Introduction

What is the Northamptonshire Arc?

The Northamptonshire Arc is a locally developed spatial concept covering the whole county. It represents an integrated approach to economic development, the environment and connectivity and is a first concept of its type in the country. It provides a framework for planning and investment and expresses priorities in a practical and spatial way. The details of this strategy are outlined in the document Northamptonshire Arc: A Prosperity Plan.

The goal is that this strategy becomes a statutory document.

How will it be used?

The Northamptonshire Arc has already been adopted by Northamptonshire County Council to help guide its investment activities and secured wider support from other local partners. It is also being used to help secure private sector and central government investment into the area and attract businesses and jobs. It complements the Core Spatial Strategies which act as the key documents for allocating housing growth and other development and are prepared by the borough and district councils and the Joint Planning Committees. It will also help to provide a context for, and inform, the preparation of neighbourhood plans.

This document focuses on connectivity, principally transport and broadband provision and access. It is one of a series of more detailed action plans which concentrate on particular themes.
Drivers for a new approach to Connectivity

A number of important factors are impacting on Northamptonshire and together combine to act as drivers for a new approach to connectivity.

Road Congestion

Economic growth and prosperity is a top priority for Northamptonshire. Connectivity has a vital role to play getting people to work and to services such as education and health, as well as to leisure activities and for shopping. Local businesses benefit from efficient logistics, access to new markets for their goods and services, improved productivity, and the ability to draw on a wider pool of labour. However, while the economic benefits are clear, congestion acts as a drain on the local economy. This includes the costs of excess delays and negative impacts on the amenity and attractiveness of town centres which can deter visitors and shoppers.

Parts of the strategic road network in the county are already experiencing severe congestion. This is particularly evident during peak hours and is caused through a mixture of through traffic, because of Northamptonshire’s strategic location, and locally generated movements.

Northamptonshire County Council’s technical modelling forecasts that congestion will get significantly worse in the future with more and more junctions experiencing problems. The modelling indicates that problems will be particularly acute around the main towns on the A43 and A45 corridors which form the spine of the Northamptonshire Arc and also act as key economic arteries. The problems are forecasted to be particularly acute around Northampton, on the A45 west to Daventry and the A43 south at Towcester, and will be compounded by additional planned housing. The A43 and A14 around Kettering and the A45 around Wellingborough are also likely to be affected by additional housing. Because of this it is imperative that we find ways of managing the demand for travel and the impact on the network across the area.

Carbon emissions

Tackling carbon emissions is a big challenge for Northamptonshire. At the national level domestic transport accounts for 21% of total carbon emissions and more than half of these are from the private car. One third of these emissions are generated by trips under ten miles. This is where there should be considerable opportunity in the shorter term to offer more sustainable choices. The highest volume of carbon emissions are created from medium distance trips (10–25 miles). However, it is likely that car travel will continue to be the dominant mode for these trips and a major impact on these emissions is therefore reliant on the development of the Ultra-low Emissions Vehicle market. This is dependent on cost, regulation, practicality for everyday use and availability of convenient charging facilities. However, the case for shifting to Ultra-low Emission Vehicles is strengthening, even though it is acknowledged that it will only be in the medium to longer-term that it becomes a mass-market alternative.
Health
Health is vital to future prosperity and quality of life in Northamptonshire. The way in which connectivity is approached has implications for health locally. Air pollutants from transport can create poor air quality, particularly in urban areas and adjacent to parts of the strategic road network. This can contribute to poor health in terms of heart and lung problems. This also has a major cost in terms of treatment. Making cycling and walking more attractive offers an easy way for people to incorporate physical activity into their everyday lives and improve health.

Travel patterns
People travel for a wide variety of reasons. Transport is therefore important to local quality of life and it features strongly in the factors that make somewhere a good place to live.

At a national level, currently half of all trips are made for leisure purposes, including shopping, visiting friends, entertainment and participating in sport, and some 18% of trips are made for business or commuting purposes. Most trips tend to average less than ten miles, 95% of all trips are less than 25 miles and 67% are less than five miles. For shorter distance travel, the challenge is to make walking, cycling or public transport more attractive options.

Locally commissioned attitude surveys show a willingness to switch to these modes for shorter journeys. However, the barriers often cited by drivers include speed, convenience and safety (particularly for cycling).

At the national level, cycle ownership is high (about 40%), but only 1 in 10 people are regular cyclists. Given better provision, such as dedicated cycle paths, 3 in 10 car users say they would reduce their car use, and half cyclists say they would cycle more.

New Technology
The introduction of new technology and widespread use of smart-phones offers opportunities to revolutionise the way in which connectivity is enabled. These include new approaches to network management through the use of advanced traffic management systems, the provision of local real time travel information to help people make journeys, energy management devices to reduce costs, and the use of smartcards, similar to the oyster card in London, making it easier and more attractive to use public transport and other services.
Digital Connectivity

Access to superfast broadband is becoming increasingly important for economic growth. The first question people considering moving house often ask is about broadband speeds and increasingly many jobs are only advertised online. Access to broadband is also a major determining factor in where businesses decide to locate. It is changing the way people do business, how people interact and how people access entertainment. It is already offering better and more efficient channels for delivering public services, making them more accessible. This includes access to online travel information and services. It will reduce costs for consumers and providers and enhance the capability of businesses to communicate and exchange information with their customers and suppliers. This is fundamental to future prosperity and local quality of life.

