pedestrians and the requirements for traffic. This is identified in the road hierarchy.

3.26. A network of core walking routes will be identified. On these routes, safe and convenient crossings of the main road network will be provided. Elsewhere on the main road network, crossing points will be introduced or improved for reasons of safety or severance only. Away from the main road

network, there is more scope to improve crossing points for pedestrians. The policies set out under the Road Hierarchy (Section 3.101) detail this.

3.27. Within the city centre, the core walking routes will identify the entry and exit points into the city centre, routes from arrival points (bus and rail stations, car parks, other public transport stops) and the routes linking the main attractors in the city. The road hierarchy proposes that crossing points over the Inner Ring Road will be provided on the core pedestrian network. Elsewhere in the city centre, pedestrian routes will have dominance over general traffic.

3.28. Other barriers to walking (and cycling) include the river and the railway line. River crossings have been identified, and will be provided as part of development, between King Street and Riverside, and Barrack Street near Cow Tower. Identification of the core walking and cycling networks will help to identify if any further crossings are required.

**Policy 10: Core walking routes**

Within the built-up area, a network of core walking routes will be identified. The core network will be used to identify crossing points on the main roads. Elsewhere, crossing points on the main roads will be improved for pedestrians for safety or severance reasons only

**Links for leisure**

3.29. There are many routes within the Norwich Area, away from the road network, that are suitable for pedestrians. These routes are often especially suitable for leisure purposes. Development of these routes will help to promote the Norwich area as a place to visit. These may comprise urban links to the public rights of way network in the rural fringe.

**Policy 11: Links for leisure**

A network of routes on footpaths, such as riverside walks, or that link green spaces, will be identified, protected from development and maintained, for leisure and tourism

## **Cycling**

### **Introduction**

3.30. The Norwich Area is suitable for cycling trips, as it is relatively compact and flat. Many trips can easily be managed by bike. As well as being comparatively cheap compared to other forms of transport, cycling is beneficial to health, reducing the risk of cardiovascular problems, coronary heart disease and stress, and helps to improve lung function.

**Policy 12: Cycling**

Measures to make the cycling environment safer and more convenient will be undertaken and supported.



### **Core cycling network**

3.31. Much work has already been done to improve the cycling network. However, too often the cycle facilities are not joined up and there are many stretches with no cycling provision at all, often through difficult junctions. A core cycling network will be identified, for routes to work, education, health facilities and shops. Gaps in cycle provision on this core network will be targeted, even if this means spending comparatively large sums on single schemes.

#### **Policy 13: Core cycling network**

A core network of cycle routes will be identified and priority for improving the cycle network will be given to making this network complete. The core network will be used to identify crossing points on the main roads. Elsewhere, crossing points on the main roads will be improved for cyclists for safety or severance reasons only. The network will include links to villages within cycling commuting distance of Norwich.

### **Cycle parking**

3.32. Appropriate levels of cycle parking are required, both to encourage people to cycle, and to ensure that cycles are not left in inappropriate places: such as blocking pedestrian walkways. Much work has recently been carried out within the city centre as part of other works: for example cycle parking on Queen Street and Rampant Horse Street. However, more cycle parking is required, particularly at interchange sites such as the railway station, where cycle parking has to be of an enhanced standard so that people feel comfortable leaving their bikes for relatively long periods of time. See Policy 29: Interchange.

3.33. Cycle theft is a major problem and deterrent to cycling. Cycles are often easy to steal. High quality, secure cycle parking can be a significant factor in combating cycle theft.

#### **Policy 14: Cycle parking**

A rolling programme to introduce cycle parking (including secure cycle parking) will be developed at sites where such parking is inadequate. The cycle theft reduction strategy will be implemented in the Norwich Area

## **Public Transport**

### **Introduction**

3.34. Public transport, especially the bus, provides an alternative to the car for many journeys in the Norwich Area. In particular, bus travel is suitable for longer journeys. It is often the only realistic travel choice for people who don't have access to a car.

3.35. Buses can also help to:

- Facilitate modal shift
- Reduce congestion

- Increase social inclusion
- Reduce environmental impact from travel
- Enable economic growth.

3.36. In recent years, patronage on buses has been increasing in the Norwich area, despite apparent increases in congestion on the road network, which can make bus travel unreliable. However, bus travel is often easy only for trips into the city centre. Other trips may require a change of bus, making journey times long and potentially costly. Good information is crucial, both for seasoned users of the system and for people who are unfamiliar with it. See Policy 43: Travel information.

#### **Policy 15: Public Transport**

To seek to improve the reliability, punctuality and overall quality of public transport services and information through a step change in transport provision.

This policy has been changed from its original wording when NATS was agreed in 2004, to that shown above – see note in Executive Summary.

The reasons for this are:

To strengthen the public transport strategy and to reflect the need to deliver a major shift in emphasis across the Norwich Policy Area towards travel by public transport as required by policy NR1 in the RSS.

3.37. This will be done by:

- Encouraging investment from operators by providing reasonable operating conditions on the highway, for example by providing priority measures on strategic bus routes
- Improving infrastructure and waiting facilities, especially at strategic interchange points, maintaining and developing the bus station as a state of the art passenger transport interchange facility, ensuring that information (for example timetables) is readily available and easy to find
- Providing real-time information at strategic interchange points and continued support to Traveline
- Developing initiatives with operators to educate and inform public transport users and reduce their fear of crime
- Developing and monitoring a Quality Bus Partnership for the Norwich Area to underpin the improvements funded by the Public Transport Major (bus priority measures between the rail and bus stations and rebuilding of the bus station)
- Maintaining a meaningful dialogue with the rail industry stakeholders to ensure that Norwich can retain its gateway to East Anglia status
- Tackling congestion, to improve bus reliability, see Section 3.97: Congestion.

#### **Bus Priority Measures**

3.38. In the city centre, a bus-priority route between the rail and bus stations is being implemented. This forms a core bus route within the city centre. Other

core routes into and out of the city centre and elsewhere in the area will be identified including, for example, Park and Ride routes. This core network will be used as the basis for where bus priority will be provided.

3.39. However, bus priority measures can affect the efficiency of the network for other road-users. The road hierarchy (see Section 3.101) identifies that the primary purpose of main roads is to distribute traffic. This is important to reduce congestion and delay. Any bus priority measure should be designed to minimise delays to general traffic. The benefits to public transport should be carefully weighted against any increase in delays to general traffic. On main roads, bus priority measures could be introduced by, for example, introducing extra lanes on the road network. It is recognised that this may be possible in only a limited number of instances. A Northern Distributor Road will create opportunities for bus provision because a new road will reduce traffic on main roads, allowing bus priority to be provided without introducing additional delays to other traffic.

**Policy 16: Bus Priority Measures**

Bus priority measures will be focussed on the core bus network. Where this core bus network is on main roads (Primary Distributors), new bus priority measures will lock in the benefits of the NDR.

This policy has been changed from its original wording when NATS was agreed in 2004, to that shown above – see note in Executive Summary.

The reasons for this are:

To strengthen the public transport strategy and to reflect the need to deliver a major shift in emphasis across the Norwich Policy Area towards travel by public transport as required by policy NR1 in the RSS. The NDR provides an opportunity to deliver bus priority measures.

**Orbital bus journeys**

3.40. A major difficulty with the current level of bus provision within the Norwich area is the lack of orbital, or around-city, bus services. Most services operate on radial routes, meaning that journeys around the city may mean passengers having to change buses in the city, making trips time consuming and potentially costly. The County Council has been successful in securing Urban Bus Challenge funding to provide an orbital bus service. This will start operating in 2005, and it is hoped that it will prove affordable for it to continue beyond 2008.

**Policy 17: Orbital bus journeys**

New or improved orbital bus services and improved interchange with radial bus services and Park and Ride will be developed if there is shown to be enough demand to justify ongoing financial support.

**Frequency of bus services**

3.41. The County Council adopted the Norfolk Bus Strategy in 2003. This sets out the vision and policies to deliver quality bus services in the county,

and target levels of service for different areas of the county. It recognises that a ten minute frequency means that passengers are able to use services on a 'turn up and go' basis.

#### **Policy 18: Frequency of Bus Services**

We will aim to achieve a high quality bus network within the Norwich area with:

- Turn up and go frequencies on the BRT routes with 30 minute frequencies evenings and Sundays
- A minimum 15/20 minute frequencies on core routes and hourly services evenings and Sundays
- 30 minute frequencies elsewhere in the Norwich area, hourly evenings and Sundays

This policy has been changed from its original wording when NATS was agreed in 2004, to that shown above – see note in Executive Summary.

The reasons for this are:

As for Policy 16, in particular this policy sets more ambitious targets which are required in order to reflect policy NR1 in the RSS. Achieving these high frequency services may be dependent on the NDR on some corridors.

#### **Ticketing**

3.42. A main concern for passengers, particularly if people are to choose to use bus transport in preference to car transport, is journey time. As well as providing bus priority measures, reducing the amount of time that people spend boarding the bus can make a major contribution to reducing journey times and improving their reliability. In addition, at busy bus stops within the city centre, reducing the boarding times allows for more efficient bus stop use.

#### **Policy 19: Ticketing**

The local authorities will work in partnership with public transport operators to improve ticketing arrangements, making use of modern technology.

3.43. This can be achieved in part by allowing pre-purchase of bus tickets, by providing vending machines at busy boarding points. A smartcard scheme would allow people to charge credit to a card allowing them to pre-purchase bus services. Initially, it might be aimed at a particular age group, such as 16-19 year olds.

#### **Provision of bus services as part of development proposals**

3.44. People will be more likely to use public transport if it is convenient and attractive for them to do so. A maximum walking distance of around 400 metres (about 5 minutes) has been found reasonable for most people without mobility impairment. For some new trip generators, such as supermarkets, public transport services will be sought that deliver users to the front door.

3.45. The County Council will take steps to secure the provision of public transport systems, including infrastructure, at the time of planning new development proposals. This may include the provision of real-time passenger

information. The Council will expect measures to be incorporated into the final planning application and secured in funding agreements, such as those known as 'Section 106 agreements.'

**Policy 20: Provision of bus services as part of development proposals**

During negotiations with developers, every effort will be made to secure a bus service that is within 400m of all parts of the development. Good quality waiting and information facilities will be sought during negotiations, together with a commuted sum for maintenance.

