

Staffordshire Freight Strategy

April 2011



Staffordshire
Local Transport Plan 2011

Contents

	Page
Setting the Scene	3
Background	4
Significance to the Economy	4
Environmental Impacts	4
Emissions	5
Congestion	6
Road Freight	6
Consultation	9
Plan 1 - Primary Roads and Rail Network	10
Problems and Issues	
Impact of HGV's on the Local Network and Rural Areas	11-35
Map 1 Heavy Commercial Vehicle Flows on the County Highway Network	11
Weight Restrictions	14
Routing Agreements	17
Routing and Delivery Destination Information	17
Advisory Freight Routes	18
Road Freight Efficiency, Load Capacity and Empty Mile Running	21
Back Loading - Load Sharing - Freight Databases	24
Freight Consolidation Centres	24
Freight Operator Recognition Scheme (FORS) and Haulage Operator Best Practice	24
Accidents	26
HGV Parking	31
Plan 2 HGV Parking Areas	31
Plan 3 HGV Overnight Parking Survey	32
Use of Satellite Navigation Systems	33
Rail Freight	36
Plan 4 Rail Network Loading Gauges	38
Actions and Priorities	39-40
Assessment Matrix	41



Setting the Scene

The freight transport and logistics industry is an important activity in Staffordshire in terms of the economy, the impact on the transport network and the local environment.

The M6 motorway through the County accommodates typical HGV flows of around 35,000-40,000 on a week day and is a key corridor from the south to the north of the country. Significant numbers of HGV's use the A38, A5, M54, A50 and A34. The West Coast Mainline through Staffordshire is one of the most significant rail freight routes in the country.



Below the trunk road the County network is generally much less heavily trafficked and the proportion of HGV traffic is much lower (typically 5-10% compared to the M6 25-30%) although the County does host some important sub-regional routes and some major freight destinations.

The prevalence of the logistics industry and storage and warehousing uses in the County is in part a reflection of good access and the central position in the country to serve a national distribution service. Employment in these industries is well above the national average. It is evident that there is strong market interest for major logistics operations particularly in the south of the County.



The policy context for this Freight Strategy document comes from the Staffordshire Local Transport Plan (LTP3)¹ and government policy *Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen*².

LTP3 is the overarching policy document that incorporates freight issues in a wider transport context. There is considered to be a need for a Strategy that draws together actions that more specifically relate to the movement of freight and that include 'softer' behavioural change and demand side measures.

Early consultation in preparation of this document drew out a number of issues with specific resonance to the situation in Staffordshire. These include the impact of HGV's on the local and rural road network, road freight efficiency measures, accidents involving HGV's, HGV parking, the use of satellite navigation systems and the potential of rail freight. This document is structured around these issues.

¹ Staffordshire Local Transport Plan 2011-2026 Staffordshire County Council 2011 <http://www.staffordshire.gov.uk/transport/transportplanning/localtransportplan/>

² *Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen* Department for Transport <http://www.dft.gov.uk/pgr/regional/sustainabletransport/>

Background

Significance to the Economy The freight transport and logistics sector is a major part of the UK economy with approximately 7% of national GVA accounted for by the transport and storage and communication sectors (National Accounts 2008). Industry in the UK spends more than £75 billion per annum on transporting goods by road and rail.

In Staffordshire the transport and communications sector employs around 24,000 people (ABI 2008), a significant proportion of these, around 8,500 in 'freight transport by road' and around 6,000 employees in the 'storage and warehousing' sector. The freight and logistics industry is significantly more important to the Staffordshire economy than to the regional and national economy with the 'freight transport by road' and 'storage and warehousing' sectors accounting for 2.6% and 1.9% of total employment respectively, by comparison to 1.4% and 1.0% of employment in the region and 1.0% and 0.6% of national employment (ONS 2008).

The Eddington Transport Study (2006) commissioned by government concluded that a healthy transport network, capable of fulfilling the expectations of industry for freight movement is vital to the economic health of the nation. The economic and financial stability of the country cannot be reconciled with a transport infrastructure in decline. Poor transport links adversely effect the competitiveness of industry, causing inefficiencies in the supply chain for manufacturing and services and ultimately impacting negatively on the consumer.

Environmental Impacts Balanced against the needs of the economy are those of environmental protection and resilience from the local to the global scale not least the issue of long-term climate change. The environmental implications of freight movement and negative externalities have to be considered if the overall consequence for communities is to be positive. Freight movement can have very significant negative environmental and social implications for people that can be disproportionately distributed between communities from local air, noise and light pollution, personal inconvenience, to safety and health issues.

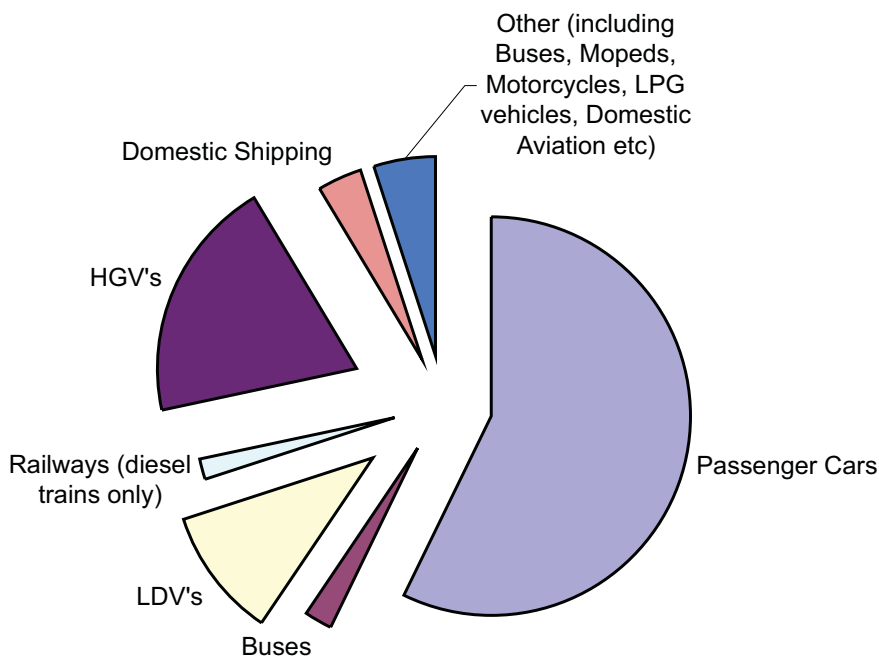


Emissions The transport sector accounts for almost 21% of total UK domestic greenhouse gas emissions of which carbon dioxide (CO₂) is the most significant (IPCC/NAEI 2007 (published 2009)). As shown in figure 1³ HGV's⁴ and LDV's account for 20% and 11% respectively of the CO₂ emissions in the transport sector (IPCC/NAEI 2007 (published 2009)). According to more detailed analysis 100% of HGV and domestic shipping emissions are directly attributable to freight movement compared to 35% for LDV's, 41% for rail and 4% for domestic aviation. Despite some considerable innovation over the last decade the road freight sector has not been as effective at implementing behavioural and technological change to reduce CO₂ emissions as other sectors in the economy.

The transport sector is also a major contributor to other pollutant emissions notably Carbon Monoxide (CO),

Nitrogen Oxides (NO_x), Particulates (PM₁₀), Benzene, 1,3-butadiene, Lead (Pb) and Sulphur Dioxide (SO₂). In terms of total emissions from all sources HGV's and LDV's perform least favourably in respect of CO accounting for 2.0% and 2.1%, NO_x 13.6% and 3.7%, PM₁₀ 2.8% and 3.3% and 1,3-butadiene 23.5% and 3.1% respectively (2007 figures AEA Energy & Environment/Defra). Regulation, engine efficiency and design, innovation and the widespread application of catalytic conversion technology has seen considerable reduction in the emissions of these pollutants in the last decade or so although this has been much less rapid from HGV's than from passenger cars (from HGV's 1997-2007, CO -42%, NO_x -23%, PM₁₀ -65%, Lead (Pb) -no change, SO₂-95%).

Figure 1: UK Transport Sector Carbon Dioxide Emissions (By Source) 2007



³ The NAEI provide the data with some caution to accuracy. Data is reported by source category is considered to be more accurate than by end user category. End user category (not shown here) provides emissions data by the sector responsible for them redistributing emissions from power generation to the end user on the basis of the fuel mix used by the industry.

⁴ This document uses the nomenclature for road freight vehicles HGV and HCV. Heavy Goods Vehicles (HGV's) have a gross vehicle weight of 3.5 tonnes and over and Heavy Commercial Vehicles (HCV's) a gross vehicle weight of 7.5 tonnes and over. In most cases HGV is used as a definition for a road freight carrying vehicle and is the basis for the collation of most road freight statistical information. Road vehicles below 3.5 tonnes gross vehicle weight also make a significant contribution to freight movement although their use for carriage is less easy to distinguish. HGV's have clear distinction from smaller vehicles in terms of licensing and taxation. In some cases it is more relevant to distinguish HCV's. HCV's can be more easily detected by automated traffic counting equipment they require plating and a special class of HGV licence. Most weight restriction applies to vehicles over 7.5 tonnes.

Congestion Freight movement is a contributor to both road and rail congestion and the efficient operation of the economy is effected by goods being held up in traffic. Forming a picture of the impact of freight traffic on congestion across Staffordshire is difficult as much of the problem is associated with long distance freight movement that passes through the area and the interaction with passenger vehicles at peak times. The most serious problems can be localised, sporadic and unpredictable, associated with other issues such as roadworks or accidents as well as particular pinch points or bottlenecks in the transport infrastructure.

Freight traffic and in particular HGV's are often perceived as a greater part of the congestion problem because of their high visibility on the network. HGV's can cause particular problems at destinations off the primary network on rural roads and in urban areas where the road system and urban fabric predates a significant level of road traffic. The kerbside loading and unloading of HGV's and LDV's can have a disproportionate impact having the effect of significantly reducing road capacity. The slower acceleration of HGV's when fully loaded or climbing steep gradients can cause delays for other traffic.

In terms of rail freight the speed differential of passenger and freight traffic is an obstacle at peak times resulting in considerable loss of efficiency in the track infrastructure

and reduction of available train paths. Moving rail freight at off-peak times creates other problems not least noise disturbance to local residents.

Road Freight The relative importance of road freight in the County is shown comparatively for local authority district areas in figures 2, 3, 4 and 5 from data collated in the DfT Continuing Survey of Road Goods Transport 2006-2008.

In figure 2 freight activity is measured in terms of the weight of goods (tonnes) handled not taking any account of the distance that the freight is moved. On this measure 'goods lifted' in Staffordshire Moorlands as an origin of freight is very significant. When distance is accounted for on the measure of 'gross tonne km' in figure 3 the significance of Staffordshire Moorlands drops considerably. This is a reflection of an above average heavier loads moving over shorter distances, typical of quarry traffic, compared to Staffordshire as a whole.

The measure of freight activity 'gross tone km' in figures 3 and 5 and is a better measure of the work done by HGV's. This is arguably a better indication of the relative scale of the logistics industry. On this measure of freight activity the significance of East Staffordshire Borough and Lichfield District is clearly apparent as is the importance of road freight to the economy of the County by national comparison.