Affordability

Connectivity can be expensive, whether it involves operating a car (with the increasing associated costs, including insurance – especially for young people – and fuel) or accessing broadband. Solutions to improve mobility and provide better accessibility need to be identified which help to ensure that alternatives are available at a price which local people are able to afford.

Where investment in new infrastructure needs to be public sector led, major constraints on the public purse, coupled with the continuing drive for efficiency savings, mean that more cost effective ways need to be found for delivering better mobility and accessibility. Therefore, robust business cases need to be developed for future investments, particularly major infrastructure improvements. Because of this, integrated solutions combining infrastructure improvements with demand management and ‘softer’ measures to ‘lock in’ benefits, will become more the norm. Examples of this include, stimulating demand for online services alongside investment in broadband infrastructure, and investing in better public transport provision where a key road link has been improved.
‘it is imperative that we find ways of managing the demand for travel and the impact on the network across the area’
‘A broad Arc of economic and innovation activity in the centre of England’

Figure 4: Infrastructure Deficit
Addressing the factors outlined in Section 2 in isolation is relatively simple, but tackling them together in a way which supports economic growth and the levels of housing growth which are being proposed for Northamptonshire through the Core Spatial Strategies, is low carbon, is fiscally sustainable and promotes social mobility, accessibility and sustainable development is a far tougher challenge.

This is the challenge Northamptonshire faces. However, by doing this, and taking an integrated approach to economic development, the environment and connectivity, real transformational change can be delivered which supports business and delivers benefits to local residents.

New technologies are already emerging that will help to resolve this challenge. By embracing them (for example, superfast broadband, ultra-low carbon vehicle technology, sustainable bio-fuels) Northamptonshire can not only make progress towards carbon reduction targets, but can also build the basis of a more diversified and sustainable economy, based on these new technologies.

However, technology alone will not deliver success. Investment will be needed to address gaps in infrastructure to increase access to markets, services and labour and to improve mobility. This will unlock wider strategic benefits because of Northamptonshire's location at the hub of national infrastructure networks.

‘taking an integrated approach to economic development, the environment and connectivity’
Behaviour change will also be necessary. This is because, in the short term, technological change alone will not get us to where we need to be fast enough on the agenda of carbon reduction, but in the longer-term because other elements of a sustainable transport solution, in particular, dealing with congestion, cannot be solved by technological advance alone. However, for behavioural change to work, attractive choices need to be provided which encourage walking, cycling and use of public transport. Incentives also need to be in place to promote and encourage changes.

Northamptonshire is developing a programme of activities which address these issues and challenges and provide the context for smarter use of public funding, new investment models, and encouraging new sources of private capital. This involves better use of assets, targeted action to address network stress and failure points and delivering transformational projects which are part of a clear long term strategy.

This programme of actions is focused on the following three priorities.

- Enhancing strategic connections and addressing congestion on the road network
- Making public transport and cycling more attractive and encouraging and incentivising low-carbon travel
- Enabling 100% countywide access to superfast broadband

The County Council, which is the local transport and highways authority, will work with the new Northamptonshire Enterprise Partnership, local business, the borough and district councils, and other local partners to develop and implement these activities. Further details of these activities are set out below.

Enhancing strategic connections and addressing congestion on the road network

The car is the mode people most frequently chose for all but the shortest trips in Northamptonshire. This is mainly because if its freedom and flexibility. At the same time, the car is responsible for the majority of transport carbon emissions. Congestion also has a detrimental effect on the local economy.

Northamptonshire is committed to addressing ‘infrastructure gaps’ in the road network, making car travel more sustainable, managing traffic better, and promoting opportunities for ultra-low emission vehicles. It is also committed to optimising rail connections.

The road network and connections

The way roads are managed is critical to how they are used and tackling congestion.

Northamptonshire’s inter-urban roads have experienced up to twice the national traffic growth rate in recent years. This is primarily as a result of its position at the heart of the nation’s road network and high levels of housing and other development. These inter-urban routes are important not only to the local economy, but also national economic performance as some of the nation’s main economic arteries form part of Northamptonshire’s road network. These include the A14 which connects to the East Coast Ports, the A34/A43 which connects to the South Coast Ports, and the M1/M6 which provides the country’s main north – south economic artery.

In and around Northampton and on parts of the strategic network congestion is particularly acute and is already having a negative impact on economic performance and quality of life. As road traffic grows, congestion will become more of an issue and will increasingly impact on other towns. Technical modelling indicates
This includes the Strategic Road Network, for the growth of Northampton and Railways.

