9. Wider Transport Issues

9.1 Safe and secure travel

Road Safety

Greater Manchester has the lowest rate of killed and seriously injured casualties from road traffic incidents per head of population within the UK. Following a 7 year period of relative stability, the numbers of killed and seriously injured casualties in Greater Manchester have steadily declined over the last 4 years. However, although national targets for reducing the numbers of killed and seriously injured (KSI) and of child KSIs have been met, Greater Manchester adopted more stringent local targets, of which only that for child KSIs is likely to be met. Much therefore remains to be done to reduce casualties, and the severity of casualties. Figure 9.1 below compares the levels of KSI and slight casualties with those for the North West and for Great Britain.

Figure 9.1: KSI and Slight Injuries
Analysis of the main risk areas for road traffic casualties, based on 2009 data, shows the following:

- the highest accident rates per head of population occur in the Regional Centre and town centres, where there are high levels of activity and low levels of population (see figure 9.2);
- accident rates on motorways in Greater Manchester are slightly higher than the national rate and accidents on A roads considerably higher;
- casualties are more likely to live in the deprived areas of the conurbation, where communities live close to major roads - this is particularly true of child casualties;
- pedestrian casualties accounted for 15% of the total but more than 36% of killed and seriously injured (KSI) casualties. Despite good progress in recent years, children and elderly people are particularly vulnerable;
- 65% of all casualties (and 13% of KSI) were car occupants. Drivers involved in accidents are more likely to live in the more deprived areas of the conurbation;
- although the number of motorcycle casualties is relatively small (6%), more than a third were aged 17-25, and they account for nearly 19% of all KSIs;
- pedal cyclists account for 8% of all casualties & of these, 22% are children. The number of cycle KSIs is small in comparison to other groups, and mainly involves adults;
- the number of cycle casualties on A and B roads appears to have risen as cycling on these routes has increased;
- although LTP targets for reducing child casualties have been met and the countywide average is well below other metropolitan areas and the regional average, the Greater Manchester child KSI rate remains slightly higher than the national average; and
- the introduction of safety cameras has had an impact on all accidents, and in particular a major impact on KSI accidents. The annual average KSI accidents at new camera sites fell by 48% in the three years up to December 2009, compared to the previous three years. This compared to a 16% fall in the rest of the area.

A Greater Manchester Casualty Reduction Partnership was formed in 2007, with a remit to facilitate better management of road safety functions including merging the management of speed limit reviews, speed awareness and speed enforcement.

The partners include:

- regional and Greater Manchester Highway Authorities, who provide road safety education, training and publicity and carry out safety improvements to the highway infrastructure and maintain existing safety features;
- Greater Manchester Police, who carry out road safety enforcement and awareness activities;
- Greater Manchester Public Health Directors, who provide health advice and promote healthier behaviour; and
- Greater Manchester Fire and Rescue Service, who carry out safety awareness activities.

Proposals

We aim to:

- minimise road traffic casualty risks and especially risks of death and serious injuries and risks to pedestrians and cyclists;
• protect vulnerable people and especially children, young people and motorcyclists;
• support responsible road use and tackling irresponsible behaviour; and
• improve health by encouraging active travel modes of walking and cycling.

The low base level of casualties in Greater Manchester makes it harder to achieve further reductions, particularly as the most effective engineering solutions have largely been delivered. To continue the recent positive trend; we propose to target casualty reduction activities at high risk behaviours and locations and in support of the most vulnerable people. This will be done through a revitalised collaborative Casualty Reduction Partnership with a remit to drive and support the casualty reduction activities of the partner organisations.

Figure 9.2: Accident (KSI) Clusters

We will introduce a shared analytical process that identifies the contributory factors that cause high levels of casualties, the behaviours partners need to influence and what locations need to be improved in order to meet the safety objectives. This may include the following casualty reduction actions:

• joint publicity and communication events;
• physical projects to improve the highway (eg converting signalised junctions to an all-red phase for traffic (allowing pedestrians to cross safely), or introducing traffic calming measures and parking restrictions);
• enforcement actions (eg introducing speed cameras and mobile enforcement); and
• training and education projects.
The approach is based on providing information about high safety risks and campaigning to encourage responsible behaviour on our streets, providing a driver improvement programme and prioritising enforcement of speeding, drink or drug driving, seat belt use, parking and moving traffic offences on high risk routes at high risk times to tackle irresponsible behaviour, delivering local safety projects to minimise traffic conflicts at high risk sites and providing road safety training and education for high risk people.

A collaborative approach between delivery partners has been developed with the strategic delivery of the Greater Manchester Strategy, information, behavioural change and enforcement services and local delivery of design, management, education, and training activities.

### Case Study: Safer Travel for At-Risk Families

An integrated education and engineering road safety initiative is operating in five disadvantaged areas of Oldham involving working extensively with both new and established partners. The project, branded as ‘Take Care Get There’, runs from April 2009 to March 2011 and is funded by DfT and Oldham Council.