3.46. For new developments, it is important that convenient and attractive public transport is available when people first move into the houses or start work at the development. This allows people to get into the habit of using public transport, rather than car travel.

**Light Rapid Transit**

3.47. Light Rapid Transit is a term for public transport systems including trams and guided buses. Work shows that Light Rapid Transit may be viable in the latter part of the transport strategy (post 2011). However, there will be considerable cost in both developing and implementing a Light Rapid Transit system, and whilst it may be technically possible to provide, it would prove a challenge given the historic layout of Norwich's streets.

3.48. The County Council is already investing considerable sums in improving the public transport bus network, with a new bus station, bus corridor within the city centre and Park and Ride. A high quality, road-based bus system will provide many of the benefits of Light Rapid Transit, but with greater operating flexibility.

**Policy 21: Light Rapid Transit**

The provision of a Light Rapid Transit system will be reviewed after 2011, following decisions about the location of housing growth in the Norwich Area, and given some certainty that a Northern Distributor Road will be delivered.

**New Rail Halts**

3.49. A new rail station at Broadland Business Park or Dussindale has been a long-standing aspiration. A station in that location could serve the business park and nearby residential development, act as a 'Parkway' type station into Norwich and provide additional station capacity on the rail lines to either Great Yarmouth or Sheringham. However, its feasibility as a station for heavy rail is likely to depend on development proposals. Without further development there is unlikely to be sufficient demand for a station.

3.50. New rail halts may also be viable in other locations. One possibility may be a parkway station to the south of Norwich, near the A47. Such possibilities will be kept under review.

**Policy 22: New Rail Halts**

The feasibility of new rail halts will be kept under review.

**Coaches**

3.51. Many visitors arrive by coach. However, facilities for coach travel are poor, with poor facilities for dropping off and picking up passengers. At drop-off and pick-up points, adequate space (both for passengers and to ensure that coaches do not block traffic flows) is needed. Adequate facilities are also needed for passengers, including information, shelter and other waiting facilities like toilets and refreshment facilities. There may be a need for a place for car drivers to park whilst they drop off or wait for passengers.

3.52. In addition, facilities are needed for the coach drivers who provide day trips into the city. The new bus station will not provide this facility. NATS4 proposes that consideration is given to the use of spare capacity at Park and Ride sites for the provision of long-stay coach parking facilities.

**Policy 23: Coaches**

Facilities for coaches will be improved in the Norwich area

3.53. This will be done by:

- i Signing and information for coach drivers and coach parties
- ii The provision of long-stay coach parking facilities including toilets, refreshments, etc, nearby. Consideration will be given to the use of spare capacity at Park and Ride sites for this purpose.

**Cars, freight and other traffic****Introduction**

3.54. Cars and other traffic, including freight deliveries to businesses and shops, make many essential trips. NATS4 caters for these trips through policies including:

- Congestion strategy (see Section 3.97)
- Enforcement to help traffic flow more freely (Policy 67: Enforcement)
- Improving efficiency on the road network (Policy 49: Urban Traffic Control)
- Encouraging fuel efficiency (Policy 59: Cleaner vehicles) and
- Policies on car parking, city centre, air quality, road safety and travel information

**New Road Schemes**

3.55. NATS4 recognises that transport needs to be managed: see policies on soft measures, promoting and improving public transport, walking and cycling, and making more efficient use of existing roads. However, it also recognises that there is a need for better infrastructure, essential to deliver growth in the area. As well as assisting sustainable development, new road infrastructure may be needed to relieve communities of through traffic or improve access to key centres (for example by reducing congestion). New road schemes may allow conditions on other parts of the network to be improved.

3.56. Currently, the need for major road building proposals is recognised in two locations:

- Northern Distributor Road
- Access improvements to the Norwich Research Park and hospital, including improvement to the B1108, a new access road to the Norwich Research Park and hospital and a new housing access road from the A11.

3.57. The Northern Distributor Road is set out in Policy 2: Northern Distributor Road. It is anticipated that construction of the Norwich Research Park and hospital access improvements will start in 2005, subject to receiving the necessary funding from Government.

#### **Policy 24: New Road Schemes**

New road schemes will be promoted only where there are economic development, community or regeneration benefits or where they will result in environmental improvements on other parts of the road network. Projects selected will take full account of all environmental considerations and the assessment will include an examination of non-road building alternatives.

#### **Complementary measures to new road infrastructure**

3.58. In considering any major road-scheme there should be consideration given to what further complementary measures for other modes are needed, and what soft measures should be included as part of a package of measures.

#### **Policy 25: Complementary measures to new road infrastructure**

New road schemes will be pursued only in combination with measures to improve access by other forms of transport. For any new scheme, consideration will be given to the advantages gained from packaging it with soft measures, or other complementary measures.

#### **Freight**

3.59. Freight provides a vital service, allowing businesses to thrive. However, particularly in the city centre, freight operators can experience problems of having to operate within certain time restrictions and urban congestion. Because there is often a lack of dedicated loading areas, freight operators' vehicles can cause problems, including blocking pavements or traffic flows. Through working with partners, it may be possible to overcome many of these difficulties.

#### **Policy 26: Freight**

The County Council will work with partners, including Norwich City Council freight operators and city centre businesses, to establish the requirements of commercial deliveries and work to meet their needs. Consideration will be given to forming a Freight Quality Partnership / Urban Freight Forum.

#### **Servicing**

3.60. The servicing requirements of new developments can usually be accommodated off street, although there may be some locations in the city

centre where servicing has to be carried out on street. New transport schemes should protect the servicing needs of existing businesses.

**Policy 27: Servicing**

The needs of vehicles to service premises will be incorporated into all new development proposals. This may include on-street servicing in the city centre, subject to impacts on road safety, congestion, pedestrians and cyclists, needs of public transport and on-street parking. The servicing requirements of existing businesses will be protected when implementing new schemes.

**Motorcycles, mopeds and scooters**

3.61. The range of vehicles making up this category ranges from small capacity mopeds to large capacity motorbikes. They are collectively known as Powered Two Wheelers.

3.62. Powered Two Wheelers can provide an efficient transport choice, particularly in urban areas where they may offer efficiencies of fuel economy and time-savings. To be a viable travel choice, facilities are required, particularly adequate parking at the destination.

**Policy 28: Motorcycles, mopeds and scooters**

The strategy will aim to meet the parking requirement needs of powered two wheel vehicle users, subject to funding requirements and site availability.

3.63. This will be done by measures including:

- i Provision of secure on and off street motorcycle parking, including in new development. Unlike the policies on car parking, the transportation strategy does not propose a cap on numbers of spaces for Powered Two Wheelers: it is suggested that the use of such facilities is kept under review, with facilities planned and provided subject to funding requirements and availability of appropriate sites.
- ii Encouraging consideration by other road users. See links to policies on road safety education and training

3.64. See also links to policies on:

- Consideration of allowing motorcycles to use bus lanes. (Policy 55: Use of bus lanes)
- Education and training programmes, which could help to improve the safety record of motorcycling. (Policy 66: Education and training)

**Interchange**

3.65. There are a number of interchange points within the city centre including the rail station, airport, the hospital / UEA and city centre locations such as Castle Meadow. The main interchanges include the bus station, railway station and Park and Ride sites. The bus station is currently being



rebuilt and will provide modern, high quality facilities when it reopens during 2005.

3.66. At the key interchange points, there is scope to improve the facilities to improve conditions for people changing from one mode to another. Improved integration between modes can be achieved by measures including:

- Improving the quality of cycle facilities, incorporating high standard, secure cycle parking facilities. Cycle parking at interchange points has to be of an enhanced standard so that people feel comfortable leaving bikes for relatively long periods.
- Ensuring convenient and safe routes for pedestrians. These routes need to include features such as good lighting to ensure that pedestrians do not feel unsafe or insecure;
- Provision for people to be picked up or dropped off, both by private cars and taxis.

**Policy 29: Interchange**

Improved integration will be encouraged at key interchanges such as the rail and bus stations.

**Interchange for car sharers**

3.67. There is evidence that many people use car parks at commercial premises around the outskirts of Norwich as places to leave their cars whilst they travel in someone else's vehicle, usually on a longer-distance trip. Such practices restrict the amount of car parking available for the businesses concerned. It is also likely that many people may be put off car sharing because they feel uncomfortable using car parks in this way, and because they find other arrangements inconvenient.

3.68. It is proposed that unused capacity of Park and Ride sites be used for people wishing to car share. Park and Ride sites provide relatively secure and convenient parking.

**Policy 30: Interchange for car sharers**

Schemes will be developed and promoted to use spare capacity at Park and Ride sites for car-sharing

**Access to education**

3.69. The trend in travel to school has seen increasing numbers of schoolchildren being taken to school by car, with a corresponding decrease in walking and cycling. Reasons for this include busy lifestyles and an increasing choice of school, which can lead to longer trips to school. The County Council is working with schools in the county to develop school travel plans. These include measures to improve safety and reduce car use, and are developed by the school in partnership with other agencies. The plans will focus on measures including road safety education training and provision of cycle shelters, rather than large-scale engineering measures (although these may be appropriate in some instances).

**Policy 31: Access to education**

The County Council will work with schools and other partners, including other local authorities in the area, to develop school travel plans.

## Parking

### Introduction

3.70. The continued vitality of Norwich for retail, leisure and business activity is dependent on people being able to access the city, particularly the city centre. The availability of adequate parking supports the city's role as one of the country's top ten retail centres, and its economic role and as a centre for visitors and tourism. Parking must be convenient, but too much parking could worsen congestion or lead to significant extra traffic entering the city centre, increasing problems of air quality, traffic impact and making it difficult or dangerous to cross roads.

### Amount of car parking in the city centre

3.71. A review of the amount of car parking required for the city centre has been undertaken. The report concluded that the forecast demand for parking is less than the forecast capacity in the period of NATS4. NATS4 thus proposes that the number of car parking spaces in the city centre is limited, and that any new provision should replace existing spaces.

**Policy 32: Amount of car parking in the city centre**

Parking provision at new development in the city centre will be limited to

- operational use and
  - visitor / customer needs, provided this replaces existing provision.
- Such provision should be publicly available and should have associated mechanisms to ensure that commuters or other long stay parkers do not use the parking.