1. M1 Junction 19 – current plans for an ‘all moves’ upgrade.
2. Dualling of the A43 Northampton to Kettering – including upgrading of the A14/A43 roundabout interchange.
3. A43 North – investigation of further upgrades including for potential dualling through to the junction with the A1 at Stamford.
4. A43 South – improvements required to permit development at Brackley and Towcester, and an A5 bypass for Towcester.
4a. Master Planning requirements for Silverstone – including better events management i.e. telematic signs etc.
5. A45 Nene Valley Way – further upgrades including providing greater capacity for the Queen Eleanor roundabout interchange.
6. A45 Northampton to Wellingborough – further upgrades including to the A43 Riverside roundabout interchange and the Wilby Way roundabout.
7. A45 Wellingborough to the A14.
8. A45 Northampton to Daventry.
9. North and North West Northampton Development Areas – schemes for the Sandy Relief Road South and Sandy Lane Improvements North now complete; Sandy Lane Relief Road North has planning permission but negotiations still ongoing with developers; Dallington Grange link to be provided as part of the Sustainable Urban Extension. The need for completion of the North-West Bypass through to the Northampton North of Whitehills SUE, and any other infrastructure improvements to the east, is subject to further investigation linked to the emerging core spatial strategy proposals.
11. Northampton Town Centre – network to enable all key town centre developments to progress on the basis of a joined up approach – to include improved connectivity to the railway station and the development and implementation of new car parking and bus strategies, through projects such as the Angel Street development, St John’s development, the Marina development and the LeG/NBC town centre development including a new bus station.
12. Northampton Town Centre to Brackmills Connectivity – develop better sustainable transport links including further investigation of the old railway line option. To determine that opportunity for the re-establishment of the Northampton to Bedford railway line is no longer an option.
13. Other key Northamptonshire schemes – Corby Link Road and Isham Bypass.
that congestion will be exacerbated by the large scale housing development planned for the county. The potential impact of this can be seen in figure 6. Therefore an integrated approach, with targeted infrastructure investment, is needed. Funding packages also need to be developed and agreed. Without this approach economic growth will be slowed and some development may be halted altogether.

Improvements are needed to the strategic inter-urban network to support growth and enable these economic arteries to function effectively. This will involve route improvements, including creating additional capacity at major congestion points, and introducing intelligent transport systems that provide up-to-date travel information.

Because of the impact of housing and commercial development on the road network, it is also important, and fair, that new development contributes to new infrastructure. Investment will be targeted to have the maximum impact in terms of improving mobility and accessibility, supporting growth and lowering carbon emissions.

Junction 19 of the M1 is arguably the most important junction on the strategic national road network. This is where the M1, M6 and A14 meet. These three routes connect London and the South East with the Midlands, the north, Scotland and Ireland. The A14 is also the principal route for international container traffic from the East Coast Ports. This is reflected in its designation by the European Union as an international link and part of the Trans-European Network. However, the ability of these routes to operate effectively is being compromised by the inadequacy of the current junction which restricts some movements and acts as a bottleneck. What is needed is an ‘all moves’ interchange between the M1, M6 and A14. This is critical to the national economy and logistics sector and has strong backing from business. Improvements are also needed to the A14 Kettering Bypass.

Figure 6: Forecast Congestion (AM peak) - 2021
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The County Council believes that the current trunk road network does not accurately reflect the roles played by some of the main routes running through Northamptonshire, particularly the A43 and A45 arteries. It believes that the role of this wider corridor, linking the M40, A34 and the South Coast Ports and A14 and the East Coast Ports, should have a higher profile in the strategic network. The A43 and A45 arteries are also an important focus for Northamptonshire and business as this links the main towns and act as crucial economic arteries. Improvements to key junctions and approaches on these routes are essential if planned development is to be accommodated without creating gridlock on the wider network. This includes housing and commercial development which has been earmarked around Northampton, Brackley, Corby, Daventry, Kettering, Towcester and Wellingborough. Proposals for the growth of these towns, together with other development allocated in the Core Spatial Strategies, will have a significant impact on the network. Much of the impact of this growth will be on the A43 and A45 arteries.

Because of this, an integrated package is being developed for the A43 and A45 arteries to cater for anticipated travel demand. Important infrastructure components of this package include the A43 Corby Link, the Northampton-Daventry Development Link, improvements between Kettering and Northampton, A43 improvements around Towcester (including an A5 Towcester Bypass), and A45 junction improvements between Wellingborough and the A14.

Improvements are also needed around Northampton. Northampton is the largest centre in the county and the major focus of much of the new development. It is also affected by longer distance traffic because of its close proximity to the M1 and the A43 and A45 which form a partial ring road around the town. Investment in the A43 and A45 is therefore crucial to enable local traffic movements as well as the strategic functioning of these routes and the growth of the town and the economy.

Other important local economic links are the A509 between Kettering and Wellingborough, the A508 between Northampton and Milton Keynes and the A605 between the A14 and A1. Steps will be taken to address congestion on these routes.

In the towns there is little potential for new roads to reduce congestion. Any new roads which come forward will primarily link new developments to the existing network. These roads are likely to be specifically related to, and funded by, new developments. The challenge of dealing with congestion in the urban areas will therefore focus on a programme of capacity improvements at major junctions and the active management of the network using intelligent transport systems and other traffic management measures to help traffic flow more smoothly. This will include the roll out of advanced technology solutions to identify key congestion points and alter signal timings to manage traffic flows.
Parking guidance systems will be introduced to help direct people via enhanced message signs on key routes to the nearest car park with available spaces. This will be integrated with a new on-line travel information service which will provide information on congestion, journey times, car park spaces, bus times and network incidents.

Measures will also be identified to improve road safety, including on key routes to school. This will include looking at engineering solutions, but education and publicity will also have a central role to play. This will involve working with local communities, including voluntary, community and social enterprise organisations, to identify and agree the most effective solutions.

The logistics and distribution sector is essential to the economy, but it also has a big impact on the road network and the environment. Activities will be identified which enable growth to be supported whilst reducing the number of vehicle journeys and reducing carbon emissions. This will include support for the concept of ‘freight consolidation centres’. These are distribution warehouses, situated close to town centres, shopping or construction sites, at which part loads are consolidated and delivered to the target area resulting in fewer journeys. Research from centres already in operation suggests that they can reduce journeys by about 80% and cut carbon emissions from freight by over 50%.