Residents of disadvantaged areas of the Borough have a higher risk of injury from road traffic accidents than others. Earlier interviews with families in deprived areas in Oldham have identified a significant lack of road safety awareness amongst adults to an extent that they are unable to set a good example or give good advice to their children. Our previous ‘3 til 7’ project was concerned with this issue by addressing children as pedestrians and our current project builds on this by being aimed specifically at parents.

The approach is based on informal engagement, particularly with the adults in the communities concerned, to improve their road safety knowledge and skills so ensuring that the messages they pass on to their children match the mainstream road safety work in schools. With our partners, we have engaged with local communities in an informal way, often with groups that are considered hard-to-reach. The strands to the project involve engagement through social gatherings, women’s groups, mosques, the youth service, children’s centres and schools, the latter to access parents.

Our work includes advice on safer walking routes. However, the absence of formal pedestrian crossings is often a barrier to this. We are therefore establishing a network of zebra crossings, the locations of which have been decided through consultation with local people.

Monitoring to date has shown however (a) a high level of message retention from the training sessions; and (b) significant improvements in pedestrian behaviour from surveys undertaken.

### Safety and Security on Public Transport

It is essential to maintain an attractive safe and secure public transport system for both for users and for the staff employed in the industry. Whilst the vast majority of trips on public transport in the conurbation pass without incident, it is also important to improve the public’s perception of safe
travel on the network. Transport for Greater Manchester works with key agencies such as Greater Manchester Police, British Transport Police, public transport operators and the ten local authority Crime Reduction Partnerships (CRDP) through the Crime Reduction on Public Transport (CROPT) initiative.

A range of measures has been introduced through CROPT and are having a positive impact on the perception of safety, eg the Travel Safe Officers scheme on Metrolink, lighting levels on bus and rail stations and in bus shelters, the use of CCTV cameras and the visible presence of uniformed staff, both on and of vehicles. We will:

- continue to work with operators to introduce innovative initiatives such as Bus Watch Specials, CCTV in bus shelters, CCTV headcams for staff, data sharing, Gateway Check operations, Ghost buses and Patrol and Response Units;
- use the media to keep the public informed of the work that is done to make the transport network a safe environment;
- work with Department for Transport to include safety and security improvements in the rail franchising process, with secure station status as a long term aspiration;
- improve the monitoring and evaluation of various initiatives;
- following the Patrol and Response and Bus Watch Specials initiatives, determine the optimum way of providing patrol and response type activities;
- work with operators to identify the scale and nature of ticketing fraud to enable the Police to take appropriate action; and
- share safety and security information and best practice across bus, tram and rail networks so that all users can benefit from a safer network.
9.2 A more accessible transport system

Our aim is for the transport network to serve the needs of everyone who lives, works or does business in Greater Manchester. To ensure that future projects and programmes maximise the opportunity to improve access for all sections of society and that there are no unforeseen consequences for specific groups, they are subjected to Equalities Impact Assessment during the planning and development stages.

In terms of providing greater equality of opportunity to travel, we are working towards improvements in the following areas:

- access to the public transport, pedestrian and cycle networks, particularly for people in isolated areas;
- information about travel options;
- affordability, for people on low incomes;
- physical accessibility particularly, but not only, to assist people with disabilities; and
- safety and security, to give people the confidence to travel.

Access to the Network

Despite an extensive public transport network, there are areas within Greater Manchester with poor access to key locations (particularly outside the Regional Centre), eg for employment or healthcare. These are areas where bus links are not commercially viable and public sector budgets are not sufficient to provide subsidised services. Figure 9.3 shows the areas from which people can access a ‘category A’ interchange (ie a major public transport interchange, giving access to the wider network) within 30 minutes.
Often, demand is too dispersed (either over a geographical area or by time of day) even to justify a subsidised service and in a number of areas ‘demand responsive’ (including door to door) services have been provided (see section 6.2). However we are aware that in a number of areas the pattern of service is not currently meeting the needs of local communities and that, as a result, they are not able to access opportunities eg for employment. This is of concern because according to the 2001 Census, 33% of households in Greater Manchester did not own a car, making them reliant on public transport for longer journeys. The figure shows wide variation geographically (ranging from 48% without a car in Manchester to 24% in Stockport) and between deprived and more affluent areas.

The types of issue that persist are, for example:

- access to key services and social activities from rural areas, particularly the Pennine fringe on the east of the conurbation;
- cross-boundary access to Warrington and St Helens from parts of Wigan;
- access, particularly to wider employment opportunities, from isolated estates or areas of deprivation eg Langley (Rochdale), Brinnington (Stockport), Holts and Alt (Oldham);
- employment areas where the pattern of demand (both in terms of where people live and the location of the employment) is dispersed e.g Trafford Park;
- a lack of orbital links providing a direct service (links to the regional centre are often good, but orbital movements may require a change of service) to employment opportunities or healthcare e.g north-south links to MediacityUK and Salford Quays;
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• a lack of feeder bus services linking to the rail and Metrolink networks, making it difficult for people to access jobs further afield, eg at the Airport or outside Greater Manchester;
• new development on the edge of the built-up area eg Middlebrook (Bolton);
• a desire for improved connectivity to support development proposed in Core Strategies eg Heywood area (Rochdale); and
• access to recreational areas, particularly for deprived communities.