### Parking for businesses

3.72. In the Norwich area, there are likely to be sites that could accommodate car parking, which if permitted could result in the numbers of car parking spaces exceeding the amount identified as being required. It is important that NATS4 recognises that car parking is an important demand-management tool and that simply providing more and more car parking in the city centre is likely to encourage more people to use cars, resulting in additional congestion, safety, air quality and other problems. Where there are sites that could accommodate car parking, these could be considered for the use of businesses in the city centre who may require parking as part of their everyday operations, such as if they use vehicles throughout the day.

**Policy 33: Parking for businesses**

The use of remaining publicly available parking spaces in the city centre, surplus to short and medium stay requirements, will be considered for the operational requirements of city centre businesses or other uses.

**Parking for visitors**

3.73. For car parking spaces to be available in the city centre for visitors, a turn-over in parking is needed. This means that car park spaces should not be occupied all day by commuters' cars. The parking within the city centre needs to cater for people making short to medium length visits. Park and Ride can cater for long-stay parking demand.

**Policy 34: Parking for visitors**

Tariff structures of existing and any new city centre car parks, and on-street parking, will favour short stay and medium stay demand.

**Long-stay parking needs**

3.74. The implication of restricting publicly available car-parking within the city centre to short and medium stay is that alternatives will have to be found for those wishing to visit for longer periods: for example, commuters. The strategy outlines that public transport will be an important element and improvements to this will be sought. For shorter distances, walking or cycling might be an option. See links to policies... However, for many, car travel provides the only feasible travel choice and will be favoured, particularly from the rural catchment, where public transport may not provide a realistic alternative. Previous versions of the strategy have established a highly successful Park and Ride system, and the revised strategy seeks to build on the success of this.

**Policy 35: Long-stay parking needs**

All long stay public parking demand for the city centre will be provided through the development of Park and Ride car parks. Associated bus priority measures will be introduced where there is a case for doing this, based on usage, journey times and reliability / congestion.

**Parking in residential areas**

3.75. Parking policy also has an important effect on the liveability of residential areas, for example by ensuring that commuters parking all day do not clog such areas. Within the Norwich Area, Controlled Parking Zones (where only those having permits are able to park) have been introduced in residential areas where there are problems of non-residential long-stay parking. These schemes allow permit parking by residents, local businesses and their visitors. The parking needs of commuters, and other users wishing to visit the city centre, or other major attractions, should be met by public off-street car parking including Park and Ride.

**Policy 36: Parking in residential areas**

The amenity of residential areas will be protected, where appropriate, by restricting long-stay car parking by non-residents, by use of controlled parking zones.

**Enforcement of parking restrictions**

3.76. In most areas, the police, through traffic wardens enforce on-street parking restrictions. The Government has given powers to allow local authorities to take over enforcement of parking restrictions, and Norwich City has taken over enforcement in parts of Norwich. There may be benefits to considering extensions of the area, to cover other places where there are parking problems which may be able to be overcome by such an arrangement.

**Policy 37: Enforcement of parking restrictions**

An extension of the special parking area will be considered, in conjunction with other local authorities in the area.

3.77. More recently, the Government's Traffic Management Bill, now enacted, allows local authorities to take on other enforcement: e.g. against prohibited turns and driving in bus lanes. This is dealt with in the section covering congestion, in Policy 51: Enforcement.

**Park and Ride**

3.78. Park and Ride has been a successful element of the previous strategy. Sites have been established in five locations, with a further one to be constructed at Thickthorn (Cringleford) in 2005. These six sites will form the network of Park and Ride. Therefore, the network of Park and Ride sites will comprise

- Airport
- Costessey
- Thickthorn (Cringleford)
- Harford
- Postwick
- Sprowston

**Future Park and Ride capacity**

3.79. Work shows that there is potentially the demand for additional capacity at Park and Ride. This could be met through expansion of the existing sites, or through additional sites. The advantage of expanding the existing sites is that the sites and bus routes are already well established and will therefore be likely to provide good value for money.

3.80. However, there may be a case for additional sites. Potential sites have been identified at Trowse, which was identified in the previous version of the strategy, and at Taverham / Drayton. Any decision about the location of a site at Drayton / Taverham and the bus route should ideally be taken forward once a decision on the route of a Northern Distributor Road is taken.

**Policy 38: Future Park and Ride capacity**

Decisions about whether to expand the capacity of Park and Ride will be taken after future passenger demands have been assessed in the light of operating experience.

Decisions about whether additional capacity is achieved through expansion of existing sites, or new sites will be taken based on the merits of each option, including value for money.

**Park and Ride services**

3.81. The attractiveness of Park and Ride is maximised when the service provides a non-stop operation between the site and the city centre. This reduces the journey time and makes Park and Ride a more attractive alternative to car travel. There may, however, be cases where benefits can be obtained from the services stopping at a limited number of strategic locations, e.g. interchange points such as the railway station, or major attractors / generators of travel such as Anglia Square or the Norfolk and Norwich University Hospital. Park and Ride will not, however, operate services that stop at many points as regular bus services do. On the return trip (to the city centre in the evenings, from the city in the mornings), there may be opportunity to increase the effectiveness of the service by routing it to stopping-points.

**Policy 39: Park and Ride services**

Park and Ride services will provide a non-stop service between the site and the city centre, except at select locations where there is large demand for a stopping point. Opportunities for providing services on the 'return' trip will be explored.

**Access for everyone**

3.82. Rather than being a system to help people get around, the transport system can be a barrier for many people. Around 12% of the population have some degree of impairment, and this often can make it more difficult for them to get around. Similarly, older people and people with small children, carrying heavy shopping or luggage, or who have temporary injuries may find travel difficult, particularly if the environment is not well designed.

3.83. Part III of the Disability Discrimination Act 1995 gives people with disabilities a right of access to goods, facilities, services and premises. These rights have been phased in between 1996 and 2004.

3.84. As well as people with disabilities, NATS4 looks to address the problems for others who may find it difficult to access transport. For example, people on low incomes who may find it hard to pay for transport services. Elsewhere in NATS4, policies on enforcement outline that, if enforcement were to be taken on by local authorities it could be matched to the transportation policies. Doing this will allow, for example, enforcement against

badly parked vehicles, which block pavements and hinder the access for pedestrians or wheelchair users.

**Policy 40: Access for everyone**

Good accessibility for all sections of the community will be sought. Conditions for mobility impaired people and those without access to a car will be improved.

3.85. There is a large range of advice, guidance and codes of practice to guide the best ways to meet the needs of disabled people, including advice produced by the Department for Transport. These will be used to inform design of transport infrastructure and provision. They recognise that the pedestrian environment can be improved for people with disabilities and others with restricted mobility through measures including

- i Drop/flush kerbs and tactile surfaces at appropriate locations
- ii Handrails and guardrails, particularly on ramps or in high conflict locations
- iii Careful siting of street furniture
- iv Use of seating at appropriate locations
- v Shelters and all bus stop furniture is suitable for use by people with disabilities
- vi Ensuring pavements and kerbs at bus stops are compatible with Super Low Floor buses
- vii Colour contrasting of street furniture and clear signing and
- viii Audible signals and tactile devices at crossing facilities

3.86. Access to public transport services for all people can be improved through measures including:

- i Quality Bus Partnerships to secure the provision of new fully accessible Super Low Floor buses on strategic bus routes and Park and Ride services
- ii Tenders for other local bus services that require meeting the latest DPTAC specifications.
- iii Developing real time information, with accessibility to this through websites and text messaging
- iv Maintenance of the existing bus concessionary fares scheme
- v Continued support of Community Transport, Dial-A-Ride and the Shopmobility schemes, and encouraging co-ordination of existing schemes
- vi The provision of information in accessible formats

**Parking for people with disabilities**

3.87. For many people with disabilities, the car is often the only feasible choice. The ability to be able to park often determines whether they will make a trip, or where they will travel. Parking needs to be provided, with the parking spaces conveniently sited and clearly signed. Parking equipment such as ticket machines should be positioned so that disabled people can operate it.

3.88. New development provides an opportunity to build in parking for people with disabilities. This parking should be sited close to the entrance to the facility.

**Policy 41: Parking for people with disabilities**

Adequate parking will be provided for people with disabilities at convenient locations.

The County Council will work with other local authorities to implement parking standards that require adequate car parking for disabled people, and others who may require larger than normal car parking spaces close to the entrance to a development. Generally, these will comprise a minimum 5% of total provision of car parking.

**Disability awareness training**

3.89. The County Council works with transport providers, such as bus companies, to provide disability awareness training. Such training can raise awareness of the issues with the relevant staff, who can use this to improve the travelling experience for people with disabilities.

**Policy 42: Disability awareness training**

In partnership with local access groups, disability awareness training for transport providers will continue to be supported.

**Soft transport measures**

3.90. 'Soft' measures include workplace and school travel plans, personalised travel planning, travel awareness campaigns, public transport information and marketing, Car clubs and car sharing schemes and teleworking, teleconferencing and home shopping. They are playing an increasingly prominent role in transport planning. Whilst they can make a significant contribution to improving accessibility, they are covered in Policy 53: Soft measures, under congestion as recent research undertaken for the department for transport demonstrates that they can reduce peak traffic by up to 21%.

**Travel Information**

3.91. A major deterrent to travelling on public transport can be the difficulty of finding out about services: where and when they depart, where they go. This can be a particular disincentive for people who are unfamiliar with travel by public transport, or have never tried it in the area.

**Policy 43: Travel Information**

The availability of rail and bus information will be improved.

3.92. The availability of bus and rail service information will be improved by measures including:

- Provision of roadside timetable information at bus shelters and bus stops in accordance with the Norfolk Bus Strategy and in partnership with operators
- Opening a Traveline shop at the new bus station
- Exploring the use of any new developments in information technology
- Provision of information via other service providers, e.g. education and health.

### **Signing for vehicles**

3.93. Norwich attracts many visitors, including tourists, people on business or people visiting family and friends in the area. Visitors are unlikely to know Norwich very well, and regardless of how they are getting about, whether this is by car or on foot, their experience of the city will be greatly improved by good, clear direction signing and other travel information. Good signing can also support other aims of the strategy, such as directing traffic onto the most appropriate roads, or helping those people unfamiliar with the public transport system to travel in this way.

#### **Policy 44: Signing for vehicles**

Direction signing in the Norwich Area will be reviewed following identification of the road hierarchy

### **Signing for pedestrians and cyclists**

3.94. Signing for pedestrians and cyclists is just as important as signing for car users. It is particularly important, especially for pedestrians, within the central area. Many cities have introduced innovative signing for pedestrians, including maps of the area and information on how long it takes to walk or cycle to places, rather than simply giving the distance in miles. Within Norwich, some good steps have been taken to provide information and signing, but further progress could be made.