Figure 2: Road Freight: Goods Lifted By Origin District 2006-2008 destined within GB (gross tonnage per capita per annum)

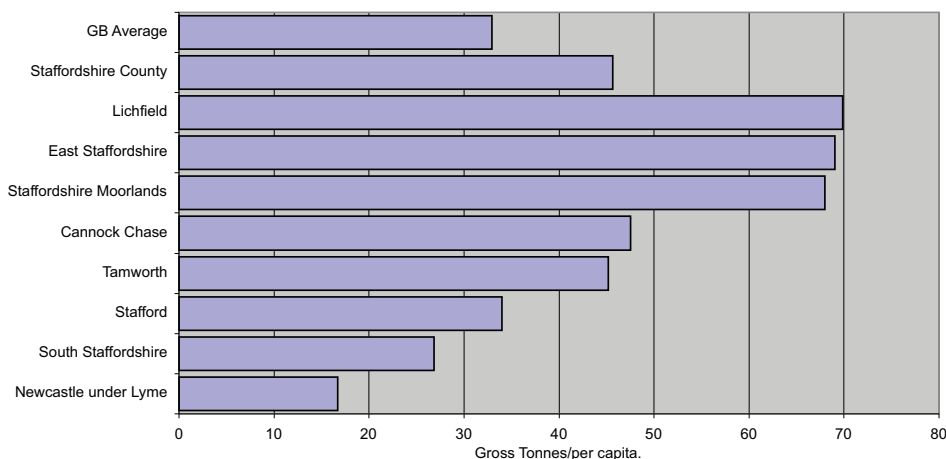




Figure 3: Road Freight: Gross Tonne km By Origin District 2006-2008 destined within GB (gross tonne km per capita per annum)

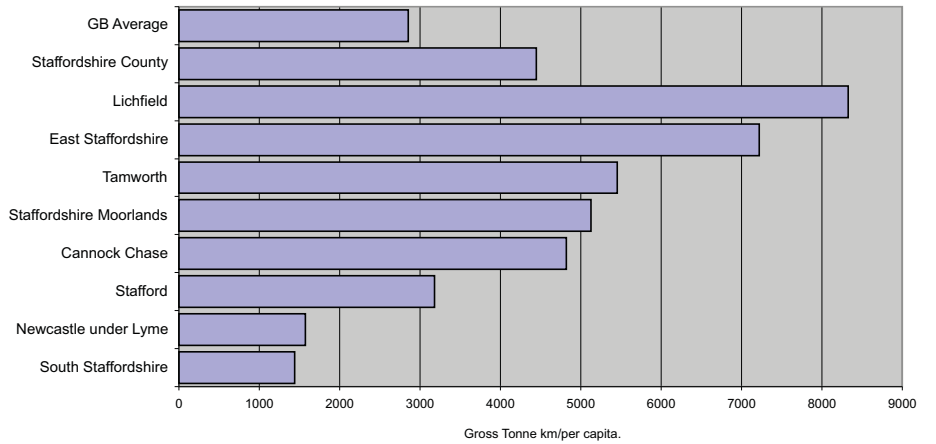


Figure 4: Road Freight: Goods Lifted GB By Destination District 2006-2008 (gross tonnage per capita per annum)

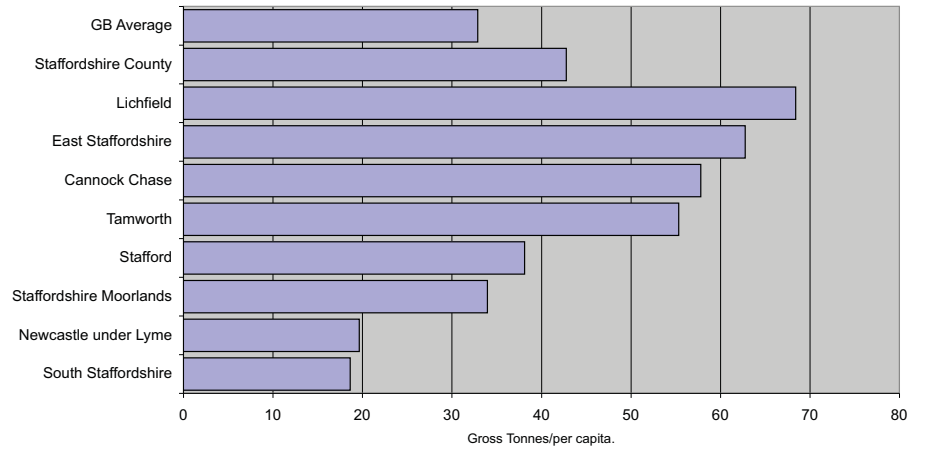
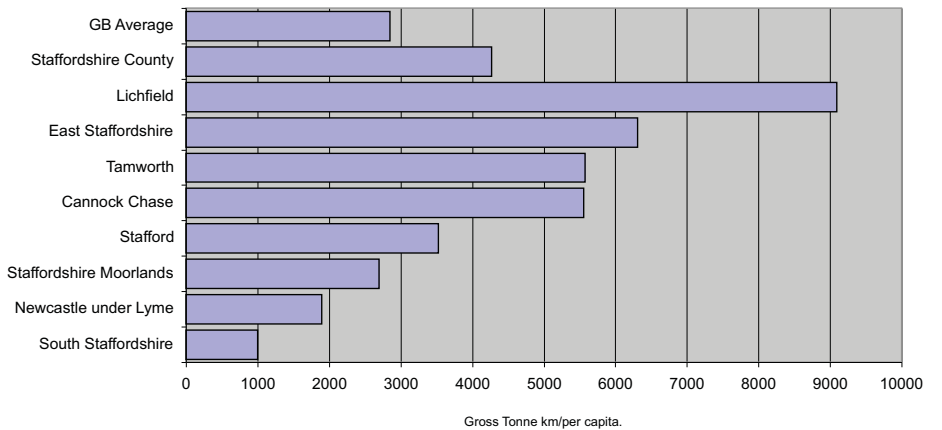


Figure 5: Road Freight: Gross Tonne km By Destination District 2006-2008 originating within GB (gross tonne km per capita per annum)



Staffordshire - Local, Regional, National and International Freight Networks Plan 1 shows the primary highway routes and rail network across the County. The M6 is one of the most important road freight corridors in the country and forms part of the Trans European Network of Roads. The Highways Agency recognises the M6, M54 and A38 as an integral part of the main transport corridor connecting the south and north of the country. Staffordshire is also host to a part of rail network that is significant for both regional and national freight traffic.

The canal network and air transport also play a role in moving freight in particular sectors although the contribution is modest by comparison to road and rail transport.



Consultation

As well as ongoing consultation on broader transport objectives through the Local Transport Plan process a targeted consultation on freight issues and priorities for action was undertaken between October 2009 and March 2010. The consultation was targeted at three groups Parish Councils, road haulage operators and delivery companies, and HGV drivers.

All 186 Parish and Town Councils in Staffordshire were contacted with a freight issues questionnaire initially in October 2009 and then followed up in November 2009 and January 2010. Responses had been received from 52 Parish Councils by mid-March 2010.

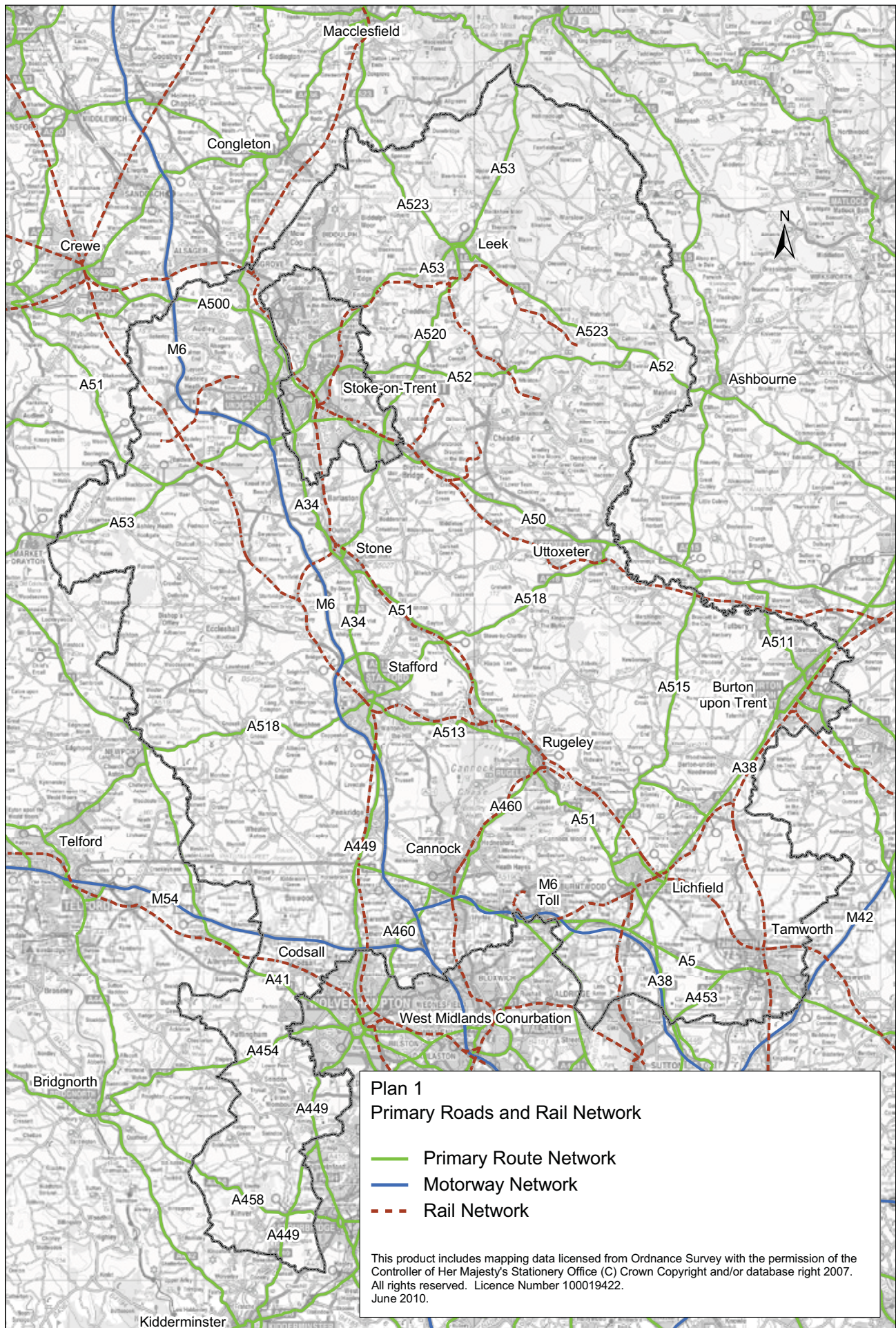
Road haulage operators, delivery companies and other freight operators that use the Staffordshire road network were identified from site surveys and over 300 were initially contacted by telephone and email. After applying a filtering process to remove the companies who considered their use of roads in Staffordshire to be marginal follow-up contact was continued with over 200 companies. This was repeated with email or telephone contact on three further occasions between November 2009 and January 2010. Despite contact with companies on the whole being well received the response rate was poor with only 21 companies fully completing survey questionnaires.

Successful interviews with 200 HGV drivers were conducted at various locations across Staffordshire in lay-bys on the primary road network, transport cafes and truck-stops between November 2009 and January 2010. On the whole the questionnaire used was very well received and the response rate was estimated to be in excess of 85%. Of the drivers who did not co-operate in most cases this was because of operational and time constraints rather than any disregard for the County Council.

Reflecting the input from the initial consultation and various other evidence and policy parameters a first draft document was sent to a restricted circulation of stakeholders in May 2010. A public consultation document was produced in July 2010 and made available ahead of then a parallel consultation with the Local Transport Plan (LTP3) that continued to the end of 2010.

A more qualitative engagement of the haulage and logistics industry continues and it is anticipated that this will continue in a variety of forms through the LTP period. The County Council maintains a variety of mechanisms to engage with local communities not least through Highways Community Liaison Teams.





Problems and Issues

Impact of HGV's on the Local Network and Rural Areas

The available evidence of traffic flow across the Staffordshire network suggests that the majority of HGV's make full use of the motorway and strategic highway network. Map 1 shows flows of heavy commercial vehicles (HCV's) on A and B class roads in

Staffordshire. The data is from a number of traffic count sources and is the best available information of two-way flow. By comparison typical weekday HGV flows on the M6, A38, M54 and A5 through Staffordshire amount to 35,000-40,000, 6,000-7000, 11,000-12,000 and 5,500-6,500 respectively.