In the future, changes in the delivery of public services such as health and education may require changes to networks in order to support choice and access to opportunities for the individual.

There is no single solution to the types of problem outlined above, and so our approach to improving access to the network has the following elements.

• Our plans to work with bus operators to deliver, over time, a ‘Target Bus Network’ (see section 6.1) will help to ensure the bus network caters for more of the journeys that people need to make, particularly to work and education.
• We will continue to provide subsidised services where commercial services are not viable, but the extent to which this is possible depends on the level of funding available.
• We will continue to provide Local Link ‘demand responsive’ services (DRT) in areas where demand is too low to justify a conventional bus service. These provide important links to key services and local rail stations for people in rural areas and the more isolated housing estates. Our proposals to better integrate the provision of DRT across a number of different providers (eg Ring and Ride, Social Services and the NHS), described in section 6.2 will mean that the various vehicles will be used more efficiently, allowing them to provide more journeys.
• Delivery of a number of our major schemes, funded through the Greater Manchester Transport Fund, will improve public transport access in key areas. The Oldham-Rochdale and East Manchester Metrolink extensions will link a number of key regeneration areas to major employment destinations at Kingsway Business Park, Hollinwood, Ashton Moss and Central Manchester Business Park;
• We will take the opportunity to improve access through planned new development, where this could improve the viability of services or provide the opportunity for developer funding of improvements.
• We will continue to work with local planning authorities and the providers of key services (eg the health sector) to ensure that access by sustainable modes is a key consideration when planning new facilities.
• We will look for opportunities to provide further Park and Ride facilities at stations, particularly in rural areas, where this would not encourage ‘railheading’ (see section 8.3).
• Our plans to improve walking and cycling links to key local destinations, including transport hubs, and as part of long distance routes have been described in chapter 7.
• Smarter Choices promotions, including area-wide travel planning initiatives, and improved travel information will make people aware of their travel options.
• Addressing bus network pinch points and local congestion hotspots will improve the reliability of services.
• We will continue to monitor access to the network, identify areas where this is a problem and develop solutions, working with relevant partners, subject to funding.

As described in chapter 5, we see improved accessibility as an essential component of smarter choices programmes to encourage people to travel by more sustainable modes. Small-scale network
(service and infrastructure) enhancements assist in ‘locking in’ the benefits of smarter travel marketing by providing a quality of service that will maintain people’s revised travel patterns. Our proposed bid to the Local Sustainable Transport Fund will include targeted local service enhancements, including DRT/community transport, and improved access to stations and other public transport hubs, including park and ride, cycle and pedestrian access and local information programmes.

Our longer term proposals to work with the operators and the Government to target the public subsidy of the bus network so as to achieve maximum benefit for passengers have been described in section 6.1.
Case Study: Crewe Manchester Community Rail Partnership (CRP) and South East Manchester Community Rail Partnership

These Community Rail Partnerships bring together GMPTE, Northern Rail, local authorities (Stockport, Manchester, Cheshire East or Tameside), and community and passenger groups, with the general aims of increasing passenger numbers, involving the community and improving stations and facilities. Funding comes from GMPTE, the local authorities, Northern Rail and local businesses.

The Crewe Manchester CRP (CMcrp) was established in 2007 with the principal aim of regaining passengers lost when the line was closed as part of the West Coast Main Line upgrade. It also aimed to attract new passengers and to improve the railway environment for passengers.

Recent achievements & activities of the CMcrp include:
- assisting continued growth along line achieving a 4.5% increase in passengers in 2010 compared with 2009. Patronage is now above pre-upgrading levels;
- promoting the line and train services including a Line Guide to attract visitors from across the north of England;
- operating a website which gets some 8000 unique hits a month;
- undertaking special events to promote rail services to potential users including a scheme to encourage use by schools and young people; and
- Providing assistance with market research on behalf of Northern Rail and Passenger Focus.

Immediate priorities include:
- implementing fundraising and volunteering strategies to attract more resources in cash and kind, as public purse funding dries up;
- encouraging more volunteer led projects including station gardens;
- encouraging use and knowledge of railway by non-users, especially young people; and
- lobbying for resources for stations.

The South East Manchester CRP (SEMcrp) was established in January 2011 with a focus on improving access to key services for a population with low car ownership. It will also provide an effective way of engaging with the local community, improving the station environment and ultimately helping to safeguard the continued future use of the stations. Its aims are to
- engage with the communities along the routes;
- promote rail services and increase patronage; and
- improve Stations and their environments.