3.95.

#### **Policy 45: Signing for pedestrians and cyclists**

Signing and information for pedestrians and cyclists will be improved within the Norwich area.

3.96. Particular attention will be given to

- Improving maps and pedestrian signing from city centre car parks and other dropping off points including the bus and railway stations to major attractors in the city centre. Similarly, pedestrian signing from the centre to the car parks and other dropping off points will be improved
- Implementing comprehensive, easy to read direction signing for pedestrians in the city centre
- Signing coherent networks of cycle routes.



# Congestion

## Introduction

3.97. Government has identified urban congestion as a major problem. It published its Traffic Management Bill in December 2003, which has subsequently been enacted. This places a duty on local authorities to keep traffic (including pedestrians) moving. Government has also identified that in larger urban centres with a population above 250,000, congestion should be monitored and targets formed to reduce it. Although Norwich has not been identified as a larger urban centre where this must be done, NATS4 proposes that the Council treat it as if it was, and monitors congestion and develops targets to reduce it.

3.98. Traffic congestion is a serious issue within the Norwich area. Norwich has some of the slowest journey speeds in the country. According to Department for Transport surveys, congestion (as measured by average traffic speeds in urban areas) is worse in Norwich than in any other similar sized area, such as Peterborough or Oxford. Congestion affects economic efficiency, quality of life and the environment, and makes it difficult for people and goods to move around. Reducing traffic congestion will also lead to improvements for public transport: the reliability of buses is badly affected by congestion on the road network.

3.99. New road construction or improvements to the existing roads may be appropriate in some circumstances. However, NATS4 recognises that improvements to congestion can be achieved through other interventions: managing the network more efficiently, traffic management, signing, encouraging people to choose to walk, cycle or use public transport, or through managing demand (for example, by influencing the number of car parking spaces available).

3.100. Congestion is of particular concern on the main road network: the main radial routes and the Inner and Outer Ring Roads. The strategy will target congestion on these roads.

### **Policy 46: Congestion**

Congestion and delay on the primary distributors will be targeted for action, where this is consistent with environment and air quality, road safety, economic regeneration or other community benefit aims.

### **Road and Mode Hierarchy**

3.101. The strategy recognises that different roads fulfil different functions. For example, main roads distribute traffic on essential business through the area, whilst back-streets provide access to individual houses. Often, the main function of a street is reflected by the way that it is used. Often however it may be desirable to change the way that a street functions so that it better serves the people who need to use it. An example may be a residential street that is used as a cut-through for traffic. Identifying the appropriate functions for

streets will assist in identifying what types of improvements may be appropriate and address the relative priority for different modes.

3.102. NATS4 proposes a road hierarchy on which priority is given to where it is needed most. This will mean that different users of the transport network will have priority depending on the type of road or area. This order of priorities is based on identifying an urban road hierarchy of Primary Distributors, District Distributors, Local Distributors, Access Roads and Pedestrian Streets.

3.103. The road hierarchy will cover the part of the NATS area inside the Outer Ring Road. Beyond this, the County Council has an already identified Route Hierarchy. This will remain. The two hierarchies will need to be consistent so that they link together.

3.104. At this stage, only Primary Distributors and District Distributors have been identified. It is proposed that further work be undertaken to identify roads further down the hierarchy. The road hierarchy will follow advice, such as "Urban Safety Management Guidelines Road Safety Strategies for Urban Communities," published by the Department for Transport, Transport Research Laboratory and the Institute of Highways and Transportation.

**Policy 47: Road and Mode Hierarchy**

The road network in the Norwich Area will be classified according to a consistent road hierarchy that distinguishes roads on their function and level of use.

<b>Road category</b>	<b>Roads that may fit into the category</b>	<b>Function of road</b>	<b>Priority objectives</b>
Primary Distributors	Existing A and B class roads – Ring Roads, main radials (e.g. Newmarket Road, Dereham Road, Fakenham Road)	Used to carry the through traffic, presumption in favour of distribution.	<ul style="list-style-type: none"> <li>• These roads may benefit from improvements (for example, junction improvements) to carry the volumes of traffic, and to take traffic away from other streets.</li> <li>• Pedestrian and cycle facilities will be introduced on pedestrian and cycle core networks only, or for reasons of safety or to reduce severance. These will be designed so that their impact on congestion for traffic is minimised.</li> <li>• Bus priority will be introduced on the strategic bus network, but only in exceptional circumstances will capacity be taken from general traffic.</li> <li>• Access to new development should not compromise traffic flow</li> </ul>
District Distributors	Hall Road, Unthank Road, Bowthorpe Road, etc...	Intended for more local traffic.	<ul style="list-style-type: none"> <li>• Traffic flow at junctions with Primary Distributors may be improved</li> <li>• Pedestrian crossings may be provided at key crossing points</li> <li>• Bus priority measures may be appropriate</li> </ul>
Local Distributors	Park Lane, St Leonard's Road, The Avenues, etc...	Predominantly the more substantial roads running through residential areas.	<ul style="list-style-type: none"> <li>• Physical traffic management measures to reduce traffic speeds, or flows, may be appropriate</li> <li>• Should have provision for pedestrian and cycle movement</li> <li>• Bus priority generally not necessary</li> </ul>
Access roads	Most residential streets. Roads in city centre providing access to, for example, car parks	Provide individual access to premises.	<ul style="list-style-type: none"> <li>• Must cater for pedestrians' and cyclists' needs.</li> <li>• Physical traffic management measures to reduce traffic speeds, or flows, may be appropriate</li> </ul>
Pedestrian Streets	City centre retail core. E.g. Gentleman's Walk, Castle Meadow	To provide access to shops and businesses	<ul style="list-style-type: none"> <li>• May allow access for public transport and cyclists, or allow access for some motor vehicles at restricted times.</li> <li>• A better environment will be created: using high quality paving and resurfacing works, better pedestrian signing of the main attractions.</li> </ul>

### **Improvements to the Main Roads**

3.105. NATS4 identifies that congestion will be targeted on main roads (identified as primary distributors in the road hierarchy). The County Council has already carried out a study of congestion on the inner and outer ring roads. These roads are vital to keep traffic moving around Norwich. Work has identified areas where chronic congestion (rather than congestion caused by incidents such as accidents or road works) could be tackled. A programme of improvements has been identified and is already underway.

3.106. It may also be necessary to consider similar schemes on the main radial routes where chronic congestion is a problem. The relationship between junction improvements on the ring roads and measures in the city centre is discussed in Sections 4.12 to 4.19.

#### **Policy 48: Improvements to the Main Roads**

Measures to reduce congestion, including junction improvements, will be pursued where they have a beneficial impact on the road network as a whole. In particular, measures that improve capacity for sustainable modes will be considered most favourable.

This policy has been changed from its original wording when NATS was agreed in 2004, to that shown above – see note in Executive Summary.

The reasons for this are:

To reflect RSS and DaSTS which emphasise the need to prioritise capacity improvements for low carbon modes.

### **Urban Traffic Control**

3.107. Within Norwich, traffic signals are managed using an Urban Traffic Control system. To date, the main thrust has been maintaining and operating the basic function. No formal management reporting system for network efficiency/congestion has been set up. The introduction of such a system would allow benchmarking of current conditions and allow the tracking of changes over time and monitoring the effects of future development, junction changes and special events etc. The tools and techniques recently available could, if introduced and actively monitored and refined, be used to maximise efficiency.

3.108. NATS4 proposes measures that address the lack of management information, provide a benchmark on current congestion levels and monitor changes through time, and to ensure that the system is operating at maximum efficiency at all major junctions. It is proposed to deal with the growing problems occurring at weekends, with full-time operation, widespread CCTV and introduction of other facilities in response to external factors such as the Air Quality Management Areas.

**Policy 49: Urban Traffic Control**

The Urban Traffic Control system will be developed to monitor and minimise congestion on the main road network.

**Information for motorists**

3.109. Improved information for motorists can be used to overcome congestion: for example to direct motorists away from congestion caused by incidents like roadworks. Information can be imparted to motorists by a number of means, including using road traffic signs, text messaging, the internet (before the journey), radio and satellite navigation technology.

3.110. Some variable message signs, which direct cars towards car parks and inform which of the car parks have spaces available, have already been erected. NATS4 proposes augmenting these with additional signs to the remaining car parks plus signs in other locations, such as on the southern bypass. Ultimately these signs could be used to advise motorists of problems on the network, for example congestion or air quality problems. The project links with wider work including websites showing parking space availability at city centre car parks and roadworks.

**Policy 50: Information for motorists**

Information for motorists will be improved to enable better management of the road network and to enable motorists to plan their journeys in ways that will allow them to avoid either causing, or being held up by, congestion.

**Enforcement**

3.111. Parked vehicles, including those being loaded or unloaded can significantly reduce the efficiency of the network. A badly parked vehicle can block a whole lane of traffic, resulting in major delays at busy times. Additional enforcement of the regulations governing parking or loading could address these problems. Enforcement could be targeted to particular routes (for example key radial routes and the ring roads) and to bus and cycle lanes. Additional enforcement would require additional resources, maybe more than the Police could provide. The recent Traffic Management Act allows for more civil enforcement of parking and traffic offences. Norwich City Council has already taken on responsibility for enforcement of parking. The County Council will explore with the City Council the scope for the City Council to take on additional responsibilities allowed by the Act.

**Policy 51: Enforcement**

The possibility that local authorities in the area could take on additional responsibilities for enforcement of traffic offences will be explored.

**Promotion and Education**

3.112. Travel awareness campaigns aim to improve general understanding of local environmental and health impacts resulting from transport choices. They

aim to educate the public about what can be done to improve people's health, including suggestions about changing their own behaviour. They aim to improve knowledge of the facilities available for walking, cycling and public transport use. The campaigns may use posters, leaflets, advertising on press, local radio and television, events, activities, provision of information and trials of initiatives.

3.113. There are clear links between travel awareness campaigns and other parts of the strategy including:

- Personalised journey planning
- Public transport information and campaigns
- Promoting healthier transport.