Map 1 Heavy Commercial Vehicle Flows on the County Highway Network



The Staffordshire HGV Driver Survey (SHGVDS, January 2010) asked drivers what proportion of total journeys were distributed between Motorway and A-class Trunk roads, other A-class roads and B-class roads and the rest of the network. In any cases of uncertainty or confusion in classification and in order to expedite an easy response dual carriageways were taken as a proxy for Trunk roads. As figure 6 shows 67.5% of journeys did not encounter any roads of B-class or lower and a further 26% of journeys had involved at least 90% of distance covered without encountering a B-class road or lower (93.5% of all HGV journeys therefore involved at least 90% of distance covered on roads classified as A-class or higher).

Looking from the perspective of the top of the road hierarchy down it was found that 71% and 49% of all journeys maintained at least 70% and 90% respectively of distance travelled on motorways and trunk roads⁵.

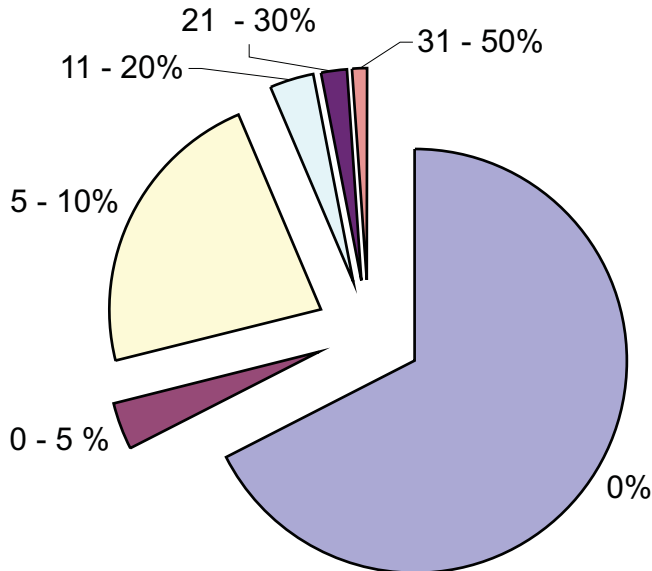
Much of the HGV traffic in rural areas has a legitimate right of access to a point of collection or delivery and a significant proportion of it is related to a business operating in the rural area. The small proportion of HGV traffic that is using the rural network inappropriately however is of considerable concern to local communities.

HGV's are particularly unsuited to narrow rural roads. The most frequently cited causes of concern (evidenced from the Staffordshire Parish Council Survey (SPCS) and complaints direct to the County Council) relating to;

- 'rat running' through rural areas to avoid congestion or to take a more direct route,
- subsidence and damage to highways,
- noise and impact on the tranquillity of the rural area,
- the size and speed of vehicles and an increase in perception of vulnerability for pedestrians, cyclists and people horse-riding,
- damage and erosion to verges, walls, hedgerows, other vegetation and tree canopies over narrow lanes,
- damage to buildings and other structures,
- congestion and blockages to roads,

5 The SHGVDS may under represent the proportion of HGV traffic on motorway and trunk roads as none of the interviews were conducted in motorway services areas, 69% being in truck stops or lay-bys adjacent or very close to A-class Trunk roads and 31% in truck stops or lay-bys adjacent or very close to other A-class roads.

Figure 6: Staffordshire HGV Driver Survey: Response to Question 9 Proportion of Total Journey Length on Roads classified as B-class or below



- difficulties in crossing roads and dangers to children playing in rural communities where there is a regular flow of HGV traffic,
- dust pollution, and,
- mud and other hazards on the highway.

As well as concern about the problems of HGV's in rural areas there is also an understanding and empathy on the part of many who live in rural communities that freight movement is a necessary function of an economically viable countryside that can support employment for local people. There are mixed sympathies towards farm traffic, particularly in relation to safety concerns, although there is again recognition that it has a legitimate right to operate on rural roads.

The maintenance of the highway network was consistently expressed as a high priority in the SHGVDS, the SPCS and the Staffordshire Haulage Operator Survey (SHOS) (see figures 7, 8 and 9).

When ranked against 14 potential priorities for the local area 72.2% of the responding Parish Councils ranked highway maintenance within the top three and 33.3% ranked it as the top priority (see figure 10). Similarly, when ranked against 13 potential priorities for Staffordshire 50% of the responding Haulage Companies ranked highway maintenance within the top three and 33% ranked it as the top priority (see figure 11).



The weight, length and restricted manoeuvrability of HGV's have a disproportionate impact on wear to the road surface compared to other traffic. It is therefore perhaps no surprise that highway maintenance is such a priority in areas more heavily trafficked with HGV's.

One common concern of HGV drivers was the rutting out and tram-lining of roads with high levels of HGV traffic and the effect this had on the ability to safely steer vehicles.

Figure 7: Staffordshire HGV Driver Survey: Response to Question 12I Priority Towards Highway Maintenance

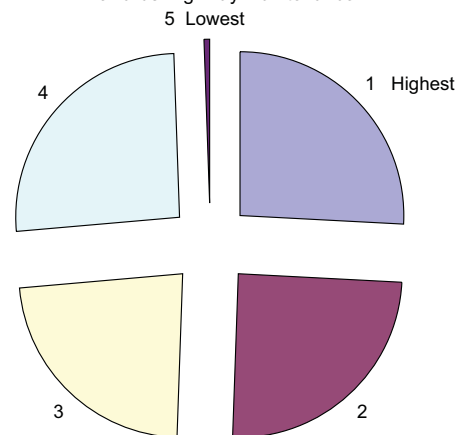


Figure 8: Staffordshire Parish Council Freight Survey: Response to Question 2AD Ranking priority of Highway Maintenance

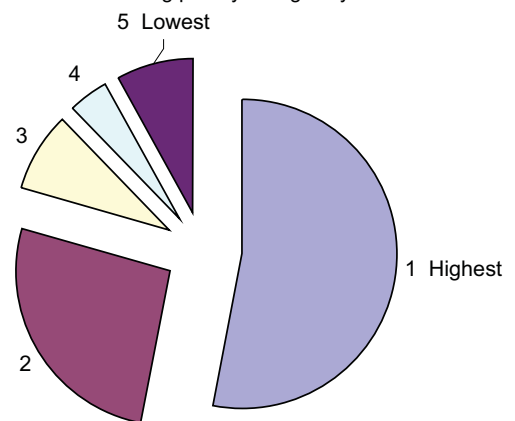


Figure 9: Staffordshire Haulage Contractor Survey: Response to Question 8AD Ranking priority towards Highway Maintenance

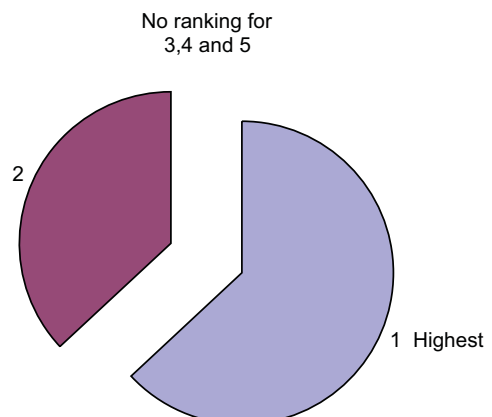


Figure 10: Staffordshire Parish Council Freight Survey: Response to Question 2BD Ranking priority of Highway Maintenance against 13 other measures for the local area

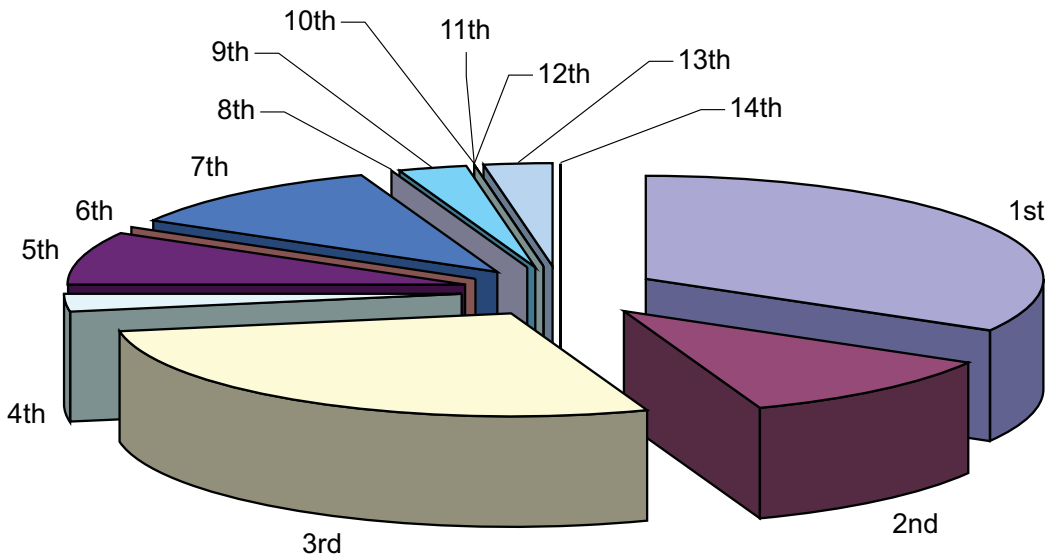
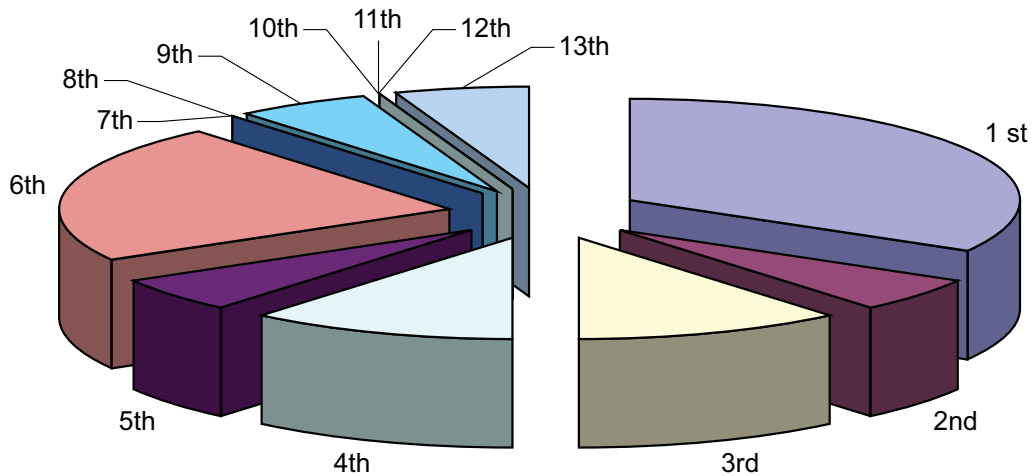


Figure 11: Staffordshire Haulage Contractor Survey Response to Question 8BD Ranking priority to towards Highway Maintenance against 12 other measures for the local area



Weight Restrictions The County Council uses its powers as Highway Authority under the Road Traffic Regulations Act 1984 to prohibit or restrict HCV's from using certain roads. Generally restriction orders are used to prohibit the entrance of 7.5 tonne gross weight vehicles although they may be restricted to 3 tonnes to protect a particularly vulnerable or weak structure. Traffic Regulation Orders are only applicable to vehicles passing through an area they do not prevent legitimate access to rural businesses.

There are a number of issues to consider when investigating the appropriateness of weight restrictions. They could be considered for areas with significant

numbers of properties with frontage to the highway and/or where the local environment is particularly sensitive. It is particularly important that there are reasonable alternative routes available for HCV's and that these can be effectively signed. An assessment will consider the proportion of HCV vehicles the road is carrying in relation to other roads of the same class whether this is high or if there is a significant issue of the timing, continuous or sporadic nature of the traffic. The level of access required within the area is an important consideration along with the likely impact of displacing vehicles and whether the restriction could be practically enforced.