**Rail connections and facilities**

The rail network is funded primarily by the Government through franchise agreements with train operating companies for the provision of rail services and through Network Grant to Network Rail for infrastructure provision. Enhancements to safety, capacity and performance on the network are secured through the High Level Output Specification. The next High Level Output Specification is due to be published in July 2012 setting out what the Government requires from the rail industry during the period 2014-19.

Northamptonshire will press for better rail services through the next High Level Output Specification. This will include faster services to and from Northampton with our priority being a regular two per hour 40 minute or less service to and from London and Birmingham. Northamptonshire will also continue to work with other areas to make the case for electrification to the Midland Main Line to enable better and faster services to and from Corby, Kettering and Wellingborough and reduce carbon emissions. This will also involve improving connections to services across London and the South East (and via Eurostar services at St Pancras to mainland Europe). The Chiltern Line and East Coast Main Line also serve parts of the county and we will look to secure improvements to the services on these lines.

At its Full Council meeting on 23rd June 2011 the County Council agreed:

*That this Council confirms its support for the principle of High Speed Rail in Britain, but only if:

A clear, professionally certified business case is made for the value for money of the investment needed, which significantly outweighs the advantages for the same investment which could otherwise be made into the existing transportation infrastructure of the county.*

*That the Council, recognising that the advent of high speed services is probably 15 years away for the west coast line and 30 years away for cities served by the Midland Mainline, urges that improvements sought in the nearer future to existing infrastructure and services should be given a high priority so that capacity and service enhancement is achieved in the interim and is available for conventional services if the high speed service comes on stream.*

The County Council and others will work with Network Rail to secure improvements to stations in the county. A priority is a new station for Northampton. West Northamptonshire
Development Corporation, the County and Borough Council and partners have been developing the business case for a new station. This work is well advanced. Designs have been produced for what would be an iconic new station building which would also offer additional car parking, better interchange and passenger facilities and new commercial opportunities.

Timetable integration is important, particularly between bus and rail - ensuring that passengers are able to get a bus that is well-timed to meet a departing train, or to quickly pick up passengers from a station to take them to their destination. The County Council will work with train and bus operators to help them integrate their timetables. It will also work with the existing and potential train operators, Network Rail and the Government to look at opportunities to improve the passenger experience, including integration with other modes, for instance by improving provision for cycle parking at stations, station car parking, and travel information. Furthermore, the County Council will work with train operators and Network Rail to set out a strategy and action plan to make it easier for rail passengers to use more sustainable forms of transport to travel to and from stations.

The ability to move freight by rail is crucial to the economy. This importance is likely to grow with the need to reduce congestion and lower carbon emissions. Northamptonshire is ideally based to capitalise on the growth of this and lead innovation in the logistics sector. The reason for this is its central location and proximity to national economic arteries, and the presence of a large cluster of leading logistics companies and operations.

Northamptonshire is home to two freight transfer terminals. These are Eurohub (at Corby) and the Daventry International Rail Freight Terminal (DIRFT) close to M1 Junction 18. DIRFT is UK’s premier road and rail distribution hub with pathways to major ports, rail terminals and the channel tunnel. It employs around 4,000 people. A further phase of DIRFT is under-construction and has the potential to create a further 2,000 jobs and additional rail connected facilities. These facilities are supported because of their importance to the economy and because they provide opportunities to transfer goods off the road and create jobs.

Initiatives include:

• An ‘all moves’ upgrade to M1 Junction 19 (connecting the M1, M6 and A14)
• A14 improvements, including around Kettering
• A43 and A45 arteries package
• Northampton town centre, growth and connectivity package
• Northamptonshire fast-rail agenda
• Connect Northamptonshire - improved Traffic and Travel Information
• Freight Consolidation Centres with industry
• Increased rail freight capacity

‘A priority is a new station for Northampton’
Making public transport and cycling more attractive and encouraging and incentivising low-carbon travel

Public transport needs to be made more attractive if it is to provide a viable alternative to car travel. Key to this is improving end-to-end journeys and enhancing the whole journey experience for users.

Rapid Transit

Light rail, trams and other rapid transit systems can play a significant part in improving the attractiveness and quality of public transport. Not only is this mode of transport good for passengers, it is also good for local economies and in the right circumstances can be an effective and efficient means of moving large numbers of people particularly in large urban areas.

Looking into the future we are committed to investigating a rapid transit network for the Northamptonshire Arc (NAT). This will provide next-generation services on the core urban and inter-urban routes, link the main towns and provide access to town centres and major trip generators such as hospitals, universities and colleges and business parks. This is essential to achieve a transformation and major step-change in the use of public transport and by doing so reduce the twin challenges of managing predicted traffic growth to avoid major congestion and reducing carbon emissions. However, it is imperative that NAT is economically viable. This will help to avoid the difficulties faced by some other schemes elsewhere in the country. The County Council has already commissioned work on an initial business case for the NAT. This is looking at potential routes and phasing as well as a funding strategy and how the network could operate. The business case work will start to inform which technology, or mix of technologies, would work best in Northamptonshire.

A Travelstyle analysis has been undertaken of the county to help understand the potential to increase the use of public transport and where improvements and other measures could be best targeted. This analysis shows that those groups which have the highest propensity to use public transport make up a significant proportion of the populations in Northampton, Corby, Daventry and Wellingborough. This helps to confirm that there is a potential market for an improved mass-transit network linking these towns.