Initial work priorities include:
- assisting the work of the Hattersley Partnership (Tameside) and the Brinnington neighbourhood Renewal Team in the areas surrounding their stations, including working with schools and encouraging community involvement at stations;
- helping to establish ‘Friends of’ station groups along the lines;
- developing awareness of the CRP and contacts with volunteers; and
- lobbying for investment in the stations and the areas surrounding them.
Information

Lack of information about how to travel, or about whether services are running or on time, can deter some people from travelling by public transport, particularly those in vulnerable groups eg elderly or disabled people. We will continue to provide information in a range of formats via a range of media (and to make improvements so that information is easier to access and understand) and use smarter choices techniques such as journey planning to make people aware of their options.

The provision of information screens on Metrolink stops (see section 6.3) will provide reassurance to waiting passengers, and our rail station improvement programme (see section 6.4) will bring improved information to the prioritised stations. In the longer term, we plan to deliver real time information about buses, using mobile phones (see section 6.5).

Travel training can help to improve the confidence of learning-disabled people to travel independently, and we will continue to provide advice and support to organisations that provide this.

Affordability

Affordability is an important issue for people on low incomes, and we are aware that rises in fares may have a disproportionate impact on some groups in society (eg disabled people, ethnic minorities, and young people) where people are more likely to have low incomes. Whilst we are not able to provide concessionary travel for low income groups, our proposals to simplify fares and ticketing (see section 6.5) will help some people eg those who currently have to buy two single tickets because a different operator runs the return leg of their bus journey.

Working with operators and other public bodies, we will seek identify funding opportunities to develop ‘Workwise’ schemes, where people taking up employment are provided with both journey planning advice and free or reduced cost travel for an initial period. Several small-scale projects of this type have been run successfully in the past, and we will look for opportunities to provide schemes in a more sustainable way which we believe will help reverse worklessness in some of our more deprived communities.

Physical Accessibility

Our Network Management strategy (see section 8.1) sets out how we will continue to improve local accessibility by introducing more tactile surfaces, dropped kerbs and upgraded crossing facilities, and by ensuring that new public realm is designed to meet the needs of all users, including physically and sensory disabled and elderly people.

In terms of public transport, all new buses will be accessible by 2017 as required under the Disability Discrimination Act (DDA) and, as funding allows, we will raise kerbs at bus stops so that the full benefits of this can be realised (building on the work we have already done, particularly along the Quality Bus Corridors). However the full raised kerb programme needs to be carefully planned and prioritised in view of the cost associated with these upgrades.
All new public transport infrastructure is now designed to DDA requirements. The Metrolink system has been designed to be fully accessible to wheelchair users, and a programme of improvements to the existing stops has upgraded the lifts (see section 6.3). The new trams are compliant with Rail Vehicle Accessibility Regulations (RVAR). This means that there is more room in circulation areas such as in and around doorways and aisles.

Mobility scooters are not currently permitted on Metrolink for safety reasons, due to their size, shape and manoeuvrability. However we are aware that there are many different types of scooter and are carrying out a review of this policy. Similar issues exist on the rail network but due to the different types of fleet operated, no single standard of carriage for mobility scooters can be adopted and the advice of individual Train Operators needs to be sought before travelling. Broadly speaking, only the fold up ‘boot scooter’ is currently permitted. By law, accessible buses must be able to carry wheelchairs up to 700mm wide and 1200mm long. However, it is the responsibility of bus companies to decide whether they will carry scooters.

The majority of rail stations are not accessible, and it will be a major undertaking to upgrade the whole network. The Disability Discrimination Act 2005 and 2008 DfT guidelines set an end date of 2020 for all passenger-based rolling stock to be accessible for disabled people. They also specify a framework for reasonable adjustments to the built environment. Although the duty to comply with the legislation rests with Network Rail and the train operating companies (other than in relation to Horwich Parkway, which is owned by Transport for Greater Manchester), we do have a legal duty as a public sector organisation to ensure that work is undertaken to improve disabled peoples’ access to the rail network. We therefore carried out a study to assess each station in terms of the capital cost of the necessary improvements, station usage, disability levels in the local area and highway distances between the station of concern and the nearest accessible station. As a result, we have identified a ‘top ten’ list of stations where we will work with the rail industry to make improvements. To achieve a more even geographical spread, stations in the inner area have been balanced with those on the periphery. The stations are:

- Blackrod
- Mills Hill
- Appley Bridge
- Walkden
- Newton for Hyde
- Daisy Hill
- Irlam
- Broadbottom
- Hindley
- Swinton

On the bus network, customer care by drivers is an issue frequently raised by people with disabilities. Under the Code of Conduct for bus operators (see section 6.1), Code partners will have a structured driver training programme in place, based on the Driver Certificate of Professional Competence requirements. This must include training based on safe and fuel efficient driving. The Code also states that driver training programmes should recognise the requirements of disabled passengers and adopt good practice principles. In this respect, the guidelines set out in the GMPTE booklet “Easier Access on Greater Manchester’s Buses” (which provides advice to operators and points out their responsibilities under the DDA) are recommended.
Safety and Security

For many people, particularly those in minority or vulnerable groups eg elderly or disabled people, concerns over safety and security are a deterrent from using public transport, particularly at night. Section 9.1 describes the measures we are taking, not only to improve safety and security but to improve perceptions of safety. We will continue to maximise safety through the design of infrastructure, the provision of a staffed presence on the network, and through effective joint working with Greater Manchester Police and via local Crime and Disorder Partnerships.