There are over 100 weight restriction orders in place in the County covering environmental and amenity restrictions and structural weight restrictions in both urban and rural areas. Evidence from the SHGVDS (January 2010) indicated that on the whole most drivers recognised the validity of weight restrictions and found the signage adequate (figure 12). A number of problems were reported although these tended to be in relation to a specific locality the most common being concern about the inadequacy of warning signs in advance of a restriction.

The majority of Parish Councils viewed both the enforcement and review of weight restrictions as a priority (see figures 13 and 14) and ranked these highly against 13 other potential measures (see figures 15 and 16).

There is clearly an interest for communities in restricting HCV movements. It is very important however that areas of prohibition and restriction are carefully considered on merit and it is not simply a case of shifting traffic from one sensitive area to another. If journey lengths are substantially increased by the instigation of weight restriction measures this can have a significant environmental and economic cost in terms of increased fuel consumption.

Figure 12: Staffordshire HGV Driver Survey: Response to Question 11H Do you find that weight restrictions in Staffordshire are generally clear and justified?

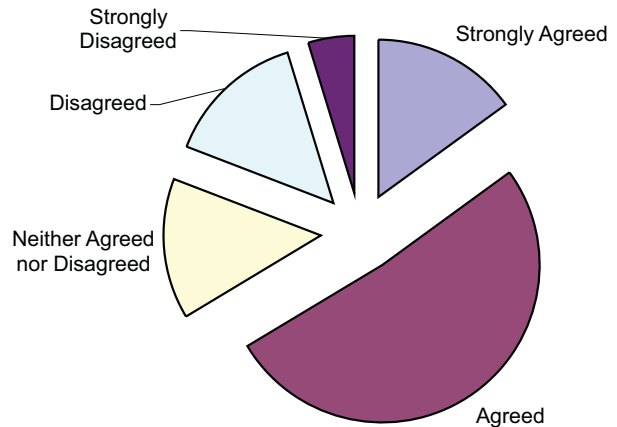


Figure 13: Staffordshire Parish Council Freight Survey: Response to Question 2AE Priority towards enforcement of weight restrictions

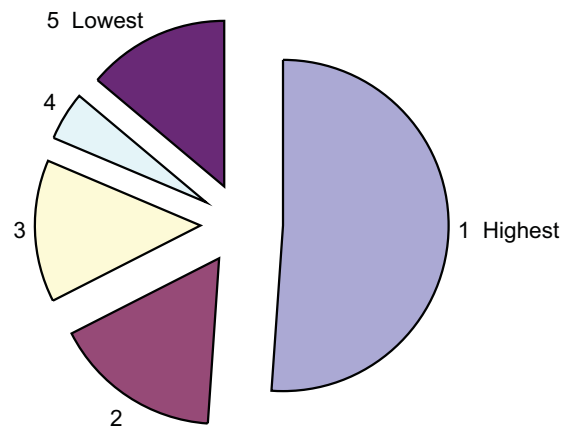




Figure 14: Staffordshire Parish Council Freight Survey: Response to Question 2AH Priority towards review of weight restriction areas

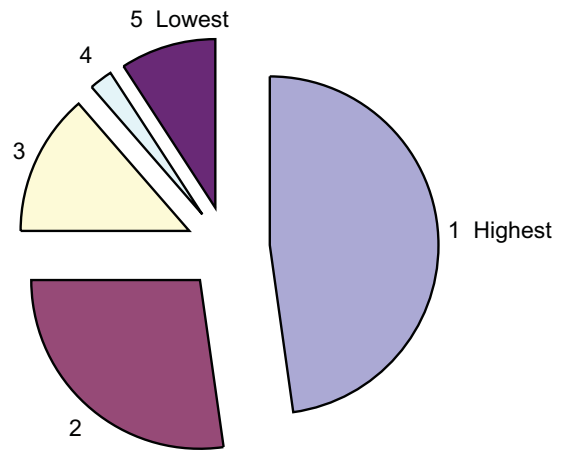


Figure 15: Staffordshire Parish Council Freight Survey: Response to Question 2B Ranking priority to enforcing weight restrictions against 13 other measures for the local area.

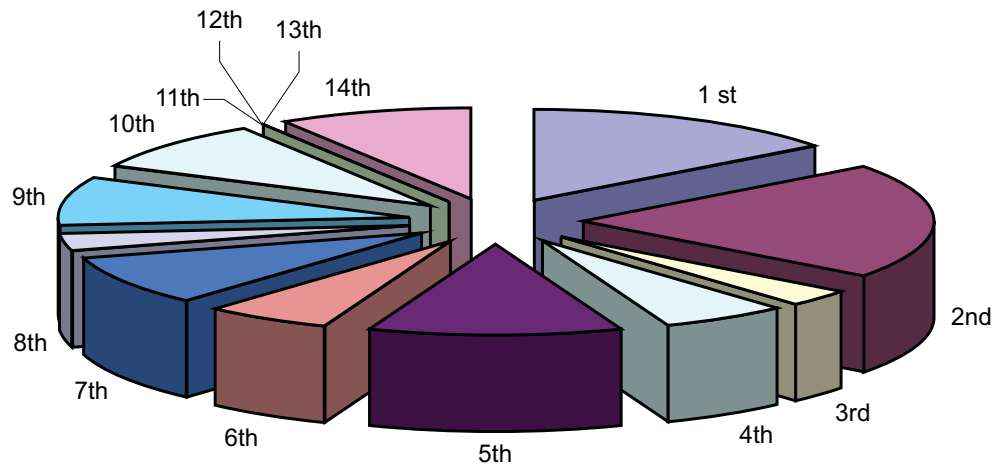
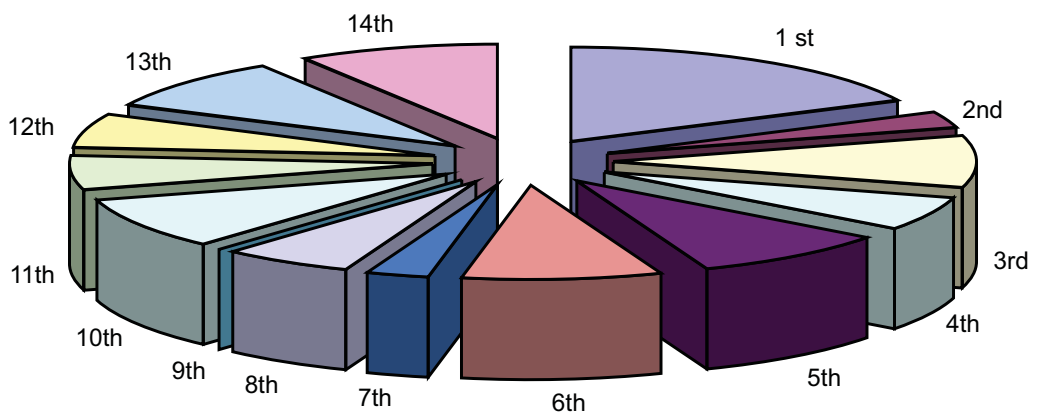


Figure 16: Staffordshire Parish Council Freight Survey: Response to Question 2B Ranking priority to reviewing weight restriction areas against 13 other measures for the local area.



Routing Agreements In relation to the approval of planning permission for minerals extraction or waste disposal operations that involve substantial HGV movements a routing agreement may be used to positively direct the use of a particular route or the avoidance of specifically sensitive areas. Routing agreements might also be advised for other major development proposals that are likely to generate substantial levels of HGV traffic. As these take the form of a condition or a legal agreement to a planning consent they cannot be imposed retrospectively on existing development or operations. Routing agreements are generally more effective when used in conjunction with some statutory weight restriction and/or improved signage and/or an access design that influences the direction vehicles would enter and exit from a site. Occasionally an operator may voluntarily commit to a routing agreement as a gesture of goodwill or appeasement to the local community where a problem has been identified and an adequate alternative route exists. These are more likely to be agreed with companies and operators who have a long-term commitment to an area.

Routing and Delivery Destination Information

The SHGVDS (January 2010) provided clear evidence of the enthusiasm for better destination information (see figures 17 and 18).

Many areas of the country and particularly those with well established Freight Quality Partnerships have initiatives to improve information to HGV drivers in relation to major freight destinations. It is recognised that roadside signs have to compete with all the other safety and traffic information directed at drivers and there are a number of other approaches employed, many of which are relatively low cost. HGV stops, cafes and lay-bys are places where drivers can safely gather information about the local area and are an obvious host for freight destination maps.

Improving signs at the final point of delivery destination on industrial and retail estates is another potential intervention. Generally in Staffordshire signage is already adequate and the routing problems relate to HGVs further back in their journeys.



Figure 17: Staffordshire HGV Driver Survey: Response to Question 12N Priority towards Improving information and signs for delivery destinations

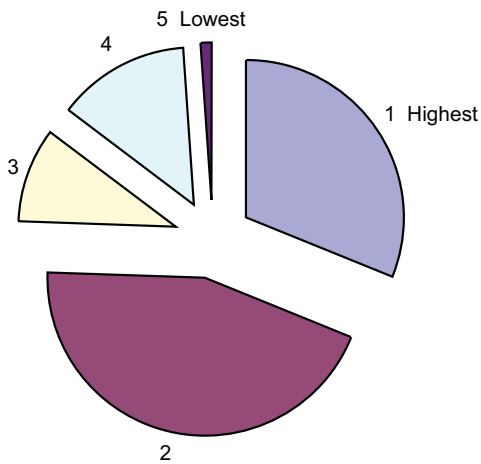
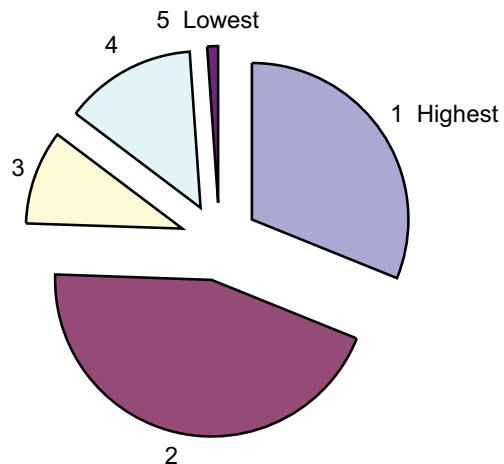


Figure 18: Staffordshire HGV Driver Survey: Response to Question 12N Priority Towards Improving information at HGV Stops, Laybys and Cafes



Advisory Freight Routes These can take a variety of forms from a single signed route to avoid a particular area or a strategic overview of the whole network across an administrative area. Examples of the later include Gloucestershire, Greater Manchester, East Sussex, West Sussex and West Berkshire. Advisory Freight Routes are often related to areas of significant environmental sensitivity such as the South Downs (East and West Sussex) and the Cotswold Hills (Gloucestershire). The more comprehensive approach to defining advisory freight routes below the strategic highway network have generally been worked up in areas that have well established Freight Quality Partnerships.

Advisory Freight Routes are generally signed for HGV's with white symbols and text on a black background. Comprehensive freight routing strategies are generally supported with maps distributed to local hauliers, through trade associations and made widely available at truck-stops. Truck information points in motorway service areas and other electronic media have also been used to promote advisory routes.

The SHGVDS (January 2010) and the SPCS (February 2010) provides a mixed message of enthusiasm towards advisory freight routes.



The majority of Parish Councils viewed implementing advisory freight routes as a priority (see figure 19) although when ranking this against 13 other potential measures this appeared less significant (see figure 20).