‘Light rail, trams and other rapid transit systems can play a significant part in improving the attractiveness and quality of public transport’

Features anticipated on the NAT are;
- Rapid links between existing urban and planned growth areas
- Modern high capacity, low emission vehicles coupled with latest technology guidance, command and control systems
- High levels of journey time reliability, approaching metro standards
- High quality real time information when and where passengers need it
- Smart, multi-modal integrated ticketing
Public transport
The County Council will work with the bus operators to determine where the congestion hot-spots for buses are in the main towns and look at ways in which these can be addressed.

Low carbon emission buses emit around 30% less carbon emissions than standard diesel buses and use about a third less fuel. However, they are more expensive to purchase. The County Council will work with local operators and Government (including through the Green Bus Fund) to introduce hybrid (diesel/electric) and electric buses in Northamptonshire.

Partnership working with bus operators, local communities, social enterprise organisations and other interested parties is important. Pooling of resources and ideas can increase capability and reduce costs, making local transport more focused on need and more efficient in delivery, and leading to improvements in the quality of services. The County Council will look to develop voluntary partnership agreements and quality partnership schemes to combine improvements to facilities and services.

Access to real time information will be improved to make public transport easy and simple to use and more attractive. This will include ‘live’ display boards at stops, text-services and a simple and easy to use website which allows users to make well-informed decisions about whether, when and how to travel. The County Council will also work with operators and local communities to look at the best sites for bus stops to improve end-to-end journey experiences.

Smart and integrated ticketing has the potential to revolutionise the way passengers use public transport, with benefits for passengers, authorities and operators. Smart tickets, usually embedded in a micro-chip can also be held on a mobile phone. They offer more innovative products than conventional tickets, such as an electronic purse, where passengers can top-up a smartcard with credit. This offers greater flexibility and reduces the need to queue. Smart ticketing technology can also support a variety of fare options, for example providing discounts after a certain number of trips or enabling the passenger to build up ‘loyalty’ points that buy free or discounted additional journeys. The data from smartcards can also be helpful to enable concessionary travel reimbursement and through understanding route needs identify where we should target resources to develop partnership agreements with bus operators or in supporting community services.

Integrated tickets facilitate seamless travel by enabling passengers to use the same ticket on services of different operators. The introduction of smart and integrated ticketing in Northamptonshire could also create new opportunities for existing and new ticket retailers enabling advance purchase rail and coach tickets to be bought on line through third party retailers. Tickets could also be bought in local retailers such as newsagents.

‘interactive journey planning services enables users to identify options and select the one which best meets their travel needs’
The County Council has already worked with bus operators to introduce smartcard readers on some buses. This is the first step of a much wider smartcard scheme that will encompass not only buses, but also trains, parking and all form of concessions. The aim is to expand the scheme to incorporate different leisure and social activities.

An interactive journey planning service will be introduced, using local network information, which enables users to identify options for end-to-end journeys and to select the option that best meets their travel needs.

Northamptonshire is also committed to improving the accessibility of public transport for disabled people. This will include measures to improve access to buses for people with disabilities and work with the train operators and network rail with the aim of making all stations in the county obstacle and step free.

Public transport services are important for both the sustainability and independence of rural communities. However, the provision of a bus network in the rural areas is difficult, and where services do exist, very few are run commercially. Reduced public sector funding means that different, more innovative, approaches are needed. A new approach is needed which helps to transform rural accessibility and mobility. The best solution in some areas may be the provision of demand responsive services and other innovative approaches where passengers are able to match lifts and book services online. Where there is strong support for such an approach, the County Council will work with communities to help them design and develop the locally led solutions that work best for them. This could provide the opportunity for new rural based businesses and social enterprises.

Cycling

The County Council is keen to maximise the potential of cycling as a transport mode and as a form of recreation and exercise. This will include defining and targeting key corridors in the main towns for cycle routes (including segregated off-road provision) to cater for different levels of cycling ability and to improve safety.

The potential will also be investigated to designate rural recreation routes, similar to the National Cycle Route scheme but at a local level, targeted to different levels of cycling ability and introduce improvements to make these routes attractive and safer for cyclists. This can also help to support the rural economy by encouraging access to local tourist attractions.

Alongside this, cycle facilities will be improved at key destinations including town centres, major sporting venues and transport interchanges. This will include cycle parking facilities to enable cyclists to leave their bikes securely for long-term parking.

This approach also involves a partnership process including secondary school, university and college students, through schemes such as Bikeability, as well as the traditional focus on primary schools.
Smarter choices

Smarter choices is a term used to describe a range of soft measures which seek to encourage more people to choose sustainable travel by improving information, opportunities and the attractiveness of alternative modes. These measures include travel plans, personalised travel planning, awareness campaigns, information and marketing, car clubs and car sharing schemes. Practice from around the country and internationally shows that smarter choices can be very effective, relatively low-cost and complement other measures including infrastructure improvements.

As part of the Northamptonshire approach, travel plans will be required for all major developments as part of the planning process and secured through Section 106 agreements. Travel plans are long-term strategies for managing access to a workplace or development by promoting sustainable modes of travel, encouraging car sharing and the use of public transport, cycling and walking, and where possible, reduce the need to travel. The County Council will work with developers to help with the preparation of these plans. It will also approve and monitor these plans. Alongside this, the County Council will also support local businesses, commercial areas and industrial estates to develop voluntary travel plans and focus efforts on where congestion is a particular problem.