In terms of road safety, children in disadvantaged areas are many times more likely to be involved in an accident than those in wealthier ones. Many communities live alongside busy radial routes, or are affected by rat-running as motorists try to avoid congestion. Our road safety policies are described above.
9.3 A greener transport system

Introduction

Our overall strategy is centred on increasing travel by sustainable modes, using a combination of:

• Improvements to public transport and to infrastructure for walking and cycling (see chapter 7);
• Better integration of transport and new development, through the GMSF (see section 3.2); and
• Encouraging smarter travel through improved fares, ticketing and information, management of demand for car travel and promotional campaigns (see chapter 5 and sections 6.5 and 8.5).

Through these policies, covered previously in this document, a switch away from car use will contribute to improved air quality, reduced carbon emissions and the protection of biodiversity. However we are also committed to action to tackle these issues directly, and policies, relating to air quality, carbon reduction, noise, biodiversity and scheme design are set out in the following section.

Air Quality

Poor air quality has a real and significant effect on people’s lives and on the economy as a whole. Across the UK, current estimates are that up to 35,000-50,000 people die prematurely from exposure to air pollution. Our principal aim is substantially to reduce the negative impacts of air pollution on health and the environment in Greater Manchester. Whilst in the short and medium term the priority is to meet statutory limits for major pollutants in all areas, the longer term aims are to promote the image of Greater Manchester as a progressive city region with a high quality environment and to reduce the contribution of air pollution to poor health in deprived areas (which can compound and propagate the problems of deprivation). The encouragement of active travel modes will assist in reducing emissions whilst simultaneously improving air quality and the health and productivity of our residents.

Currently many areas within the conurbation, as in many other urban areas across the UK, exceed EU thresholds for nitrogen dioxide (NO₂) concentrations and the requirement to meet these limits in all areas by 2010 has not been met. This is shown in Figure 9.3 below. The UK Government is therefore in the process of applying to the EU for an extension of the deadline from 2010 to 2015 (as permitted in EC Directive 2008/50/EC). Current forecasts commissioned by Department for Environment, Food and Rural Affairs indicate that many parts of Greater Manchester and other urban areas will continue to exceed the limit values in 2015.

18 The lower estimate provided by Environment Research Group, King’s College London and the higher estimate by the European Environment Agency, cited in a report by the Environmental Audit Committee (2010) Air Quality 5th Report
http://www.publications.parliament.uk/pa/cm200910/cmselect/cmenvaud/229/22902.htm
The Greater Manchester Air Quality Strategy and Action Plan (2006) set out a wide reaching package of measures to address air pollution from road transport (accounting for more than 60% of all emissions of NO\textsubscript{2} and PM\textsubscript{10} (particulate matter) in Greater Manchester in 2006). A particular focus of the strategy was to ensure that all areas of Greater Manchester would meet EU limits for NO\textsubscript{2} in 2010. However, it is apparent that the action plan has made very little difference to NO\textsubscript{2} concentrations at most roadside locations, since the impact of the individual measures was dispersed across the conurbation. We therefore need to focus activity on the most beneficial options and to concentrate initiatives geographically.

Different modes contribute differently to emissions of NO\textsubscript{x}, carbon dioxide and particulates. Whilst cars constitute half of road transport emissions of carbon dioxide, ‘other goods vehicles’ (OGVs), including rigid and articulated HGVs, are the major contributors to NO\textsubscript{x}. The potential impact of measures targeted at OGVs is high, given that they represent only 6.5% of the total vehicle distance travelled on major roads (including motorways) in Greater Manchester\textsuperscript{19}. Although buses are responsible for a far smaller proportion of NO\textsubscript{x} emissions, these emissions are concentrated on congested urban corridors where the exposure of the population is high, which adds to their significance. The need to reduce NO\textsubscript{2} concentrations in the short term will therefore require a focus on HGV and bus emissions.

\textsuperscript{19} Based on figures from GMTU Report 1476 Transport Statistics 2008
In the longer term the approach will be to influence and integrate air quality strategy with parallel climate change strategy. The contribution of each mode to particulate emissions is similar to that for carbon, which means that measures to reduce carbon emissions will also reduce emissions of particulates.