#### **Policy 52: Smarter Choices**

In the Norwich area measures that encourage a modal shift to sustainable modes of transport will be investigated before road capacity improvements. These will include:

- School and workplace travel plans
- Residential travel plans for all new developments
- Travel awareness campaigns
- Car sharing schemes
- Information and publicity around walking, cycling and public transport
- Personalised journey planning

This policy has been changed from its original wording when NATS was agreed in 2004, to that shown above – see note in Executive Summary.

The reasons for this are:

To strengthen the policy and align it with the RSS and DaSTS which state that significant change in behaviour will be brought about through a concerted programme of policies to raise awareness of sustainable travel. In order to better reflect Climate Change Act 2008 and associated carbon reduction targets.

The policy is usefully merged (with Policies 53 and 54) to create an overall statement around Smarter Choices.

#### **Soft Measures**

3.114. Current evidence suggests that the most effective way of reducing congestion be through a package of soft measures, like travel plans and measures to promote other modes. New research produced for Government suggests that, by continuing present levels of activity, peak-hour car trips could be reduced by around 5%. Increasing to a high intensity of activity could see peak period urban traffic reduction of over 20%. The research suggests that every £1 spent on well-designed measures could yield £10 of benefits in reduced costs of congestion alone.

3.115. However, it is likely that reductions in the level of congestion would result in other people switching to car use, unless there are measures

designed to prevent this. Such other measures are included in the strategy: improvement of public transport, parking control and restrictions on traffic within the city centre.

#### **Policy: 53**

This policy has been deleted and merged with amended Policy 52 – see note in Executive Summary.

The reasons for this are as set out for Policy 52.

3.116. Such measures could include:

- Workplace and school travel plans
- Personalised travel planning
- Travel awareness campaigns
- Public transport information and marketing
- Car clubs
- Car-sharing schemes
- Teleworking, teleconferencing and home shopping.

#### **Travel Plans**

3.117. Commuting to work by car makes up a large proportion of all car traffic, particularly during the morning and evening peak periods. Workplace travel plans can be used to try to encourage employees to use means other than the car for trips to work, or for other work-related trips. Travel plans also help the employer, by improving accessibility to work, by reducing costs associated with car parking provision, and by offering increased travel choices for their staff. Workplace travel plans can reduce commuter car driving by 10-30%.

3.118. For major new developments, or expansion of development at existing sites, travel plans will be required as part of the planning consent.

#### **Policy 54:**

This policy has been deleted and merged with amended Policy 52 – see note in Executive Summary.

The reasons for this are as set out for Policy 52.

#### **Use of Bus Lanes**

3.119. Currently, taxis are able to use bus lanes unless there would be detrimental consequences for safety or capacity, or where cyclists would experience increased fear or intimidation. To increase the efficiency of the network, it is proposed to consider the effects of allowing goods vehicles, high occupancy vehicles and motorcycles to use bus lanes, on a trial basis. Various issues, including of enforcement, will need to be overcome. Consideration will be given to specifying standards of vehicles, for example in terms of vehicle emissions that would qualify. In any such trial, the purpose of bus lanes, and safety of road users, must not be undermined.

**Policy 55: Use of Bus Lanes**

Work will be undertaken to assess the feasibility of allowing freight vehicles, high occupancy vehicles and motor bikes to use bus lanes.

**Congestion and Workplace Parking Charging**

3.120. Congestion charging has been introduced in London. It has delivered traffic reductions, but some businesses are concerned about the economic consequences. For Norwich, there will be similar concerns, for both congestion charging or charging people to park at their workplace. Additionally, there is concern that reductions in traffic may be achieved at the expense of the less well off, or for others, where an alternative public transport service may not be readily available.

3.121. Road pricing or workplace parking charges schemes will not be developed at this time, but will be kept under review, particularly as they can help to deliver the transport shared priority, and revenue from charging schemes could be used to bring forward transport improvements as part of NATS4.

**Policy 56: Congestion and Workplace Parking Charging**

The possibility of road-user charging or workplace parking levies will be kept under review.



# Pollution

## Introduction

3.122. Transportation makes a major contribution to air pollution, affecting both local air quality and leading to climate change. In the Norwich area:

- Road transport is estimated to produce 35% of the total emissions of CO<sub>2</sub>, the main driver of climate change.
- Three Air Quality Management Areas, where local air quality falls below Government thresholds, have been declared, due to transport impacts.
- Transport leads to noise impacts, affecting quality of life. Noise impacts may range from general background noise of traffic to affecting sleep by nighttime disturbances.

3.123. There are benefits in tackling air quality in the Norwich area as a whole, rather than focussing only on areas where air quality thresholds are exceeded. The strategy will do this through measures including:

- Campaigns such as Travelwise, and promoting better driving techniques, cleaner fuels and transport choice. These will improve air quality, and reduce noise and CO<sub>2</sub> emissions.
- Reducing traffic in the city centre. This would reduce traffic noise impacts and improve air quality in the centre.
- The community carbon reduction partnership. The Council is part of this, which aims to reduce CO<sub>2</sub> emissions.

### **Policy 57: Tackling Climate Change and Pollution**

We will seek to reduce emissions from road transport, including carbon emissions and to improve air quality in the Norwich area by:

- Encouraging a modal shift to less polluting modes of travel
- Reducing emissions from vehicles that emit the most
- Ensuring that new development is planned and located to reduce the need to travel and maximise the opportunities for the most sustainable modes of travel.

This policy has been changed from its original wording when NATS was agreed in 2004, to that shown above – see note in Executive Summary.

The reasons for this are:

To ensure NATS reflects the need to reduce emissions from road transport and aligns with the strong emphasis in both the RSS and DaSTS on responding to the threat of climate change. In order to better reflect Climate Change Act 2008 and associated carbon reduction targets

## **Air Quality**

3.124. Air quality problems are most acute on the main roads. The National Air Quality Strategy and Environment Act 1995 require local authorities to act where air quality exceeds certain limits. Norwich City Council has already declared Air Quality Management Areas in three parts of the city centre: around the castle (including Castle Meadow), Grapes Hill and St Augustine's. On many other parts of the main road network, the levels of pollutants

approach Government limits. Measures to address air quality need to be consistent with the rest of NATS4. For example, tackling air quality should not result in diverting traffic from main roads onto other, less suitable, routes.

**Policy 58: Air Quality**

Action will be taken in Air Quality Management Areas to address problems of air quality caused by transport. Measures taken in these areas will be consistent with the Norwich Area Transportation Strategy.

**Cleaner vehicles**

3.125. Travel by motor car remains the most common means of travel around the Norwich area. Unfortunately, this travel choice leads to air and noise pollution and can lead to climate change. However, it is possible to reduce the impacts of motor vehicles. This can be done by raising awareness about environmentally responsible driving techniques, including avoiding hard acceleration. Motorists can choose to use more environmentally friendly vehicles (those that meet the latest emission standards), use alternative fuels or have devices fitted to reduce emissions. Even relatively simple measures, such as switching to offside exhaust outlets can reduce people's exposure to vehicle emissions.

3.126. Local authorities can also lead by example. They operate or contract significant vehicle fleets and can influence bus services through partnership agreements. Local authorities could also work with fuel distributors and suppliers to increase the availability of such fuels or introduce Low Emission Zones or allow only low emission vehicles into bus lanes (see link to Policy 55: Use of bus lanes).

**Policy 59: Cleaner vehicles**

This policy has been deleted and merged with amended Policy 57 – see note in Executive Summary.

The reasons for this are:

Promoting cleaner vehicles is a key element of delivering the amended Policy 57 on climate change

**Traffic Management**

3.127. Traffic management measures can be used to overcome problems of pollution (including air quality and noise) caused by traffic. Techniques include road closures, partial access restrictions, re-routing of traffic and low emission zones. The strategy proposes a number of such measures, including traffic management schemes in residential areas and removing through traffic from the city centre.

**Policy 60: Traffic management measures**

Traffic management measures will be used to overcome problems of air and noise pollution.

### **Noise and disturbance**

3.128. Noise and visual intrusion from traffic affects the liveability of the city, particularly in the public open spaces of the city centre. The proposed strategy for the city centre seeks to tackle this through improving potential public open spaces in the city centre. The strategy also proposes reducing through traffic in the city centre, initially implementing a number of strategic road closures.

3.129. Although there is generally less traffic during the evenings, problems remain. These are often different from problems experienced at other times, comprising noise and disturbance in residential areas, or excess speed. Late night cruising, or 'boy-racers' can cause some of the problems (see links to policies on enforcement).

#### **Policy 61: Noise and disturbance**

Local traffic management initiatives to relieve problems of annoyance and disturbance caused by traffic late at night will be introduced where appropriate.

### **New Transport Projects**

3.130. Government's 2004 White Paper, The Future of Transport, reaffirms Government's commitment to a presumption against transport schemes that damage landscapes, townscapes, biodiversity and the aquatic environment. New transport schemes need to keep the environmental impacts to a minimum, ensuring high standard mitigation measures. Any environmental or social costs must be justified.

3.131. Similarly, impacts from existing infrastructure should be minimised, and mitigated, where possible.

#### **Policy 62: Transport Projects**

New transport infrastructure will be designed so that its impact on townscape, landscape, open space, wildlife habitats and water resources is minimised. Mitigation measures will be taken wherever possible to replace or recreate habitats.

Existing impacts from traffic on roads through open spaces, or which impact on water resources or wildlife habitats will be minimised using traffic management measures including access restrictions.

# Safety

## Introduction

3.132. Every year, there are over 1,000 casualties from road traffic accidents in the Norwich area. Monitoring shows that casualty numbers are reducing, but all accidents result in pain and suffering to those involved, as well as damage to property, and demands on health and police authorities.

Government has set targets for reductions in casualties from road traffic accidents. NATS4 looks to contribute towards achieving these targets.

3.133. As well as casualties from road accidents, the fear of accidents or about personal safety can be a big influence on how people travel, where and at what time they choose to travel, or whether they make a trip at all. People may be put off making a trip if they feel that it is unsafe or because of fears over their personal security.

3.134. As well as the safety strategy outlined here, other policies in NATS4 will contribute to safety and security, for example:

- Policy 47: Road and mode hierarchy. Changing the way that roads are used and making best use of appropriate interventions
- Policy 6: Residential streets in the built up area. Securing safety improvements as part of the strategies for regenerating areas. For example improving residential areas using traffic management techniques.