The vast majority of HGV drivers (see figure 21) welcomed the instigation of advisory routes and thought the County Council should give this a high priority. Somewhat conversely however 55.3% rated existing signage in relation to HGV routing as good or very good. The SHGVDS also asked drivers about the overall adequacy of directional signs in the County, the consistency of signs (in terms of following routes) and the clarity of information displayed, these being ranked by drivers as very good or good by 82%, 82.5% and 85.8% respectively.



Figure 19: Staffordshire Parish Council Freight Survey: Response to Question 2AH Priority Towards Development and Promotion of Advisory Freight Routes

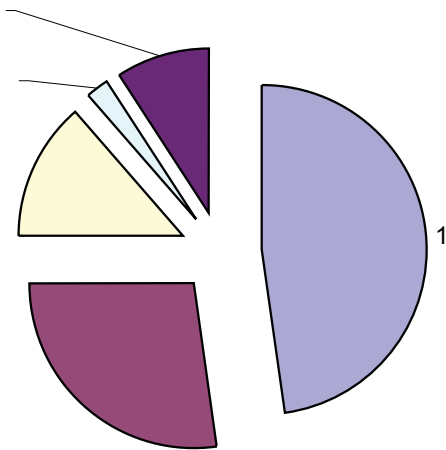


Figure 20: Staffordshire Parish Council Freight Survey: Response to Question 2B Ranking priority to Advisory Freight Routes against 13 other measures for the local area.

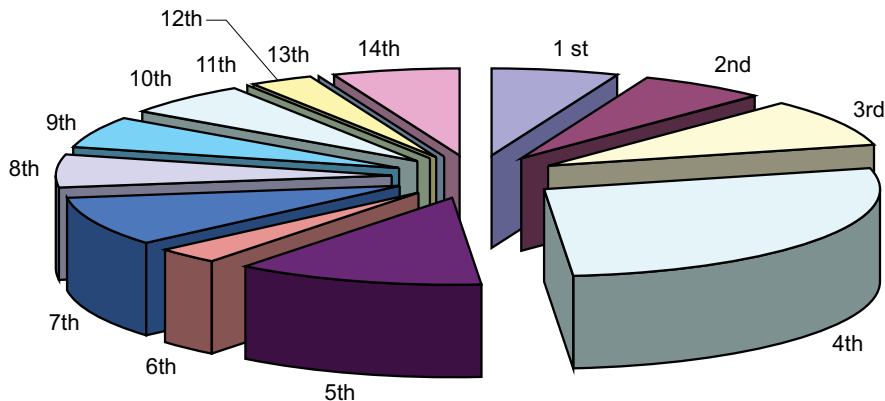
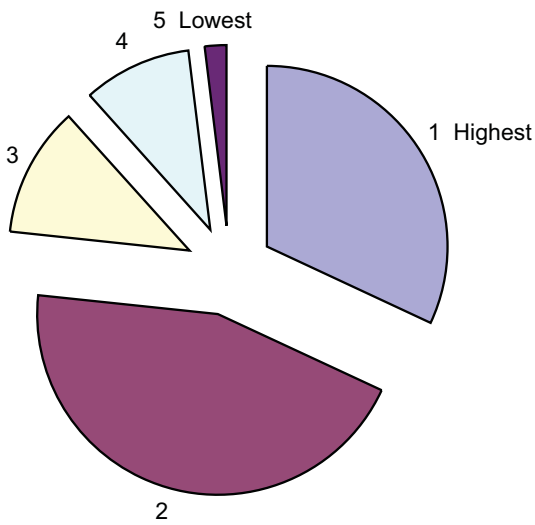


Figure 21: Staffordshire HGV Driver Survey: Response to Question 12P Priority Towards Development and Promotion of Advisory Freight Routes



An Advisory Freight Route strategy covering the whole County clearly would have some advantages for the efficient use of the highway network and the protection of local communities. There are limitations to such an approach however, the most prevalent being;

- additional signs may add to confusion and act as an additional distraction from the road,
- ensuring all the HGV drivers who will pass through the County have an advisory map and continually reinforcing the routes to new drivers,
- the complexity of height and weight restrictions on the non-principal roads,
- the increased use of SATNAV as the main navigation system for HGV, and most fundamentally,
- whether the advisory routes would add clarity to the road hierarchy which is already defined for all traffic uses.



It is not considered that the pattern of HGV movement, the definition of the strategic highway network and the nature of areas sensitive to HGV traffic either in terms of amenity or environment obviously point to the need for a County-wide approach to an advisory freight route. It is considered on the whole that the strategic highway network is reasonably well defined and that the approach to HGV routing should be worked up on the basis of specifically tailored solutions to local routing problems.

Related Actions and Priorities 1, 2, 3, 4, 5, 6, 11, 12 and 13.



Road Freight Efficiency, Load Capacity and Empty Mile Running

As a general trend 'just-in-time' manufacturing techniques over the last two to three decades based on a relatively low proportionate cost of transport have produced a more fragmented and challenging freight transport system with less opportunity for bulk transport.

There is huge potential in the organisation of the freight industry and its relationship with manufacturing and the logistics supply chain to reduce freight movement and improve economic and environmental efficiency. Some of the more fundamental issues relate to the organisation of manufacturing and production, how goods are stored and components used and transported in the production process. A significant part of logistics industry is highly advanced in the application of technology and much of this has a positive impact in reducing freight movement and increasing efficiency. Satellite technologies to effectively route plan 'multi-drop' deliveries being an example.

Trends in the logistics and retail industries towards larger distribution and shopping centres and superstores have the potential to greatly reduce freight miles, although there is also an analogous trend in the wider spatial sourcing of products, particularly food, and the regionalisation (and nationalisation) of distribution centres.

Particularly with the advent of rising fuel prices the freight industry has responded with efficiency improvements. Some of the most effective practices simply relate to effective route planning, how loads are put together, the wider application of technology and good transport management, ensuring that HGV's carry backloads or have shorter periods of travel empty.

The SHGVDS (January 2010) found drivers reporting an average empty running rate of 30.6% with 47.4% running empty less than 25% of the time and 29.8% running empty 50% of the time. This ratio is fairly consistent with the DfT Continuing Survey of Road Goods Transport which shows empty running at 27% of the total fleet mileage for domestic road freight in the UK (this had consistently improved from 34% in 1973 to a low of 25% in 2005 and then slight upward trend to 27% in 2007).



As well as reducing empty running the improvement in the under-utilisation of HGV's running part loaded could offer significant efficiency benefits. The SHOS (February 2010) sought to identify the proportion of total distance travelled by HGV fleets at various loading capacities. This proved difficult for companies to quantify and unfortunately only the results for the proportions of fleet distance travelled fully laden and empty yielded any tangible information (see figures 22 and 23).

In terms of fuel consumption when fully laden a 44-tonne HGV and a 7.5 tonne HGV might typically achieve 35.0l/per 100km (8.1 mpg) and 16.1/l per 100km (17.5 mpg) respectively (Iveco 2010). With a 29 tonne and a 3.5 tonne payload respectively all other things being equal the largest articulated trucks are almost four times more fuel efficient per cargo tonne km than the smallest ones. There has been considerable interest from many of the main players in the haulage industry in continuing the upward spiral of both capacity and length of the largest trucks (see figures 24 and 25).

Despite the shifting of regulation allowing progressively larger vehicles the UK government has held firm on the limit to 44-tonne gross vehicle weight vehicles with 6-axle 'road-friendly suspension' introduced in 2001. The fuel efficiency and CO2 reduction benefit of larger vehicles could be somewhat offset when running part loaded or empty and further concerns relate to the potential increasing severity of accidents and local environmental harm when the vehicles downshift off the primary road network.



Figure 22: Staffordshire Haulage Contractor Survey: Response to Question 7A Proportion of Total Fleet Distance at Full Capacity

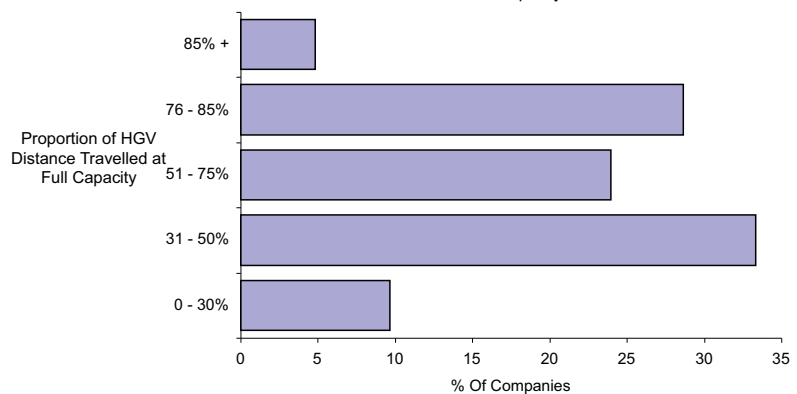
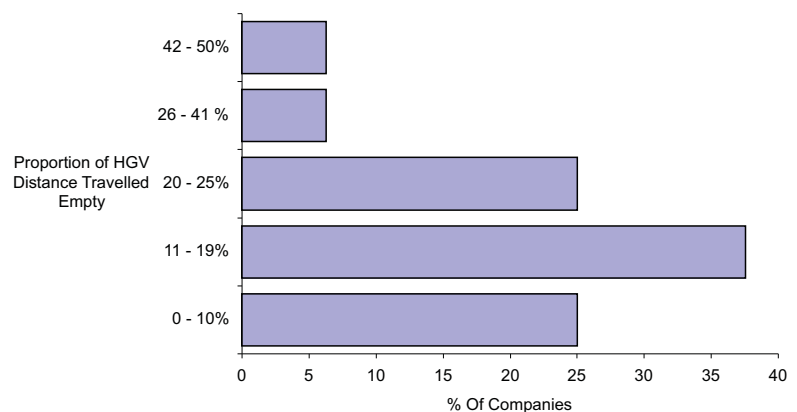


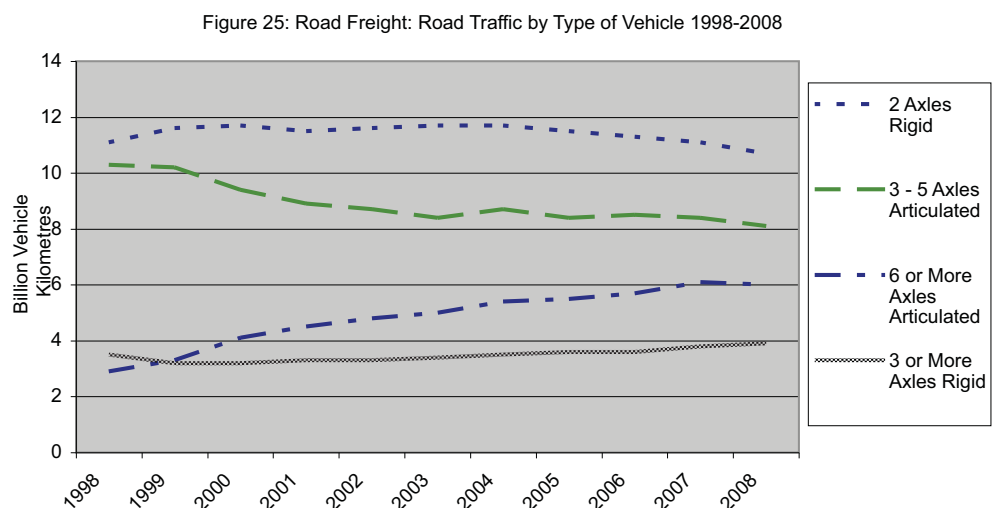
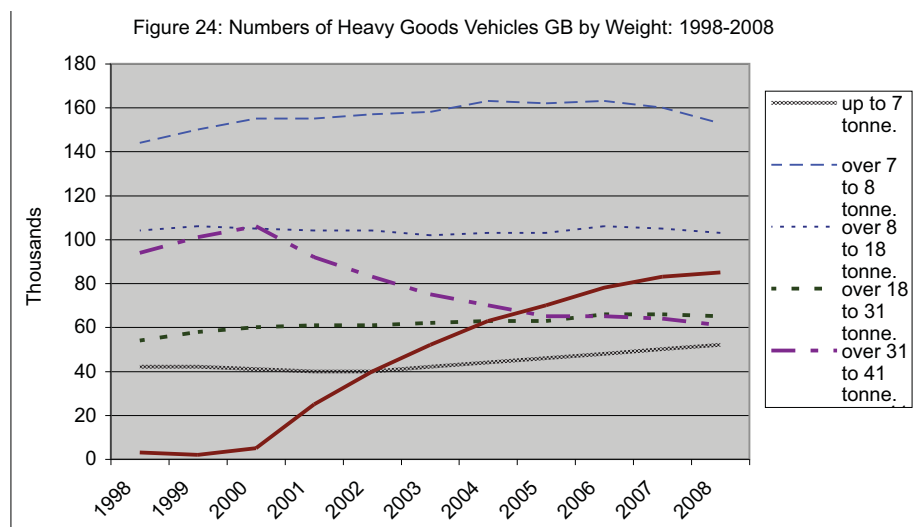
Figure 23: Staffordshire Haulage Contractor Survey: Response to Question 7D Proportion of Total Fleet Distance Travelled Empty



The qualitative evidence from the SHGVDS (January 2010) and the SPCS produced a number of concerns over the potential increase in the size of HGV's primarily over safety, manoeuvrability, damage to highway and property issues. There would however seem to be some benefit to be gained from upsizing in existing fleets within allowable weight limits which may come about anyway as older smaller and less efficient vehicles are replaced.