Our approach to improving air quality will be based on:

- reducing acute pollution incidents from traffic;
- improving vehicle efficiency including vehicle and fuel technology and efficient driving techniques;
- reducing trips by motor vehicles; and
- improving network efficiency.

In terms of reducing trips by motor vehicles, our strategies to increase the levels of walking and cycling and public transport use (given that a single vehicle can carry many passengers) have been described elsewhere (see chapters 6 and 7). The impact on air quality of a mode shift to public transport will be greatest on the main corridors to the Regional Centre, where passengers have access to newer buses, introduced through Quality Bus Corridor schemes, and Metrolink, which is pollution free at the point of usage. Elsewhere, the picture is complicated by the fact that many buses perform poorly in environmental terms, but our proposals to raise the quality of bus vehicles, in partnership with operators, will be beneficial in terms of air quality. Different types of diesel train use different quantities of fuel, and the better quality diesel trains we are seeking in order to improve passenger comfort will use more fuel per passenger mile. Electrification is always better in air quality terms, and we will continue to support, and lobby for, further electrification of the rail network. Our approach to managing the highway network, described in section 8.1 aims to reduce the variability of journey times and maximise efficiency of the network. Reducing congestion will cut emissions by reducing the need for excessive acceleration and deceleration or for travelling at slow speeds, at which engine performance is sub-optimal. However, this may not be the case in all instances and so impacts on air quality need to be understood in the context of local conditions.

In the short term, options under consideration to reduce acute pollution incidents from traffic and to improve vehicle efficiency are:

- an annual programme of vehicle emissions testing on major transport corridors;
- extending the enforcement of idling vehicles, which is already carried out in the Regional Centre, to town and district centres;
- targeted renewal of buses on routes into the Regional Centre and in adjacent areas where permitted levels of pollutants are exceeded;
- support/lobby central government for a national HGV scrappage scheme and work with the government on complementary regulation measures; and
- co-ordinate the up uptake of Safe and Fuel Efficient Driving (SAFED) training for smaller freight and bus operators and promote continued updates to driving skills through a best practice scheme.
Case Study: Green Bus Fund

DfT invited bids for funding to cover the difference in purchase price between a ‘green’ bus and the equivalent standard vehicle. Two rounds of bidding were held, in 2009 and 2010, and previous winners were invited to increase their initial allocations in January 2011. GMPTE submitted a number of bids to support the purchase of low carbon hybrid diesel-electric vehicles for use on various services.

Overall, the total value of funding awarded is £5.23m to support the purchase of 88 vehicles, which must be in operation by April 2012, requiring Transport for Greater Manchester to secure the remaining capital cost, in the order of £12.11m. The vehicle supply contract was procured through an external framework agreement, together with an initial 5 year repair and maintenance contract.

The number of vehicles secured in each round is as follows:

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Round 1</th>
<th>Round 2</th>
<th>2011 ‘top-up’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metroshuttle</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellow School Bus</td>
<td>16</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>General subsidised network</td>
<td>25</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>(MediacityUK shuttle)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial services (bid by Bus Operators)</td>
<td>48</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Airport services (bid by Manchester Airport)</td>
<td>-</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>23</td>
<td>28</td>
</tr>
</tbody>
</table>

The investment by Transport for Greater Manchester will be repaid by the projected savings to be made by operating the vehicles on tendered services when compared to the more usual operating model of operators supplying vehicles themselves. These savings come from a wider market of interested operators (and hence increased competition for tenders) and lower tender prices.

The impetus behind the allocation of a fleet of hybrid vehicles on the Metroshuttle service was the expiry of the previous contract. For the Yellow School Buses, financial contributions were also made by Stockport and Wigan Councils. The buses will be used to replace operator-owned vehicles on existing conventional school services, including new academies. Sufficient subsidised services across the whole of Greater Manchester were identified as part of the bid for vehicles for use on general subsidised services. Packages of daytime, evening and Sunday services were identified for over 50 vehicles to allow greater flexibility in deploying vehicles to contracts which offer best value for money throughout the project. Once the vehicles have been fully bedded in, an average of 20% reduction in greenhouse gas emissions from the vehicles should be achieved.
Low Emission Zones (LEZ) targeted at HGVs, LGVs and buses have been promoted as a key policy instrument through the national air quality strategy and subsequent guidance\(^\text{20}\). However we are concerned about the potential impact of a LEZ on the economic recovery in Greater Manchester, and the likely disproportionate effect on smaller freight and bus operators. We have already indicated to DEFRA that this could not be a viable solution without a significant pledge of financial support to businesses in order to accelerate the replacement of their fleets.

In the longer term our strategy will focus on measures to encourage the uptake of electric vehicles, which are described below although it is also recognised that the market penetration of electric and hybrid vehicles is likely to be relatively modest prior to 2020 in even the most favourable of policy environments.