### **Policy 63: Safety**

The strategy will seek to reduce the risk of road accidents for all groups of road user and to decrease fears over personal security

## Casualty reduction

3.135. A programme of measures to reduce casualties in the Norwich area has been implemented over several years. It has produced notable accident reductions and value for money. The strategy proposes to continue with a programme of treating sites with a poor accident history.

3.136. Research suggests that children from the lowest social class are five times more likely to die in road accidents than children from the highest social class. This may be due to relative levels of exposure, with children from lowest social classes using the roads more (for instance because they have nowhere else to play), or due to higher levels of traffic within more deprived neighbourhoods.

### **Policy 64: Casualty reduction**

The consistent and systematic treatment of accident problems on an individual site, area wide and road user group basis, will be continued throughout the Norwich Area, particularly in areas of disadvantage / deprivation or where vulnerable groups are involved.

## **Speed**

3.137. Speed is a major determinant of the severity of casualties associated with road accidents. Speed reduction may be particularly beneficial for the safety and mobility of pedestrians and cyclists. Particular consideration needs to be given to avoid pushing problems onto other streets. If an area is treated as a whole, it is often helpful if an identity is fostered through appropriate signing and gateway treatments.

### **Policy 65: Speed**

A reduction in excessive speeds and compliance with all speed limits will be sought.

3.138. This can be achieved by:

- i An area-wide approach to the assessment of traffic calming solutions
- ii Traffic calming measures, where appropriate, to reduce motor vehicle speeds to 20mph or less
- iii A requirement that internal roads associated with residential and visitor intensive development are designed to restrict speeds to 20mph or less
- iv Liaison with the police to extend the enforcement of speed restrictions and
- v Use of other design measures to reinforce pedestrian/cyclist priority.

## **Education and training**

3.139. Although highway design can influence road safety to a large degree, most accidents are caused by road users' behaviour. Public awareness of the consequences of acts can influence choices people make. People should be aware of the importance of good, safe driving, including compliance with speed limits and other traffic regulations. Similarly, other road users should be aware of the risks on the transport network and the choices they can make to minimise these risks. A comprehensive road safety education service is already provided for the Norwich area, and the strategy proposes that this continue.

### **Policy 66: Education and training**

Comprehensive road safety education initiatives and awareness campaigns will be carried out throughout the Norwich Area.

## **Enforcement**

3.140. Enforcement can play a crucial role in influencing behaviour. It has a role to ensure responsible, safe driving, particularly to ensure compliance with speed limits. Ensuring that people behave responsibly could remove the need to implement physical measures, such as traffic calming, that reduce drivers' speeds.

### **Policy 67: Enforcement**

The Council will work with other local authorities and the Police to secure compliance with speed limits and improve driving behaviour in the Norwich area.

# Economic Vitality

## Land-use

3.141. Within the Norwich Area, much new development, including supermarkets, has been sited at the edge of the built-up area. It can be difficult for many people to get to such places, particularly if they do not have access to a car.

3.142. Government guidance and the draft Regional Spatial Strategy suggest a sequential approach to development. This means first considering the reuse of land and buildings within urban areas, then extensions to those areas, and finally other locations where there is good accessibility to public transport, or where proposed development can contribute to improving public transport access. The draft Regional Spatial Strategy suggests that this approach will be complemented by measures to deliver an 'urban renaissance' to provide a high quality urban experience. The County Council will work with local authorities in the area with the aim of ensuring that policies for development are in accord with Government guidance and the Regional Spatial Strategy.

3.143. There is likely to be massive housing growth in the Norwich area, more than in any other urban area in the region. A significant urban extension is likely on the north east fringes of the city. It is important that this new housing is sited so that it can be as sustainable as possible. This means making sure that it is sited so that car dependence is reduced: by facilitating more walking and cycling; by improving linkages by public transport between housing, jobs, local services and local amenities; and by planning for mixed use. The County Council will work with local authorities in the area with the aim of ensuring that new housing is sited to minimise trips and encourage the use of walking, cycling and public transport and that a sequential approach to the siting of housing is followed.

### **Policy 68: Land-use**

The layout of new development, including housing, should encourage trips by walking, cycling and public transport.

### **Transport links to new development**

3.144. In looking towards the growth within the Norwich area, NATS4 needs to cater for the transport requirements that will need to be provided, both infrastructure and public transport services. There may be a need to protect sites and routes that could be critical in developing infrastructure, to widen transport choices for passenger and freight movements. It is important that other transport infrastructure critical for bringing forward development is identified and protected.

### **Policy 69: Transport links to new development**

Public transport links to areas of new development will be provided or improved, particularly between the new development and the city centre, employment areas and district centres. Local links for walking and cycling will

be provided or improved. Other transport infrastructure critical for bringing forward development will be identified and protected.

### **Contributions from new development**

3.145. Implementation of the transport strategy will improve transport conditions within the Norwich area. Commercial and residential developments will benefit from NATS4, allowing better transport links to markets, workforces and local amenities and services. The additional cumulative transport impacts of new developments place pressure on the delivery of the transport strategy to ensure the efficient operation of the transport network. New development will be expected to contribute in a fair and proportionate way to strategy implementation. This generalised contribution to the strategy will apply to any scale of development and will be in addition to any site-specific access improvements that may be necessary. Currently this approach is being taken to secure contributions towards infrastructure for Longwater interchange and at Norwich research park / hospital cluster.

### **Policy 70: Contributions from new development**

The County Council will seek contributions from all new development to implement the Norwich Area Transportation Strategy.

### **Areas of land-use change**

3.146. Within the Norwich Area, large sites could come forward for redevelopment, for example the Deal Ground / utilities site at Trowse. The impact arising from such changes in land use can be significant, involving different patterns of movement. This can result in local impacts on the road network, affecting congestion as well as wider impacts. It is important that such areas are considered holistically so that the future infrastructure requirements can be identified, as well as allowing consideration of accessibility requirements by public transport, walking and cycling.

### **Policy 71: Areas of land-use change**

Areas of significant development change will be identified and looked at as a whole to identify future infrastructure requirements.

### **Areas of economic activity**

3.147. Within the Norwich Area, there are a number of locations of economic activity, such as the Norwich Research Park, UEA and hospital cluster, Broadland Business Park, St Andrews Business Park, Norwich International Airport and Longwater Employment Area. These are all still being developed, but there are also other major employment areas especially to the north of the City and pockets elsewhere. It is vital for the continued success of these areas that access needs are maintained. In addition, there are likely to be sites that come forward in the future, either as areas where significant change may occur, or as new areas of economic activity. One possible example may be the Deal Ground site at Trowse. The access needs include not only access by road, but also by other modes: walking, cycling and public transport.

**Policy 72: Areas of economic activity**

The strategy will seek transport solutions that support areas of major economic activity.

**Connections to and from the area**

3.148. Connections to the rest of the country and beyond to Europe are important for the Norwich Area to continue to thrive. These transport links are by road, rail and air. It is important that good links are maintained between the Norwich area and the Government's Sustainable Communities Plan growth areas, such as Cambridge and Peterborough.

3.149. Currently, the A11 is programmed to be completely dual carriageway by 2008, although there are no similar proposals for the A47 in the short-term. On rail, there are good passenger services to London and Cambridge. Services to the Midlands and the North are less attractive, due mainly to the length of time journeys take. The east-west rail link would allow services between Norfolk and the south Midlands and west of England, avoiding London.

3.150. Norwich International Airport provides a valuable regional facility and is one of the fastest growing airports in the country. It provides good, high-speed links to other parts of the country, Europe and a number of tourist destinations. Its connection at Schipol, in the Netherlands, allows passengers to connect to flights to the rest of the world.

**Policy 73: Connections to and from the area**

The County Council will work with other agencies to secure upgrading of national and international links from Norwich. In particular, improvement to the trunk road and rail network is strongly supported.

**Norwich International Airport**

3.151. The European market is growing in importance to the local economy. In addition, businesses increasingly need to access other destinations in the UK for people and freight. The further development of Norwich Airport is crucial for these links. Norfolk County Council and Norwich City Council have sold their controlling interest in the airport to a private airport operating company, and this should lead to further development of the airport. Government is requiring airports to set out Master Plans setting out plans for future development.

3.152. Government has announced its strategy for the future of air transport in the UK. This sets out that Government would support development of smaller airports (including Norwich) to meet local demand subject to relevant environmental considerations. It also sets out support for additional runway capacity at Stansted. The implication of this is likely to mean that Norwich International Airport will continue to grow, although development of airports elsewhere in the south east, particularly at Stansted, will have effects on the rates of growth. At the local level, improvements to access arrangements for



the airport would assist travellers going to and from their final destination within the Norwich area

**Policy 74: Norwich International Airport**

The role of Norwich International Airport will be supported as a regional facility and a gateway to Europe and beyond, and expansion of flights will be supported, subject to environmental and traffic implications. Improvements that enhance access to and from the airport will be sought.

# Liveability and the community

## Introduction

3.153. The current Norwich Area built environment reflects the economic development, religious and cultural importance of Norwich over the centuries. The city has many high quality buildings, both historic and modern and many of these buildings add to the experience of visiting the city. However, the quality of the environment is determined not only by the quality of the buildings, but also by the quality of associated urban and landscape details. Most often, particularly in the built up area, these details are part of the transport infrastructure. Therefore, a high quality built environment relies upon high quality design of the transport system, for example the quality of street furniture like bus stops and traffic signs, the quality of paving materials and the quality of street layout, contributing to a more liveable city.

3.154. In addition, traffic impact itself can reduce the quality of the built environment, such as where busy roads cross historic squares or streets, or where traffic disturbs outdoor cafes. These policies on design therefore have links with others in the strategy:

- Policies on direction signing and information
- Policies on traffic management in the city centre
- Policies on extending the pedestrian dominated environment in the city centre.

## Design Quality

3.155. In designing schemes, account should be taken of what the project is trying to achieve, with the design of the scheme being specifically aimed at bringing about the desired outcome. This might involve leaning from examples of best practice or innovative design, as well as looking at relevant guidance and design guides.

### **Policy 75: Design Quality**

A high level of design quality will be sought in the implementation of transport schemes. All schemes will be designed to high quality standards that take account of national and local good practice and respect the needs of all road users.

High quality and visually attractive pavement and street furniture design standards will be used, in accordance with the agreed palette of materials, which suit the areas within which schemes are located and ensure that the highest practicable levels of maintenance are achieved.