- promoting regular vehicle maintenance,
- not discouraging safe 'platooning' (vehicles travelling close together to benefit from slip-streaming) or the use of cruise control on suitable motorway and A-class roads,
- driver behaviour that encourages fuel efficiency such less reactionary braking and smoothing acceleration.

Other areas which might produce considerable fuel efficiency and environmental benefits include;



Back Loading - Load Sharing - Freight Databases

Many of the major players in the haulage industry have sophisticated systems to organise, track and best utilise their freight carrying capacity. Some companies actively operate to encourage drivers to stay at the destination of their delivery until a return load has been identified. There is a good level of co-operation and collective work practice between companies to improve efficiency although national evidence and the SHGVDS and SHCS indicate there is much latent potential for improvement. Good practice in efficient running is not the exclusive reserve of the larger operators or the more technologically applied indeed some of the smaller companies and owner-driver operators can be highly adaptable and flexible. Practices as simple as waiting in a lay-by or truck-stop to receive a call for a hire and reward load can make a significant contribution to reducing HGV movement.

The efficient utilisation of HGV's is assisted by a number of backload services. There are companies who specifically identify and farm out return loads. Online freight matching services have expanded significantly in the last decade offering enormous search capacity to haulage operators to find backloads (for example www.freight2mail.com, www.haulageexchange.co.uk, www.loadup.co.uk, www.returnload.com and www.logintrans.co.uk).

Pallet networks allow freight consolidation and member hauliers to considerably increase the average carrying capacity of their vehicles (DfT Freight Best Practice 2005). Reverse logistics operations where cages, packaging and returned stock are taken away by incoming deliveries are employed by most of the big multiple retailers.



Freight Consolidation Centres In its most simplistic form freight consolidation works to bring goods to a single geographic location to make more efficient bulk loads for onward movement. Freight Consolidation Centres have particular benefits where the delivery of goods is highly constrained such as in a historic town centre or where there is an opportunity to bulk up regular deliveries such as to a shopping centre with small unit retailers.

Broadmead Consolidation Centre on the western fringe of Bristol was established in 2004 with assistance of CIVITAS-VIVALDI European funding and provides a service to over 50 retailers. It operates as a public-private partnership. Substantial delivery traffic is removed from the city centre and total delivery distance is estimated to be reduced by over 75%. The Consolidation Centre has a significant advantage in being able to receive goods 24 hours a day and there is no issue of disturbance to local residents. The consolidation of goods also allows for the transfer to zero emission or low emission vehicles and therefore could offer considerable air quality benefits.

Freight consolidation has particular advantages in the delivery of construction materials where these can be assembled off-site into bulk loads for 'just-in-time' delivery. The London Construction Consolidation Centre opened in South Bermondsey in 2005 and operated very successfully to assist the efficient construction of major development projects in Central London and is reputed to have secured very significant benefits in terms of reduced emissions and congestion, better levels of delivery service and flexibility through the divisibility of bulk loads to multiple construction sites.

Freight Operator Recognition Scheme (FORS) and Haulage Operator Best Practice

Transport for London (TfL) launched a freight operator recognition scheme in April 2008 and had announced the inclusion of 40,000 vehicles in the scheme by October 2009. The scheme offers members incentives to increase the sustainability of their operations and develop skills and best practice in relation improving safety and reducing CO2 emissions.

TfL's FORS is a cornerstone of the sustainable freight distribution plan for London and substantial resources have been devoted to it. The scheme was worked up as a partnership between TfL, the Metropolitan Police, Vehicle Operator and Services Agency (VOSA),

Department for Transport (DfT), Health and Safety Executive (HSE), Road Haulage Association (RHA) and Freight Transport Association (FTA). It depends on partnership and co-operative working practice for administration, compliance and day-to-day operation.

FORS has a tiered structure for membership levels - bronze, silver and gold. Eligibility for bronze membership appears highly complex although the majority of the criteria involve recording and monitoring compliance with existing legislation. Eligibility for silver and gold membership relate to demonstrating ongoing performance against the benchmarked measures.

Many haulage companies had practices already in place prior to FORS and to that extent the scheme acknowledges existing good management. The success of the scheme may in part relate to the incentive to reduce the costs of Penalty Charge Notices to haulage operators estimated to have cost £500 million for commercial operators in London 2007/08 (FTA 2008).

A freight operator recognition scheme or a haulage best practice club could operate on any variety of levels of complexity and comprehensiveness. As a minimum it would probably need to involve the main commercial industry bodies and operate in partnership with Staffordshire Police and the Vehicle and Operator Services Agency. Significant benefits might accrue from working with adjoining authorities, although the criterion may be difficult to agree.

To be successful the scheme would need to be free to join, compliance criteria clear and understandable and not unduly onerous. The scheme would also need to be as open and equitably administered as possible to gain credence and acceptability by both the industry and the communities of Staffordshire.

A Staffordshire freight operator recognition scheme could be devised specifically to address local problems. At entry level criteria for membership might address issues such as;

- the use of truck based SATNAV systems or SATNAV with height and weight information;
- a very low or zero accident record in relation to collisions with pedestrians or cyclists (per unit distance travelled);



- a very low or zero record of misuse of weight restriction areas (per unit distance travelled);
- a very low or zero record of public complaints (per unit distance travelled);
- a minimum percentage of fleet with Euro IV, Euro III and Euro II emission standard engines; and
- companies offering regular driver training.

A significant advantage of a recognition scheme is the additional safeguard given to contractor selection for the County Councils own delivery and haulage requirements.

Related Actions and Priorities 1, 7, 8, 9 and 10.

Accidents

In Great Britain as a whole the number of people killed or seriously injured in accidents involving at least one HGV has been gradually falling in the last decade from close to 2,900 casualties per annum average 1994-1998 to just over 2,000 casualties in 2007, a reduction of 43% (DfT 2008). Fatalities in the same period involving accidents with at least one HGV have fallen by 25% to 435 in 2007. These reductions have occurred despite a backdrop of rising levels of road traffic with an increase of 16% over the same period.

In Staffordshire accidents involving at least one HCV have averaged 226 per annum 2000-2008, falling from 254 per annum 2000-2004 to 206 per annum 2005-2008, a reduction of 18% (over the shorter period for recorded data).

Nationally, although HGV's are involved in considerably less accidents than cars per vehicle kilometre travelled, 36 per 100 million km for HGV's compared to 62 per 100 million km for all motor vehicles (in 2007), not surprisingly given the size of the vehicles the nature of injuries tends to be more severe. A fatality rate from accidents of 1.6 per 100 million km for HGV's compared to 0.9 per 100 million km for all vehicle accidents nationally in 2007.

In Staffordshire there have been 88 fatalities and 228 serious injuries in accidents involving at least one HCV in the nine year period 2000-2008. A casualty in an accident involving an HCV was 2.3 times more likely to be fatal than for all road accidents over the period.

In Staffordshire accidents involving at least one HCV and either a pedestrian or a cyclist over the period 2000-2008 have been relatively small in number averaging 9.1 and 4.1 per annum respectively. Road accidents involving at least one HCV accounted for only 2.5% and 2.0% of total road accidents involving pedestrians and cyclists respectively. However, although accidents involving cyclists and HGV's are relatively uncommon the likelihood of the death of the cyclist was 13 times higher than for accidents involving a car or other light goods vehicle (ROSPA 2006, 2004 data). Cyclists are at a particular risk from collisions with HGV's at left turn junctions and when being overtaken.

The issue of conflict between HGV's and vulnerable road users raised some consternation in the SHGVDS (January 2010). Many drivers recounted serious incidents or near misses particularly relating to cyclists. Some sympathy was expressed towards the vulnerability of other road users although the overwhelming majority of HGV drivers were of the view that as many resources were needed to be devoted to road safety education as to physical infrastructure measures such as junction improvements and the greater provision of cycle lanes. In response to being asked of the priority that should be given to measures to address the conflict between HGV's and vulnerable road users 55.6% rated this as very important/important (see figure 26).



The SPCS revealed a mixed response to issue of conflict between pedestrians and cyclists and HGV's. In some areas it is of very significant concern although this is balanced by other areas where the issue is of very limited or no concern. There is no evidence from the responses to distinguish any difference between the level of concern over conflict of HGV's with pedestrians, cyclists or other road users (see figures 27, 28 and 29).

Figure 26: Staffordshire HGV Driver Survey: Response to Question 12M Priority Towards Addressing Conflict Between HGV's and Pedestrians and Cyclists

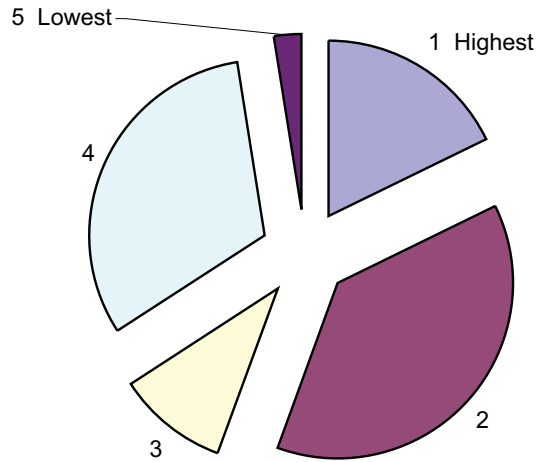


Figure 27: Staffordshire Parish Council Freight Survey: Response to Question 1AM Rating the issue of conflict of HGV's with pedestrians