The localism agenda is an important aspect of Government policy that will have a bearing on how we propose to deliver future air quality improvements and in particular on our ability to bid successfully for funding of initiatives. Whilst we may be heavily dependent on national measures to deliver targets for 2015 and 2020, it is clear that we will also need to focus on engagement with partners (in particular with the health sector), businesses and local communities in the delivery of air quality improvements. Total Place initiatives and ‘place-based budgeting’ may present important opportunities to engage with the communities that are affected by road transport pollution and this fits well with the likely need to tackle localised air pollution hotspots up to and beyond 2015.

**Noise**

The noise from traffic is a problem for communities who live along major roads. In accordance with the EU Environmental Noise Regulations (2006), the UK Government has formally adopted Noise Action Plans (NAP) for a number of the largest urban areas, including Greater Manchester. The Noise Action Plan for Greater Manchester has identified the areas within the conurbation most susceptible to high levels of noise, and the broad types of interventions needed. We are awaiting further information from DEFRA about the development of detailed action plans for target areas. This will include ensuring that options for noise reducing infrastructure (for example, negative textured surfacing) are fully appraised as part of Transport Asset Management Plans (TAMPs).

Carbon Reduction

The Passenger Transport Executive Group, PTEG, commissioned a report in 2010 entitled ‘Carbon Pathways for Transport in City Regions’. This makes recommendations for how the carbon emissions from transport can best be reduced in urban areas. Whilst we are still considering how the recommendations can best be taken forward, it is clear that a ‘package’ approach will need to be adopted, for example combining smarter choices campaigns with targeted investment in walking, cycling and public transport infrastructure. Four key themes emerged:

- low carbon vehicles;
- more efficient use of vehicles;
- shift towards more carbon efficient modes; and
- reduction of the need to travel, and destination changes.

This document has already described our proposals for highway management, walking, cycling, public transport and smarter choices, all of which will contribute either to the more efficient use of vehicles or a shift towards more carbon efficient modes. In addition, the improved integration between transport and land use planning (see section 3.2) will contribute to reducing the need to travel and destination changes. Our proposals for low carbon vehicles are set out below.

The transition to low carbon technology is of great strategic importance to Greater Manchester and its aspiration to be a Centre of Excellence as a Low Carbon Economic Area. The overall national strategy focuses on the support to research and development, on regulatory and economic incentive mechanisms to provide the industry with much needed market certainty and, crucially, the development of infrastructure necessary to enable the mass expansion of alternative vehicle technology.

As described above, 138 new hybrid electric buses will be brought into service in Greater Manchester over the next few years, as a result of successful bids to the Government’s ‘Green Bus Fund’. These will be beneficial both in terms of air quality and carbon reduction and we will work with operators to introduce more of these over time, as funding allows. We will also support the use of alternative fuel sources for buses, where these are genuinely better for the environment and are cost-effective.

In December 2010 a consortium of Greater Manchester authorities and businesses was awarded £3.6 million from the Government’s ‘Plugged in Places’ programme to provide match funding for over 300 charging points for electric vehicles. The scheme is a partnership between the public and private sectors and is intended to incentivise the market for electric vehicles (EV), supporting the Government scheme to subsidise the purchase of new EVs. The scheme will develop innovative vehicle sales and charging hubs called ‘Pods’, which will showcase a range of EVs, communicate the benefits of EV ownership and provide consumer information. Four Pods will be built, in Manchester City Centre, Oldham, Stockport and another location still to be determined. In addition to charging facilities, each Pod will have a range of facilities tailored to its specific location, for example: retail facilities; vehicle sales, hire or leasing; and after sales care. Details of the scheme including, for example the precise mix of facilities, the source of electricity to be used and the potential to work with neighbouring authorities, are still to be developed.
There is potential to combine this project with the roll out of the Greater Manchester Smartcard (see section 6.5). This will provide a single e-payments system, centralising charging and payments for all transport services offered to the public across the area. Since our Smartcard developments are already aligned with ITSO Smart Ticketing standards of interoperability and EMV contactless cards, the scheme will be interoperable not only with other modes of transport locally, but with other ITSO compliant schemes nationally.

The scheme will target public and private sector vehicle fleets in the first instance and will include promotions for taxi fleets to switch to EVs, including charging hubs where they can charge, park and get after sales support, and specific privileged access to areas that have previously been controlled.

We have also identified a need to save energy (and hence reduce emissions), by improving the efficiency of the Metrolink traction current and the lighting at stations and stops, buying energy on ‘green’ tariffs and looking for opportunities to generate renewable energy. The Rochdale Interchange scheme is an example of how this can be achieved: it includes a hydro-electric scheme on the river Roch.

There are a number of ways in which the maintenance of the highway network can reduce our carbon footprint. There is the potential to reduce energy costs in street lighting by utilising the latest techniques for switching off and dimming where appropriate, and to reduce energy usage by utilising the latest LED lighting technology where whole life costing shows an economic benefit. This will, however, require large scale retrofitting or replacement of existing stock and would therefore take time to implement. In the short term we will optimise performance through the type of lamp, maintenance standards and setting of solar cells.