### **Multi-disciplinary approach to scheme design**

3.156. A multi-disciplinary approach ensures discussion of all facets of the project and ensures that issues are accommodated at an early stage, rather than added on at the end, which can be expensive. It ensures consideration of the matter in a holistic way. This is important for all schemes, not only major ones.

**Policy 76: Multi-disciplinary approach to scheme design**

From inception stage onwards, transport schemes will be designed using a multi-disciplinary approach. Wherever possible, schemes will be integrated and co-ordinated with any other proposals in the area.

**Safer and stronger communities**

3.157. Crime and the fear of crime deters many people from making trips, especially trips by means other than the private car. In particular, women, children and elderly people feel most vulnerable when walking or using public transport, especially after dark.

3.158. The Crime and Disorder Act 1998 introduced measures to control crime and disorder. It puts a statutory duty on every local authority to “do all that it reasonably can to prevent ... crime and disorder in its area.” Reducing crime may mean changes in street design, but should not result in making walking routes inconvenient or closing areas off altogether. The layout of street space needs to take into account people’s concerns about crime, for example by providing routes that are well lit with a clear view ahead, avoiding blind spots where people may hide. Improved street lighting or provision of CCTV at particular locations may be helpful in overcoming people’s concerns, as should a high quality street environment and keeping streets clean with an absence of graffiti.

**Policy 77: Safer and stronger communities**

Norfolk County Council will work with partners including Norwich City Council, Broadland District, South Norfolk District Council and the Police to address personal security issues, and reduce crime and the fear of crime on the transport infrastructure (including streets, public transport and car parks) in the Norwich Area.

**Engaging communities and individuals**

3.159. The involvement of local people and voluntary and community sectors in service planning and delivery is crucial. Through consultation, the strategy will take into account the needs of all: including women, young people and children, the elderly, disabled people, black and minority ethnic groups, and other disadvantaged groups.

**Policy 78 Engaging communities and individuals**

The County Council will work with local authorities to engage with the community when taking forward transport schemes, policies and programmes.

**Vulnerable people accessing key services**

3.160. The strategy addresses accessibility for all to jobs, health, housing, education, shops, leisure and community facilities. For many people, this may not present a significant problem, other than dealing with issues such as congestion. However, for certain sections of the community, the problems are

much greater. The strategy needs to ensure that such vulnerable people can access the services they need. This might mean targeting transport solutions on disadvantaged groups and areas, and through integration with land-use planning and other agencies, designing, delivering and locating services according to need.

**Policy 79: Vulnerable people accessing key services**

The strategy will promote access to work, shops and other key services e.g. healthcare, jobs, education and retail centres.

**Promotion of active transport**

3.161. Obesity is a key factor in the development of many chronic diseases such as heart and respiratory diseases, Type 2 diabetes, hypertension and some cancers, as well as early death. Studies suggest that health risks may be associated with relatively small increases in body weight. However, this may be readily preventable through lifestyle changes, such as increased levels of physical fitness and activity. Walking and cycling, and improving access to leisure and sport facilities and to public open spaces like parks and the countryside can help. See link to Policy 11: Links for leisure.

3.162. Health objectives can also be achieved by ensuring appropriate design and maintenance standards, good use of public space and having regard to crime and the fear of crime. See policies 75: Design quality, 3: City centre traffic management, and 77: Safer and stronger communities

**Policy 80: Promotion of active transport**

Active transport (such as walking and cycling) will be promoted within the Norwich Area.

# Chapter 4: Action Plan

## Introduction

4.1. NATS4 sets out a framework for tackling transportation in the Norwich area up to 2021. Its implementation depends on a number of factors, many of which could change over time. These include the state of the economy, which could affect demand for transport, funding levels available and any changes to delivery mechanisms.

4.2. Funding to implement NATS4 will come from a variety of sources, including Government through the Local Transport Plan, developers and the Council's own resources. Local Transport Plan funding is the main source of capital funding for transport schemes.

4.3. It is important that schemes provide value for money. The draft guidance on 2nd round Local Transport Plans states that schemes always need to obtain the best possible value for money. It is vital that schemes and measures result in the intended outcomes, and that these outcomes contribute to meeting the aims and objectives set out in the transport strategy.

## Funding through the Local Transport Plan

4.4. During the period of the current Local Transport Plan (April 2001 to April 2006), the Council has received settlements each year from Government of around £ for transport schemes in the county. This level of funding does not include maintenance schemes or individual schemes costing above £5million. These schemes, termed 'major schemes' are dealt with later. The settlement from Government has allowed investment of around £ per annum in the Norwich area. Government has indicated that funding for transport authorities, for capital schemes, is likely to remain at a broadly similar level over the next five years.

4.5. The County Council is currently developing its second Local Transport Plan, which will run from April 2006 to April 2011. As part of this work, it will need to determine where the priorities for spending are across the county. Over the course of recent years, the Norwich area has seen relatively large chunks of the available budget, because of the desire to implement comparatively large schemes like the Park and Ride network. Bearing this in mind, and the many uncertainties that exist over the timescale to 2021, there will be a need for flexibility. The Action Plan has been written assuming that spending in the Norwich area will continue at similar rates to previously.

## Major Schemes

4.6. For schemes that cost more than £5million, the Council has to make a bid to Government for acceptance. The Council has been successful in securing £9½ million major scheme funding for the Norwich Public Transport Major. It has also bid for funding for access improvements to the Norwich Research Park and hospital, and will hear in December 2004 whether this bid has been successful.

4.7. As well as these schemes, the transport strategy identifies a Northern Distributor Road. This scheme is estimated to cost around £120million. The Council is considering ways in which this scheme could be funded, including through Government funding or the Private Finance Initiative.

### **Other funding**

4.8. Other funding sources include developer funding and the County Council's own resources. The County Council will be looking to secure funding, in a fair and proportionate way, from developers to help implement the strategy. The amount of such funding will depend on how much, and the sorts of development that come forward. Funding for public transport subsidy and for things like promotional campaigns may come from the Council's own funding. Due to the proposed increase in intensity of promoting soft measures in the strategy, additional funding will need to be found. This could come, at least in part, from Local Transport Plan funding. In addition, investment from public transport operators will be required, for example to provide high quality buses. The Council will actively pursue all available sources of funding.

### **Summary**

4.9. The rate of implementation of the strategy will depend on the amount of funding available and the decisions taken by the Council, about where this funding will be spent across the county. The Action Plan below sets out how the strategy will be implemented.

## **Action Plan**

**Note:** A NATS Implementation Plan was agreed in April 2010. This Implementation Plan effectively supersedes the Action Plan set out here.

See

[www.norfolk.gov.uk/consumption/groups/public/documents/committee\\_report/cabinet060410item26pdf.pdf](http://www.norfolk.gov.uk/consumption/groups/public/documents/committee_report/cabinet060410item26pdf.pdf)

## **Overall Strategy**

### **Northern Distributor Road**

4.10. The Council is bringing forward proposals for a Northern Distributor Road. A Northern Distributor Road could comprise a dual carriageway road around the north of Norwich from the A47 at Costessey in the west to the A47 at Postwick in the east.

4.11. The Council will be consulting on routes for a Northern Distributor Road in autumn 2004. Following this, a preferred route will be selected, but any new road is unlikely to start construction until 2010 at the earliest. The Council is investigating all available options for funding a new road.

### **City Centre Traffic Management**

4.12. Proposals for the city centre will be brought forward in a phased manner. Initially (during the period of the 2nd Local Transport Plan), work will

concentrate on extending the pedestrian dominated area and to improve the liveability of the street space. Traffic management measures / vehicular traffic restrictions and streetscape improvements on the following roads (not in priority order), will be taken forward initially:

- Gaol Hill and Exchange Street: closed.
- Rampant Horse Street: closed except for buses.
- Westlegate: closed.
- St George's Street: closed.

4.13. If full-time road closures are not found to be viable, closures for parts of the day could be considered (e.g. 10am to 4pm).

4.14. Streetscape improvements will be targeted on the following roads:

- Magdalen Street: extension of footway widths, achieved by one-way traffic working
- Tombland: streetscape improvements, rather than traffic management measures are the priority. These may contain traffic calming or other speed reduction measures. Closure on evenings or Sundays to be considered.
- St Andrews Plain: improvements to streetscape, with enhanced use of the open space at St George Street, to include enhanced pedestrian crossing facilities.

4.15. All of these schemes will be brought forward with full consultation, and include further detailed work on traffic impacts.

4.16. Further assessment and appraisal work will be completed in the city centre to bring forward further measures that would achieve the objectives. This work will involve identifying the most appropriate routes into the centre, including the major destinations such as car parks.

4.17. Ultimately, the strategy identifies that through traffic should be removed from the centre. However, this should not be achieved at the expense of other roads on the network. Computer traffic modelling has indicated that there would be unacceptable delay caused to traffic on the inner ring road through immediate removal of through traffic. The modelling suggests that removing through traffic from the city centre could be achieved only with improvements to the ring road and a Northern Distributor Road.

4.18. Completion of a Northern Distributor Road will partially mitigate the problem by removing remaining through-trips not destined for the city centre. Major junction improvements on the inner ring road, which would have to be well designed to avoid moving the problem on to unimproved junctions, would also mitigate the additional delay. Other measures in the strategy are also designed to reduce congestion: improving public transport and soft measures to reduce traffic on the network. Implementation of these measures will also be required.

4.19. Therefore, removing through traffic from the city centre could be taken forward following, or in conjunction with opening of a northern distributor road, and improvements to junctions on the inner ring road, improved public transport and other soft measures identified in the strategy.

### **Residential Streets in the built-up area and minor roads around the north of Norwich**

4.20. Within the built-up area, the strategy will continue with the work that has been carried out by Norwich City Council. This is to look at areas and to implement a range of traffic management measures and street improvements, worked up in consultation with the local community. Implementation of this programme will continue at present rates, with similar levels of funding being available.

4.21. Around the north of Norwich, there may be a case for implementing individual traffic management schemes to address problems of inappropriate traffic. However, in the first part of the strategy, widescale access restrictions will not be pursued. This is because traffic modelling shows unacceptable journey time increases around the outer ring road and because of the unsuitability of other routes that traffic would need to divert onto.

4.22. Traffic management measures will be introduced with a Northern Distributor Road, to lock-in the benefits of a new road.