Personalised travel planning has been very successful in many areas where it has been introduced. It involves the provision of information and incentives to help people make more informed travel choices. The aim is to make them more aware of alternatives to using the car for local journeys and to address perceived barriers to public transport, cycling and walking. This will include looking to trial this in major new developments.

Travel awareness campaigns have a valuable role to play. A wide range of publicity will be used, including web pages, to raise awareness of sustainable travel choices. This will be done in conjunction with other improvements and initiatives as part of an integrated approach.

Car sharing can help to alleviate the problems of congestion and carbon emissions and also reduce costs. Pay-as-you-go car clubs provide members with quick and easy access to a car. Cars are located at designated parking bays in the local area and members can book them on-line. Vehicles can then be accessed using a smartcard. The County Council will work with local communities to investigate the potential to introduce a car club in Northamptonshire. The aim is to be a leader in the implementation of community-led smarter travel programmes through initiatives such as local Travel Centres.

Initial funding for the implementation of travel centres has been agreed for a number of major new housing developments. The first of these centres is located at the Priors Hall development at Corby. These centres can help to create community cohesion and focus in the initial phases of a development, as well as providing a core hub of transport services, increasingly so as a development builds out and the resident population expands. They will evolve with a development and will provide personalised information on travel planning, car sharing and car club services as well as input into the development of new public transport services. They will be complemented by tailored and up-to-date travel information and downloadable applications. They will also take advantage of new smartcard technology to provide personalised offers to local residents focused on their travel choices and needs.

‘The aim is to be a leader in the implementation of community-led smarter travel programmes through initiatives such as local Travel Centres’
The scheme will also provide a technology platform and supporting basis to inform the development of similar schemes possibly, as social enterprises, serving existing communities in the county and in developments which have separate travel plan obligations to meet where there is local support to establish a travel centre.

The case for supporting smarter choices is backed up by local market analysis of the county using a Smarter TravelStyle categorisation. This profiles the population in terms of the likelihood that they will use smarter travel measures, such as school and workplace travel plans, utilising better public transport information and marketing, car clubs and car sharing schemes, home-working, teleconferencing and home-shopping. This analysis illustrates that a number of areas in the county exhibit a strong propensity to travel smarter. In some places, like central Northampton, these are similar to the areas which would benefit most from better public transport including rapid transit.

This analysis is complemented by a more depth central government-sponsored project which looked at travel behaviours in three new housing developments: the Life Building and Upton developments in Northampton and Oakley Vale in Corby. This concluded that almost half (48%) of the population appeared willing and ready to adopt changes in their travel behaviour. This includes using smartcards, car sharing and car club schemes.

Ultra-low carbon vehicles

The use of alternative fuels, like electricity, can help to significantly reduce carbon emissions, and in the case of electricity help alleviate air quality problems. For example, an electric car powered from today’s grid could emit between 15% and 40% less carbon over its lifetime than a comparative sized petrol car. This will improve as the electricity generating sector moves to low carbon energy sources.

Car manufacturers have already spent billions developing ultra-low carbon and more efficient vehicles and are doing more to promote and launch them in Britain. The Government is providing £43m to fund £5,000 discounts on the price of electric vehicles through the Plugged-in-Places scheme. This provides match-funding to roll-out electric vehicle recharging infrastructure at selected places across the country.

Northamptonshire is part of the Plugged in Places scheme. The County Council is working with Cenex (who are managing the scheme), private businesses, developers, local partners and residents to install charging points in key locations.

There are also wider potential economic benefits. This is because Northamptonshire, with its expertise in high performance engineering coupled with the presence of Silverstone Circuit and Rockingham Raceway which can act as proving grounds, is also the ideal place to be a pioneer to develop, test and manufacture ultra-low vehicle technologies.

‘The use of alternative fuels, like electricity, can help to significantly reduce carbon emissions and alleviate air quality problems’
Where air quality and carbon emissions is a problem and a major concern for local communities, the County Council will look to introduce low emission zones to encourage the use of cleaner vehicles, limit access to certain vehicle types or reduce the number of vehicles overall.

In September 2011 Rockingham hosted the annual Low Carbon Vehicle event which showcased the capabilities of the country’s technology providers and provided a global platform for collaborative opportunities. Northamptonshire is also investigating the potential for it to be part of the Government’s Innovation and Technology Centre network specialising in high performance engineering.

**Initiatives include:**
- Northamptonshire Arc Transit network
- Rural accessibility and mobility solutions and incentives
- Smartcards
- Cycling network
- Plugged in Places charging infrastructure

**Enabling 100% countywide access to superfast broadband**

Take-up and effective use of broadband can help businesses develop and adopt more productive and efficient ways of working by making it quicker, cheaper and easier to communicate and exchange information with suppliers and customers.

Access to broadband can help encourage greater innovation activity by:
- Helping to spread new ideas and knowledge more quickly and widely
- Bringing about the transformation of business models and organisation structures as well as greater collaboration between business and academia through virtual networks and new ways of working including cloud computing
- Developing new applications, such as services and content including new business products and applications, on-line services and entertainment applications
- The development of components and software needed to support this revolution is important to the creation of jobs

Many of the applications which may be supported by superfast broadband require faster and more symmetrical upload and download speeds and may deliver a number of other benefits. Two-way conferencing can encourage more employees and employers to make greater use of teleworking and enable employees to work from home. This can deliver benefits to the business and the employees as well as wider economic, social and environmental benefits. This includes helping to reduce the barriers to entering the labour force for those who are less mobile or for which transport accessibility is an issue, resulting in reduced traffic congestion and carbon emissions, and improving the work-life balance.