Where appropriate, we will use recycled, re-used and cold materials for highway maintenance to minimise waste. Greater collaboration between highway authorities on procurement will also reduce carbon usage: through bulk purchase and through optimal use of salt, storage, vehicles, fuel and staff resources. We will also investigate the potential for different road surfaces to improve fuel consumption and therefore reduce carbon emissions.

Biodiversity

We are very conscious of the need to reduce and mitigate the impact, particularly of road traffic, on land and biodiversity. In terms of environmental protection and management, we are confident that our standard procedures, including Environmental Impact Assessment for all major new transport schemes, will minimise and mitigate any adverse impacts. For example, Tree and Habitat Replacement policies were adopted for the new Metrolink extensions. As a result, at least 5 young trees will be planted for every tree removed as a result of Metrolink extensions, and at least 2 saplings will be planted for every sapling removed. The species will be chosen for their wildlife value and will have been grown in the North West. Any woodland, wetland or other habitat of high nature conservation value removed as a result of Metrolink extensions will be replaced, while habitat of lower value (eg mown grassland) will be replaced by higher value habitat, planned with local communities. Construction work is subject to audit and consequently timed to avoid the bird nesting season and where protected species are found, they are moved according to nationally agreed best practice.
In terms of protected sites, the Strategic Environmental Assessment identified the need to avoid disturbance to the Rochdale Canal Special Area of Conservation during the construction of Metrolink to Rochdale. The line crosses the canal twice, and we will need to ensure that there is no pollution of the water.

In addition to specific schemes, the general growth in traffic, particularly heavy goods vehicles, can also have a significant impact, through air pollution, noise and climate change. This is of particular concern in relation to the Peak District National Park, where heavy trans-Pennine traffic passes through a vulnerable ecosystem. Our strategy to encourage a mode shift to sustainable transport, for both passenger and freight traffic will help to reduce these impacts. We are committed to developing a solution to traffic problems in the Longdendale area that will help to minimise the impact on the National Park, by encouraging greater use of sustainable transport.

Greater Manchester and its surrounding areas contain a number of statutory nature conservation sites of European level Importance. These include Special Areas of Conservation, Special Protection Areas and Ramsar Sites, known collectively as European Sites. These sites are protected under the European Habitats Directive.

In some circumstances, proposals identified in the LTP are at an early stage of development and it is not possible to ascertain as yet whether they may result in impacts upon European Sites, for example the Longdendale ITS. The objectives of LTP3 seek to avoid development which is ultimately determined to have an adverse effect on the integrity of a European Site except in exceptional circumstances as defined in the UK Habitats Regulations. In circumstances such as these, schemes will be subject to a Habitats Regulations Assessment at the project level which is in accordance with national and European law.

We are also aware of the potential impact of highway maintenance regimes on biodiversity, and our approach to this problem is set out in section 8.5

Walking and cycling routes offer opportunities to benefit green infrastructure and connectivity and we will seek to complement the proposals in the Greater Manchester Green Infrastructure Strategy to improve the connectivity of green spaces and designated wildlife sites. Green infrastructure also provides a range of wider benefits, including carbon storage and sustainable drainage, and we will take opportunities to incorporate this into scheme design where feasible.

Wider Environmental Issues

We aspire to the highest possible levels of sustainability within new infrastructure projects. Transport for Greater Manchester adopts the following key design principles, during the development stages of all projects:

- Projects are required, as a minimum, to comply with all local planning authority rules requiring the use of renewable energy (through onsite energy generation) in order to reduce annual carbon dioxide emissions;
• Projects should aim to achieve BREEAM/CEEQUAL ‘Excellent’ ratings for new build schemes and ‘Very Good’ ratings for refurbishments. Where projects are unable to achieve this, appointed design consultants are required to submit a separate report explaining why this is not possible;

• Where possible, ‘A+’ or ‘A’ rated materials should be specified from the British Research Establishment’s (BRE) Green Guide to Specification, in order to ensure that the full environmental impacts of the materials specified are considered;

• Materials that are available from local suppliers (UK) should be specified to minimise impacts from transport and to support the local economy;

• Recycled materials should be specified where available and cost effective. As a guide all projects should seek to achieve at least 10% of the materials value of a construction project derived from recycled content. Once again, appointed design consultants are required to provide robust justification where this is not achievable;

• All Energy Management Systems should be capable of remote monitoring and sub metering of all utilities supplied for use by sub-tenants must be provided;

• All designers should consider the opportunity for Sustainable Urban Drainage Solutions (SUDS); and

• Designers are required to take cognisance of prevailing local and national carbon reduction targets in the development of all schemes.

Transport for Greater Manchester also works with project partners to ensure that the highest levels of sustainability are achieved in the development and delivery of all of its schemes which are delivered through third parties.