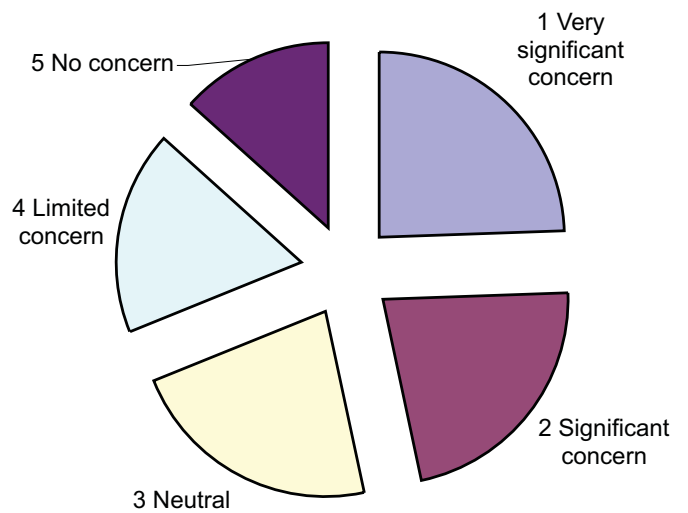
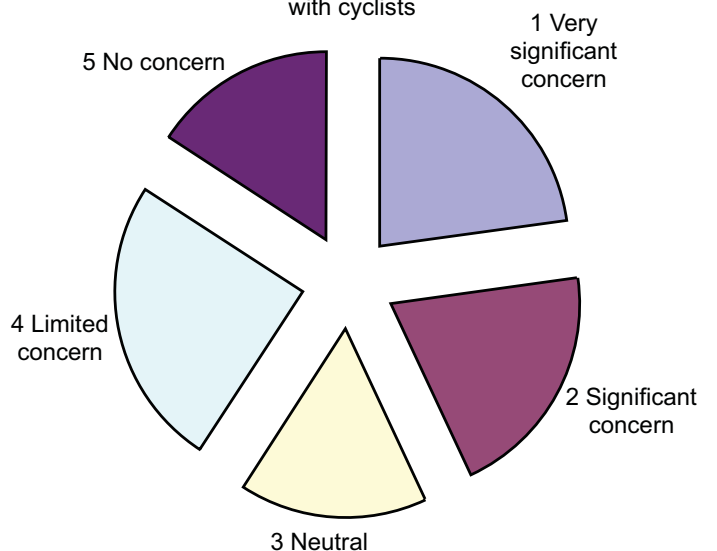


Figure 28: Staffordshire Parish Council Freight Survey: Response to Question 1AO Rating the issue of conflict of HGV's with cyclists



In terms of the priority that should be given to the issue of conflict between pedestrians and cyclists and HGV's the response from Parish Councils varied across the spectrum. As figure 30 indicates although 44% rated the issue as a very high or high priority it was not significantly rated when considered along with 13 other potential priorities for the local area (see figure 31).

Road Safety Training Road safety training for children, other pedestrians, cyclists and other vulnerable road users is already a high priority for the County Council and the authority has a good record for effectiveness and innovation. Some of the more innovative measures around the country include training and awareness programmes run by the Police or the haulage industry involving educating other road users in understanding the HGV's drivers perspective in terms of manoeuvring and restricted visibility.

Well Driven Other industry responses include the 'well driven scheme' (www.well-driven.net) which allows the management of haulage companies to receive feedback and take action from the public on poor driving practice by the reporting of incidents to a hotline clearly displayed on participatory vehicles.

Related Actions and Priorities 1, 5, 10, 11 and 13.

Figure 29: Staffordshire Parish Council Freight Survey: Response to Question 1AQ Rating the issue of conflict of HGV's with other road users

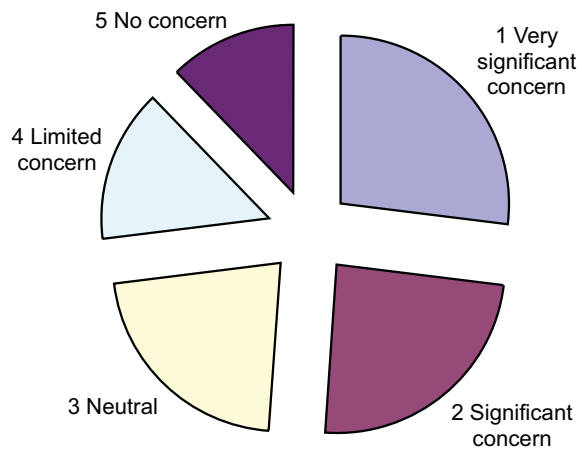


Figure 30: Staffordshire Parish Council Freight Survey: Response to Question 2AN Priority measures to reduce conflict with pedestrians and cyclists on roads with high HGV flows

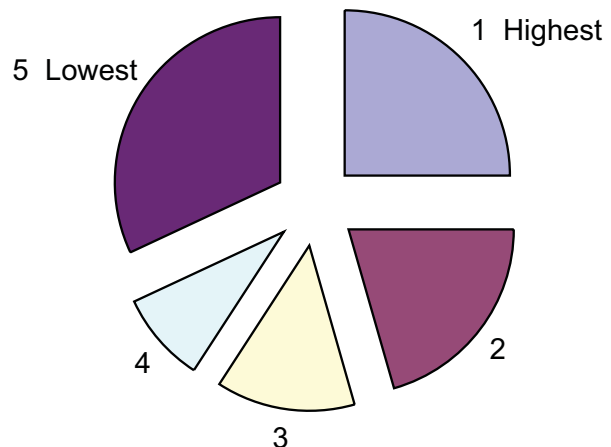
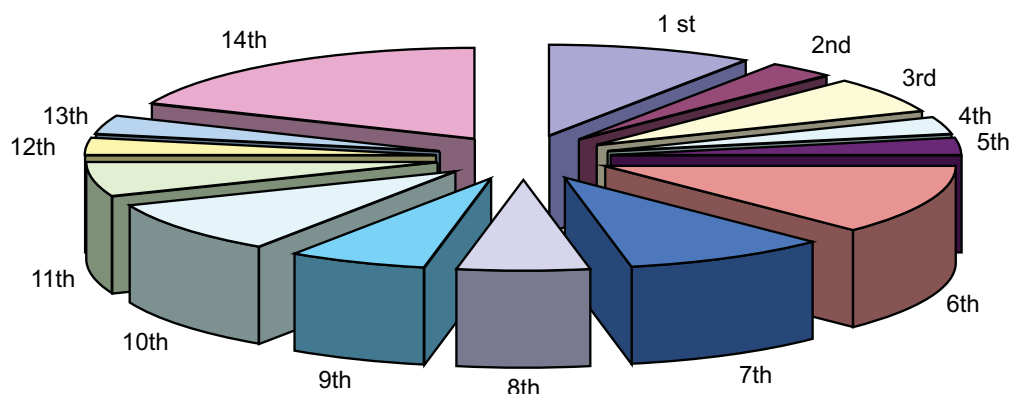


Figure 31: Staffordshire Parish Council Freight Survey: Response to Question 2B Ranking priority to measures to reduce conflict with pedestrians and cyclists on roads with high HGV flows against 13 other measures for the local area



HGV Parking

With the advent of the EC Working Directive providing strict regulation of driving hours and the continued growth in long distance road freight traffic the demand for lorry parking facilities in the County has been increasing in recent years. The main HGV parking areas and cafes in the County are shown on Plan 2 these are supported by a number of mobile catering facilities mostly found in lay-bys and the main logistics and industrial estates.

Evidence from the Staffordshire HGV Drivers survey (SHGVDS January 2010) shows the issue of demand and supply for lorry parking in the County is complex. There is clearly a range of requirements from regularly distributed lay-bys on the strategic highway network to serve mandatory breaks after 4.5 hours driving, to secure overnight parking areas with facilities for stops of up to 45 hours. It is certainly at least a perception of a high proportion of HGV drivers that there is under-provision of every type of parking facility and many feel that those that are provided are often very poor seriously infringing basic standards of human dignity (see figures 32 and 33).

The SHGVDS (January 2010) further shows a clear differentiation of experience of those drivers who know the County well using the prime parking locations and those who pass through less frequently reporting a particularly dismal account of the facilities. Some of the major hauliers and some of those who carry more valuable freight insist that their drivers use secure parking areas at the other extreme there are many companies who give no overnight allowance to their drivers. Many of latter can be found in lay-bys overnight directly adjacent to busy primary routes with associated safety, security and comfort challenges.

The SHGVDS indicated overwhelmingly that from the drivers perspective improving parking facilities in terms of the quantity, quality and range of services is a high priority (79.3% rating increased HGV parking provision as a very important/important and 75.4% rating improving facilities as very important/important).

Figure 32: Staffordshire HGV Driver Survey: Response to Question 11J Rating the Quantity and Location Parking Facilities

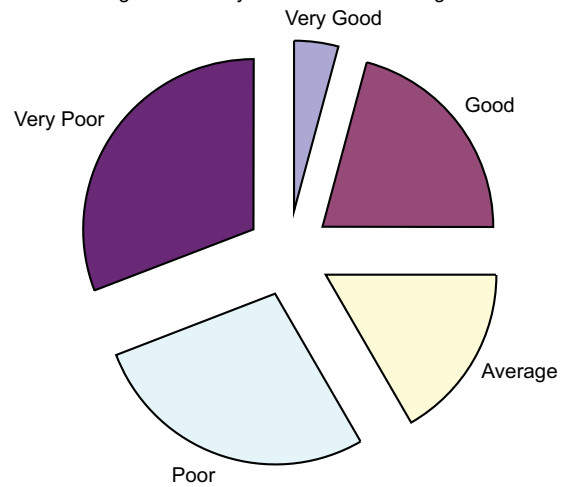
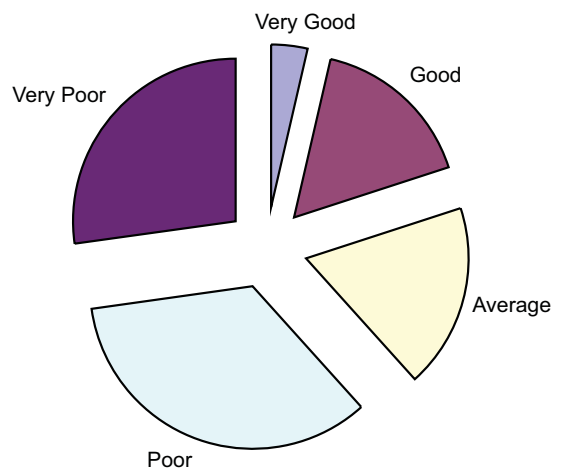


Figure 33: Staffordshire HGV Driver Survey: Response to Question 11K Rating the Adequacy of Parking Facilities



According to Truckpol, a partnership organisation supported by the Home Office, Chief Police Officers and other key stakeholders with an interest in the haulage industry 1,895 HGV's were stolen in 2008 in the UK and there were a further 1,362 thefts of loads from vehicles. The cost to the industry was of the order of £85m. As well as the more petty opportunistic thefts there is an element of criminal activity which is highly organised and moves around key 'hotspots' in the country.

Information from the SHGVDS although not possible to robustly quantify does suggest a higher targeting of crime against non-UK registered trucks. This is to some extent substantiated in the very obvious attempts particularly by non-UK drivers to indicate to potential criminals when their vehicles are empty (by leaving side curtains open or rear doors open when parked up).

Despite concern about the general comfort and safety of HGV drivers the extent of overnight HGV parking as an environmental detractor is limited. The Staffordshire HGV Overnight Parking survey (November 2009) as a snapshot found only 315 HGV's, parked en-route overnight outside proper parking areas compared to 488 HGV's parked inside authorised parking areas (the extent of the survey is shown on Plan 3). The vast majority

of these vehicles were found in a limited number of areas mainly in lay-bys in very close proximity to the motorway and trunk road network well away from residential areas. The extent of the overnight survey is of course limited although there is no compelling evidence to suggest it is unrepresentative of the situation overall.