Superfast broadband can also help to improve the quality and delivery of public services particularly in more remote rural areas.
A potential example of this is the delivery of healthcheck services in the rural areas where the average age of residents is nearly six years older than their urban counterparts. This means providers in the rural areas will come under increasing pressure over the next 20 years as the ageing population will require more services from the NHS. Another potential example is the ability to access lift-matching and local community-based transport services and other travel information through on-line and mobile applications.

Superfast broadband can also make it easier for us to communicate with others, access entertainment, shopping and other services from the private sector and therefore reduce the need to travel and the associated costs.

Results from a recent online survey carried out by the County Council involving over 1,000 respondents showed that over 50% had an average speed of less than 2Mbps, with less than 5% having an average speed of over 10Mbps. More than 70% of businesses that responded thought that an improved connection was required to support their business and that their current connection was inadequate.

The vision behind the superfast Northamptonshire initiative is to enable everyone in the county to access improved services via superfast broadband and for the county to be at the leading edge of the global digital economy.

The total investment needed to deliver superfast broadband across Northamptonshire is in excess of £100m. However, a large proportion of this investment will be provided by private telecoms providers taking advantage of commercial opportunities. For example, BT has announced that it plans to upgrade 16 exchanges in the county, and a further 5 located outside but serving the county by the end of 2012 using fibre to the cabinet technology. Further announcements are expected by BT and other telecoms providers. The County Council, along with other partners, will be making the case to providers to accelerate and widen this roll-out.

However, in some parts of the county it is not commercially viable for private telecoms providers to invest in superfast broadband. Work by the County Council indicates that this could cover over 60,000 premises (residential and commercial).

The County Council is working closely with Broadband Delivery UK (which has been established by government to manage the roll out of superfast broadband) to secure ‘gap funding’ which would make investment in these areas viable. Fibre to the premise is the preferred option for the county, but the optimum technology mix in these areas will be determined through a tender process. Choice and price are important and the County Council will be looking for a solution which enables service provider competition and offers affordability. This initiative will deliver massive increases in bandwidth – both headline

‘superfast broadband can also help to improve the quality and delivery of public services particularly in more remote rural areas’
and average speeds – and it is anticipated that the technologies employed will enable speeds of at least 40Mbps to be achieved as the norm. This compares to a county average of 7.2Mbps (Source: Ofcom 2011). However this masks parts of the county where speeds are far lower than this including some areas which do not have access to broadband. This will enable genuine superfast broadband access and act as a catalyst for business growth and enable a greater range of public services to be provided direct to the home. Considerable interest has been attracted from local communities, businesses, the media and others in this initiative.

Investment in new infrastructure will be accompanied by improved on-line services and information (including better on-line travel information), support for businesses to help them utilise better broadband access, and close liaison with communities and the telecoms industry to improve local provision and encourage take-up.

The target is to deliver the superfast Northamptonshire initiative by 2017.

**Initiatives include:**
- Superfast Northamptonshire

‘the target is to deliver the superfast Northamptonshire initiative by 2017’
This Action Plan sets out a bold agenda to transform connectivity and in doing so support economic growth and reduce carbon emissions. Some initiatives can be implemented quickly and at a relatively low cost. These include some ‘congestion busting’ measures within Northampton and other towns. Other initiatives will take longer to deliver and require the support of others. However, this does not mean that progress will be slow and work will be accelerated on priority medium and longer-term initiatives to ensure that schemes are in a state of readiness for when funding packages are in place. Detailed business cases will be developed to help inform how to proceed with specific initiatives and secure any necessary funding and inform future implementation and delivery timescales.

The County Council (as the local transport authority and highways authority) will have an important role to play in implementing this Action Plan. This will be either through working with local partners on a collaborative basis, securing support from central government or its agencies (such as the Highways Agency, Network Rail, Cenex and BDUK), direct delivery or a combination of these. The County Council has a strategic commercial partner in place to help on a range of deliverables and to commit expertise and resources. It also has a public-private sector capital programme unit already established to implement major projects.

It is also vitally important that the business sector has a major role in delivering this action plan. The private sector-led Northamptonshire Enterprise Partnership has been established to promote economic growth. The Board includes local businesses, local authorities, the University and voluntary sector. Another important voice is the Northamptonshire Ambassadors network which includes a wider reach of local business figures in the area. Both these arrangements, along with other important networks (including the Chamber of Commerce, Institute of Directors, Federation of Small Businesses), will have a major role to play helping to implement the approach activities and actions outlined in this document.

Integral to the Northamptonshire approach is the smarter use of funding. This means taking a ‘place-based’ approach for the county which looks at all the various sources of funding together, rather than looking at separate funds in isolation. This is essential with reduced public funding. This will enable a programme-based approach to be adopted and a longer-term view to be taken. In turn, this will help to create greater certainty and confidence for delivery and attract significant additional private sector investment.

Some of this can be achieved through local action and the public and private sector working in partnership. For example, by working closely with bus and train operators the aim is to build business cases which will encourage them to improve services and invest in new infrastructure. A similar approach is being taken with the telecoms industry to superfast broadband. This is because it is important that new initiatives can be run on a commercial basis and are not overly reliant on public subsidy. That is why a business case has been commissioned for a new Northamptonshire Arc Transit (NAT) system.