## **Accessibility**

### **Walking and Cycling**

4.23. The priority will be to identify the core networks. Funding for implementation of schemes will be similar to current levels. On the cycling network, the first focus will be joining up the core network. Elsewhere, facilities will be introduced such as advanced stop-lines for cyclists at traffic light junctions, ensuring that where possible cyclists can use off-road pedestrian routes like riverside paths and making sure that traffic management measures are introduced in a cycle-friendly manner. These measures need to be implemented as the opportunity presents itself, for example as part of other schemes.

### **Public Transport**

4.24. Core public transport routes will be identified as a priority. Whilst the route from the railway station to the bus station has been established, other routes into and out of the city centre need to be identified. In particular, a route to the west / south west (Dereham Road / Unthank Road) avoiding the congestion on the inner ring road needs to be identified. Similarly, consideration needs to be given to a route out of the city to the Harford Park and Ride route, and to the north of the city, where the existing bus routes may be impacted by any proposals for improving the pedestrian environment on Magdalen Street. Further out of the city centre, most of the Park and Ride routes have some bus priority provision, which will also benefit general scheduled bus services.



4.25. The focus will be on implementing bus priority where there is a strong case, e.g. where congestion badly affects buses. The improvements brought by the Public Transport Major scheme in the city centre will be built on.

4.26. The Council will work in partnership with operators, including the development of a Quality Bus Partnership for Norwich. We will also continue to work with operators on the bus net system. This will allow buses to be tracked on the network, enabling details about adherence to schedules, and indicating areas where congestion affects bus reliability. The programme is linked to the provision of real time information, and will allow priority to be given to buses at traffic signals.

4.27. An orbital bus service will be launched after spring / early summer 2005, using money from the Government's Urban Bus Challenge funding. If it proves affordable, it will continue to be run after 2008.

4.28. The Council will also work with community transport providers, to consolidate these services as more mainstream public transport services. Opportunities to improve facilities for coaches will be taken. A site for layover, including provision of facilities for drivers, will be implemented.

#### **Cars, freight and other traffic**

4.29. A study will be carried out, with a view to implementing a trial of allowing high occupancy vehicles, freight vehicles and / or motorcycles to use bus lanes.

4.30. During the first five-years of the transport strategy, the Council will work with other partners to establish a freight forum or freight quality partnership. The forum / partnership will involve agencies including local authorities, freight operators, local businesses and other interest groups. It will examine how freight can be better managed within the urban area: both to ease deliveries and to reduce the impact of freight on other road users, residents and visitors.

4.31. Up to 2010, new road infrastructure will be provided to provide access to the hospital, provided Government funding is available. This scheme involves multi modal access improvements, including improvement of the B1108 and new road from Colney Hall to the hospital. Anticipated year of opening is 2006. In addition, a new road from the A11 to the hospital, via Colney Lane, will be constructed as part of housing development.

#### **Integration**

4.32. Norwich bus station is currently being rebuilt and will be open during 2005. This will be complemented by bus priority provision between the bus and rail stations.

4.33. Provision for car-sharing spaces at Park and Ride sites will be implemented. This will be implemented at Costessey initially. It will be monitored to establish whether provision should continue to be provided or expanded, possibly to other locations.

### **Access to education**

4.34. The County Council has funding from Government for four school-travel advisors. This funding is guaranteed only until April 2006. Until that period, the advisors will be working with schools, and other partners including District Councils, to develop travel plans. The principal aims of these plans will be to reduce car trips to school. If funding is not continued by Government after 2006, the Council will need to consider how this work may continue to be funded.

### **Park and Ride and car parking**

4.35. Park and Ride will be re-launched in spring 2005. The services, and management of the sites, is all being re-tendered. This will bring consistency to the Park and Ride brand.

4.36. Thickthorn (Cringleford) Park and Ride site is being constructed, and due to open in March 2005. Beyond this, decisions about further expansion of Park and Ride will be taken following after future passenger demands have been assessed in the light of operating experience. Studies suggest that additional car parking capacity, including Park and Ride, will not be required in the period of the transport strategy. If however, additional capacity is required, Park and Ride will be expanded in preference to providing more long-stay parking within the city centre. The policy proposes reductions in long-stay parking, and this will require a shift to other modes of access to the city centre (e.g. park and ride) to accommodate the forecast demand.

## **Congestion**

### **Road and Mode hierarchy**

4.37. A road hierarchy will be developed as a matter of priority. The Primary Distributors have been identified, but road categories further down need to be identified. This needs to be completed as early as possible in implementation of the strategy, because other elements of the strategy rely on this road hierarchy being in place. Such measures include signing of the network and where improvements to the pedestrian environment should be carried out.

### **Improvements to main roads**

4.38. A series of improvements to junctions on the ring roads has already been agreed for implementation before 2008. Beyond this, other schemes have been identified, which could be brought forward. In particular, schemes will need to be implemented in conjunction with measures within the city centre to reduce and ultimately remove through traffic from the centre. More appraisal and assessment work is needed to identify exactly which schemes would be required. Whilst schemes will bring improvements to traffic flow, they could have potential environmental disbenefits. Schemes would be considered on their merits as they come forward. This consideration would include air quality, particularly in Air Quality Management Areas, where will there be a relationship between improving traffic flow and air quality.

### **Urban Traffic Control**

4.39. Improved traffic flow will be achieved by changing the way traffic is managed, through more flexible and responsive use of the Urban Traffic Control system. The improvements that can be gained through improving the system come from addressing the lack of management information, providing a benchmark on current congestion levels and monitoring changes through time, dealing with the growing problems occurring at weekends and expansion of CCTV and introduction of other facilities. The capital and revenue costs of CCTV and other systems are high. Funding could be sought from developer contributions or found from the Local Transport Plan. The improvements can be phased in, but early implementation will be sought.

### **Soft Measures**

4.40. The Council has undertaken programmes of promotional measures and currently works with schools and businesses in developing travel plans. These programmes of work need to be significantly expanded to support the aims and objectives of the transport strategy. Traditionally this work has been funded from revenue budgets. Whilst Government is very supportive of soft measures, and identifies that they can make significant differences to for example congestion, it has made it clear that it will not provide additional revenue support. Government has set out that it expects Councils to be able to find funds to support the works The Council will therefore need, with other partners, to find additional money to support this work. Decisions about whether it is appropriate or possible to fund the measures from the Local Transport Plan allocation, and from other sources, will be taken in development of the 2nd Local Transport Plan over the winter.

### **Pollution**

#### **Air Quality**

4.41. Action Plans have been drawn up for the Air Quality Management Areas. They will be implemented by the end of 2005 and include the following measures:

- Castle area: Low emission zone
- Grapes Hill: To be determined
- St Augustine's: Gyrotory system, with Oak Street, to reduce traffic flow on St Augustine's.
- Area wide measures: These include measures identified elsewhere in the strategy, for example public transport improvements and soft measures

### **Safety**

#### **Casualty Reduction**

4.42. The strategy will continue with a programme of treating sites with a poor accident history. This approach, together with wider scale schemes of introducing environmental improvement measures within residential areas will be continued in the period of the 2nd Local Transport Plan.

### **Education and Training**

4.43. Work will continue on a programme of road safety education and training.

### **Economic vitality, and Liveability and Community**

4.44. The measures under these headings of the strategy will be implemented through working in partnership with other agencies and bodies. For example, working with other local authorities and developers to secure transport provision to new developments. These programmes will continue the existing work already being carried out.

<b>Scheme</b>	<b>2005-2011</b>	<b>2011-2021</b>
<b>Northern Distributor Road</b>	Choose preferred route 2005	Ongoing preparatory work
<b>Light Rapid Transit</b>		Construction 2010
<b>Park and Ride</b>	Cringleford opening year 2005 Identify core routes Implement bus priority where there is a strong case Develop Quality Bus Partnership Launch orbital bus service 2005 Review coach parking provision	Expand park and ride if justified by demand Review viability
<b>Public Transport</b>	Assess viability of allowing freight and motorcycles to use bus lanes	Implement trial and review
<b>Cars, Freight &amp; Other Traffic</b>	Investigate scheme to allow other vehicles to use bus lanes Establish freight forum Implement ring road improvements	Implement trial if appropriate, and review  Review need for further schemes, in conjunction with city centre traffic management Consider improvements on radial routes
<b>Road &amp; Mode Hierarchy</b>	Identify road hierarchy	Implement
<b>Integration</b>	Bus station opening 2005 Implement car-sharing trial at Park and Ride site	
<b>Hospital Access</b>	Opening year 2006	

<b>New Station</b>	Review need as development comes forward		
<b>Congestion and workplace charging</b>	Keep under review		
<b>Air quality</b>			
<b>City Centre</b>	Tombland streetscape improvement	St George's Street closure / improved crossings on St Andrews plain	Ring and Loop (depends on implementation of NDR)
	Westlegate closure	Wensum St / Fye Bridge	
	Rampant Horse St bus only	St one way	
	Exchange St closure		
<b>Ring Road Junctions</b>	Ongoing implementation of small-scale schemes	Further improvements on ring roads to be taken forward	
<b>Residential areas</b>	Ongoing programme of improvement schemes		
<b>Minor rural and residential roads around north of Norwich</b>			Introduce traffic management measures alongside implementation of Northern Distributor Road
<b>Soft measures</b>			
<b>Air quality</b>	Implement action plan		Monitor
<b>Soft Measures</b>	Identify resources and implement		
<b>Cycling</b>	Identify core network		Expansion of cycle network
	Join up core network		
<b>Walking</b>	Identify core network		
	Introduce pedestrian crossings (away from Primary Distributor network)		
	Extend pedestrian dominated environment in city centre		

## **Targets**

The following performance indicators are suggested which set out the elements that could be monitored, and for which targets could be set. Targets will be developed for these indicators as part of the work on putting together Norfolk's 2nd Local Transport Plan.

1. The amount of traffic crossing the Inner Ring Road Cordon and Peak hour Outer Ring Road Cordon.
2. The amount of cycle traffic crossing the Inner Ring Road and Outer Ring Road cordons.
3. The number of passengers on buses and on trains
4. Mode share of journeys to work
5. Mode share of journey to school
6. Congestion
7. Proportion of workforce covered by travel plans
8. Local targets as per Air Quality Action Plan
9. Accessibility Indicator(s) relating to education, work, health care, major shopping centres, to be set later as part of Accessibility Planning work
10. Percentage of bus passengers satisfied with service
11. Bus punctuality