One of the major sources of funding for Northamptonshire, as a rapidly growing area, is through new development. Principally this funding is currently secured through Section 106 agreements with developers. In parts of the north of the county the County Council operates a ‘local transport tariff’ where funding from new development is collected, pooled, managed and delivered on a local area-wide basis as part of an integrated approach. This approach has proved successful and it is anticipated that it will be rolled-out to the whole of the county. This would either be through a local transport tariff, collected as part of planning obligations, or via the Community Infrastructure Delivery 4.
Levy (CIL) if this is introduced locally. This also means that some funding is already available for implementation. A smarter approach to funding will be reflected in the way in which Local Transport Plan (LTP) funding is targeted.

However, more can be facilitated and a real step change delivered, through devolving responsibilities and funding. This is an area that Northamptonshire is keen to explore and discuss further with central government. An example is placing less emphasis on schemes and detailed appraisal at the national level, and instead of this promoting a more programme-based approach which gives local highway and transport authorities the opportunity to prioritise how funds are invested. As well as increasing local control and accountability, it would provide a greater onus on the local transport authority to look for lower cost solutions with the incentive that any savings could be reinvested locally to deliver additional benefits.

Another prime example of this is local business rates. Currently, local business rates are set at the national level. They are collected locally, by the district and borough councils, and passed on to central government to redistribute across the country to help pay for public services. Northamptonshire is a major net-contributor of business rates. This means that more is collected locally than is received back to pay for local public services and to help invest in economic infrastructure. The County Council is keen to explore with central government the local retention of business rates so that this revenue can be used to help support investment in economic infrastructure especially transport and broadband which are top priorities for business.

The greater certainty and returns provided by this revenue would enable a more proactive and longer-term approach to investment in superfast broadband and transport infrastructure. It would also help to reduce the existing reliance on central government and free up localities to take more enterprising and innovative approaches to promoting prosperity and growth.

The County Council is also committed to investigating a Tax Incremental Finance (TIF) pilot initiative to fund infrastructure. This involves using future increases in local business rates to fund the investment (including costs of borrowing) needed to facilitate growth. Projects under consideration to be enabled by TIF, if viable, include the Northampton to Daventry Development Link and the A43 improvements between Northampton and Kettering as part of a wider package of investments for the A43 and A45 arteries. This is another area which the County Council is keen to explore further with central government.

The County Council will also take a proactive approach to the use of its assets to release future development value. It will do this by working alongside other public sector agencies and the private sector to help fund the costs of new infrastructure.

Oversight arrangements will be established to review progress and maintain an overview on this Action Plan and the Northamptonshire Arc concept as a whole. These arrangements will also co-ordinate collective lobbying and other activity where this can add value.

‘The County Council will take a proactive approach to the use of its assets to release future development value’
# Transformational Programme

This approach and transformational agenda is captured in our Connectivity Programme.

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Start date</th>
<th>Target end date</th>
<th>Sponsor/promoter</th>
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<tbody>
<tr>
<td>An ‘all moves’ upgrade to M1 Junction 19 (linking the M1, M6 and A14)</td>
<td>2011</td>
<td>2019</td>
<td>Highways Agency</td>
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<tr>
<td>A14 Improvements, including around Kettering</td>
<td>2011</td>
<td>2019</td>
<td>Highways Agency</td>
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<td>A43 and A45 arteries package including:</td>
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<tr>
<td>• A43 Corby Link Road</td>
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<td>• Northampton-Daventry Development Link</td>
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<td>• A43 improvements between Northampton and Kettering</td>
<td>2011</td>
<td>2019</td>
<td>Northamptonshire County Council/Highways Agency</td>
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<td>• A43 improvements around Towcester (including an A5 Towcester Bypass)</td>
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<td>• A45 Junction improvements between Wellingborough and the A14</td>
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<td>Northampton town centre, growth and connectivity package including:</td>
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<td>• Congestion busting measures at key junctions</td>
<td>2011</td>
<td>2016</td>
<td>Northamptonshire County Council</td>
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<td>• Kingsthorpe Corridor Improvements</td>
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<td>• Northampton Castle Station redevelopment</td>
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<tr>
<td>Freight Consolidation Centres with industry</td>
<td>2012</td>
<td>2016</td>
<td>Northamptonshire County Council/Freight Transport Association/Industry</td>
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<td>Northamptonshire fast-rail agenda – involving a minimum of two fast services per hour with journey times of less than 40 minutes to London and Birmingham</td>
<td>2011</td>
<td>2015</td>
<td>Northamptonshire County Council</td>
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<tr>
<td>Connect Northamptonshire – improved Traffic and Travel Information</td>
<td>2011</td>
<td>2014</td>
<td>Northamptonshire County Council</td>
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<td>Increased Rail Freight Capacity</td>
<td>2011</td>
<td>2015</td>
<td>Industry</td>
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<td>Northamptonshire Arc Rapid Transit Network initiative (NAT)</td>
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<td>Rural accessibility and mobility solutions and incentives</td>
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<td>Local communities/ Northamptonshire County Council</td>
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<td>Smartcards</td>
<td>2011</td>
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<td>Cycle network</td>
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<td>Plugged in Places charging infrastructure</td>
<td>2011</td>
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<td>Superfast Northamptonshire</td>
<td>2011</td>
<td>2017</td>
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For further information please visit:
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