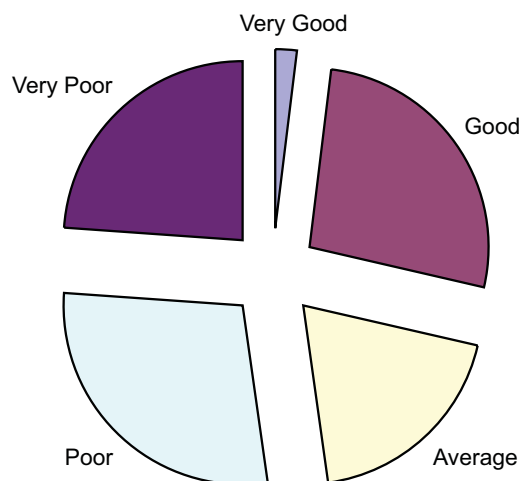
At least part of the 'parking problem' may lie in the lack of knowledge of all the available locations and facilities. The SHGVDS recorded a mixed account of the adequacy of signage and information for parking areas (see figure 34). There are some comprehensive sources of information such as the Highways Agency Truckstop Guide (in paper and electronic form, www.highways.gov.uk/knowledge) and various websites (such as www.transportcafe.co.uk) however these are not always easy to use when the urgency of taking a break arises.

A serious challenge is for the public and private sector to provide decent, secure and environmentally acceptable parking areas at an acceptable cost to the road haulage industry.

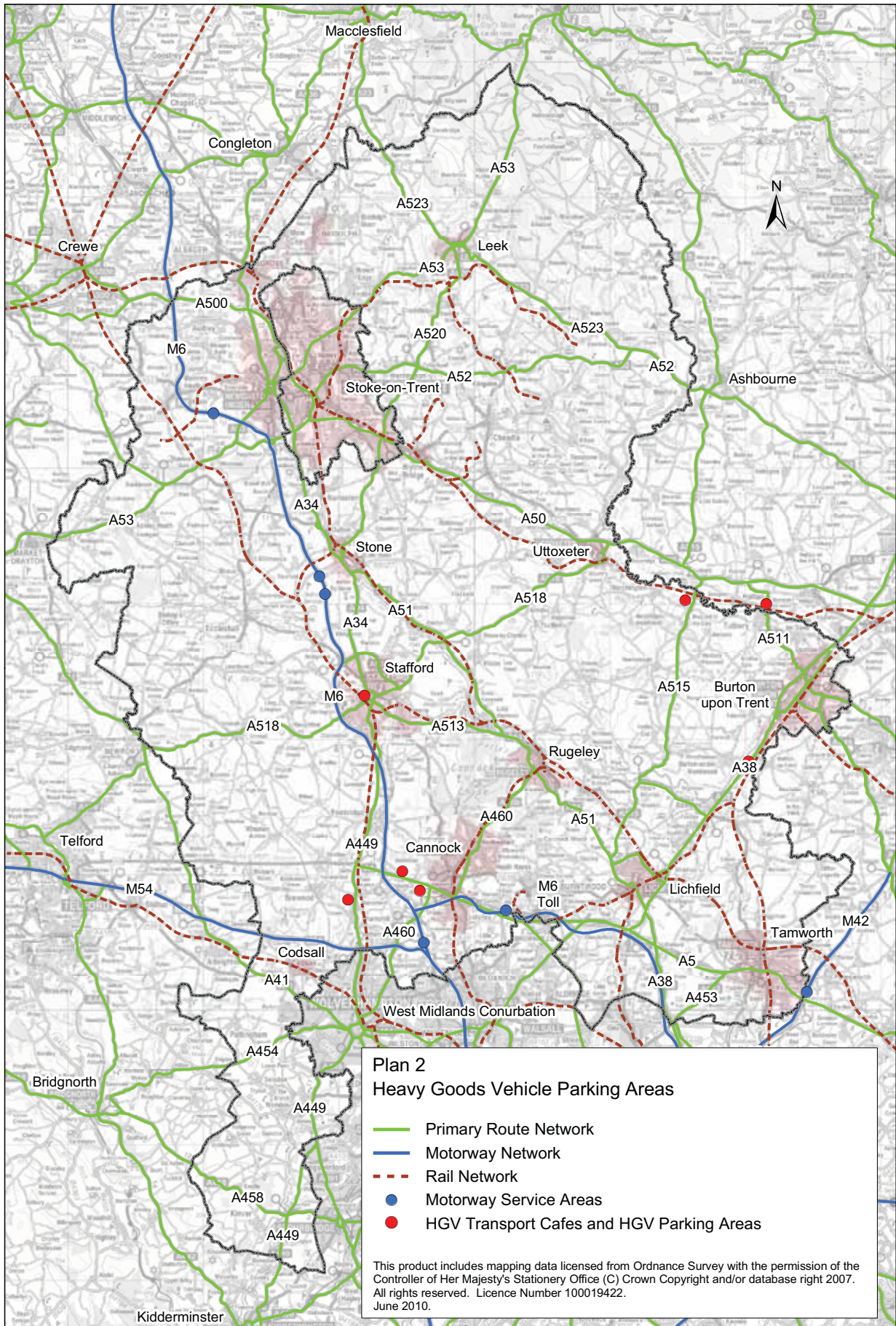
Related Actions and Priorities 14, 15, 16, 17 and 18.



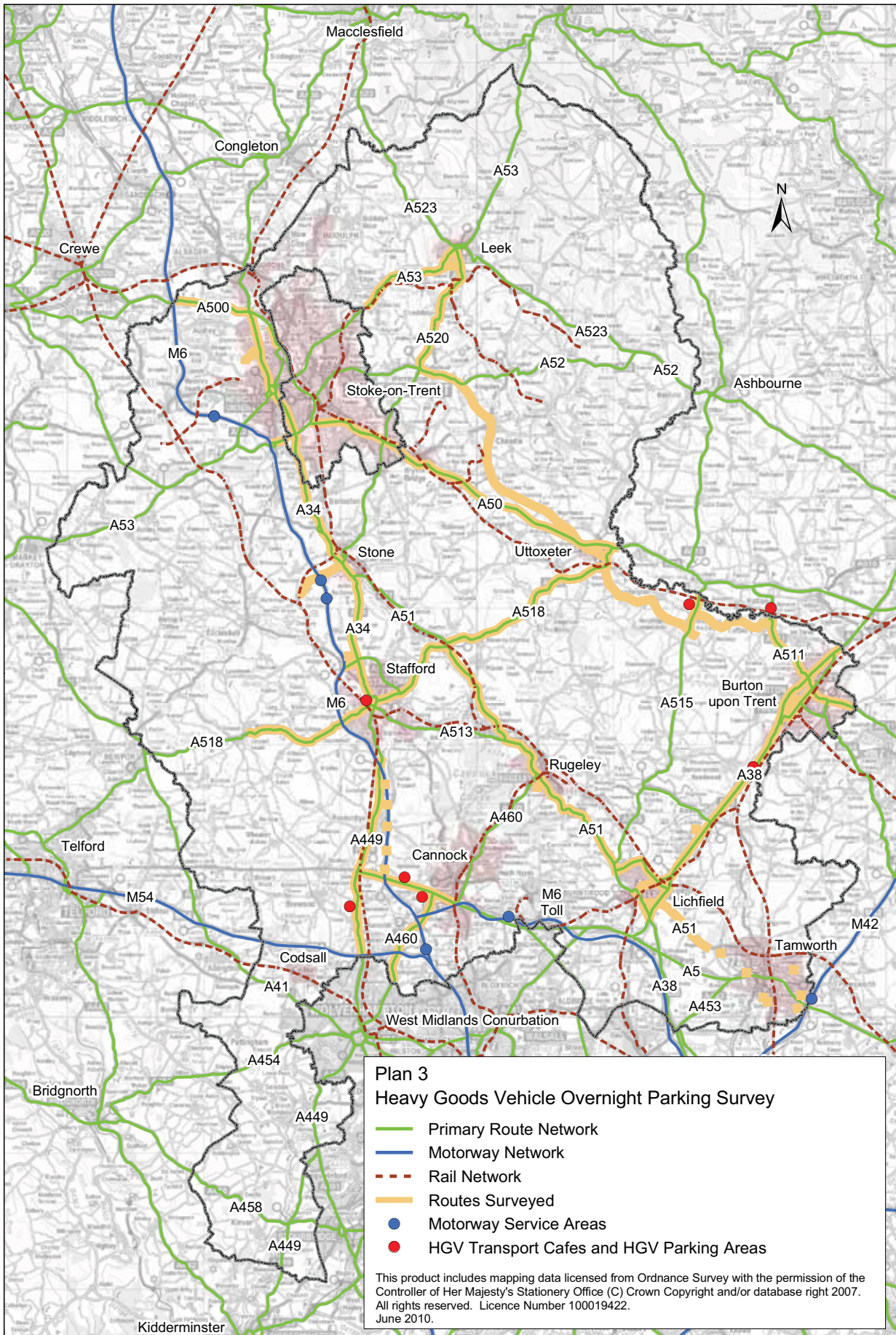
Figure 34: Staffordshire HGV Driver Survey: Response to Question 11L Rating the Adequacy of Signage and Information for HGV Parking



Plan 2 HGV Parking Areas



Plan 3 HGV Overnight Parking Survey





Use of Satellite Navigation Systems

A perception gained from the reading of some national and local evidence and certainly supported by the media is that the use of SATNAV systems by freight operators and hauliers frequently leads to problems in rural areas through the use of inappropriate roads, abuse of weight regulation areas and in the most extreme cases the blocking of roads.

Other more balanced evidence suggests that there have been a number of incidents that have been disproportionately recorded and on the whole the misuse of SATNAV is relatively rare when considered against the overall volume of road freight traffic.

The SHGVDS (January 2010) found that for those using SATNAV systems only 9.6% relied on them for all or most of their journeys (see figure 35) with the vast majority of drivers found to be carrying conventional road maps at least as a supplement.

Few drivers commented on using SATNAV as the main basis for route planning. The most common use being to find a specific delivery address (see figure 36) and therefore only relied upon for the last part of their journey.

Figure 35: Staffordshire HGV Drivers Survey Response to Question 10A - How would you best describe your use of SATNAV ?

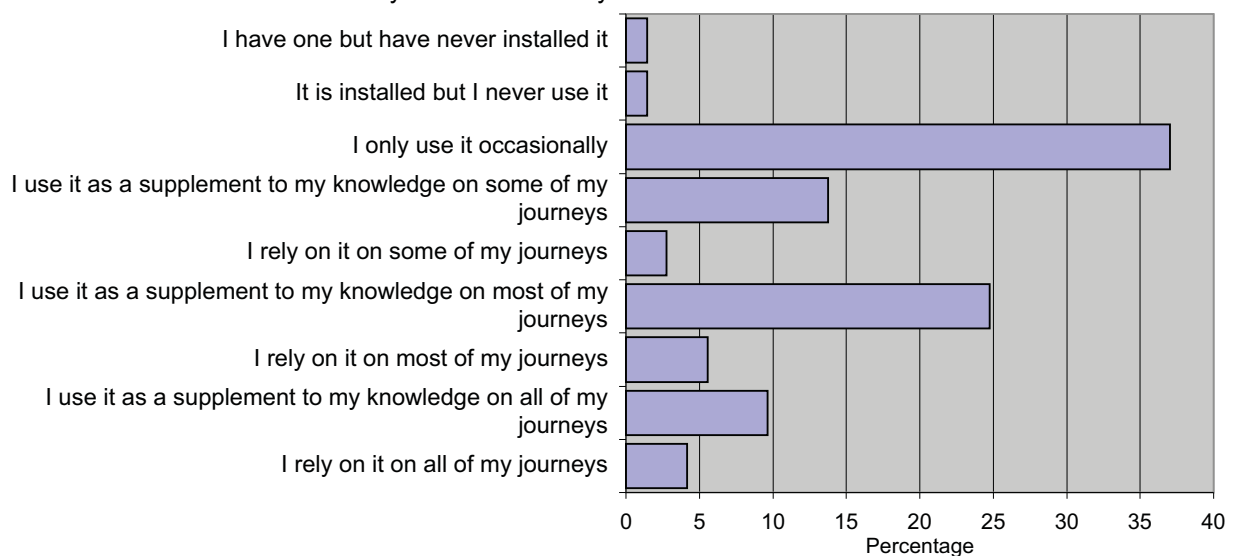
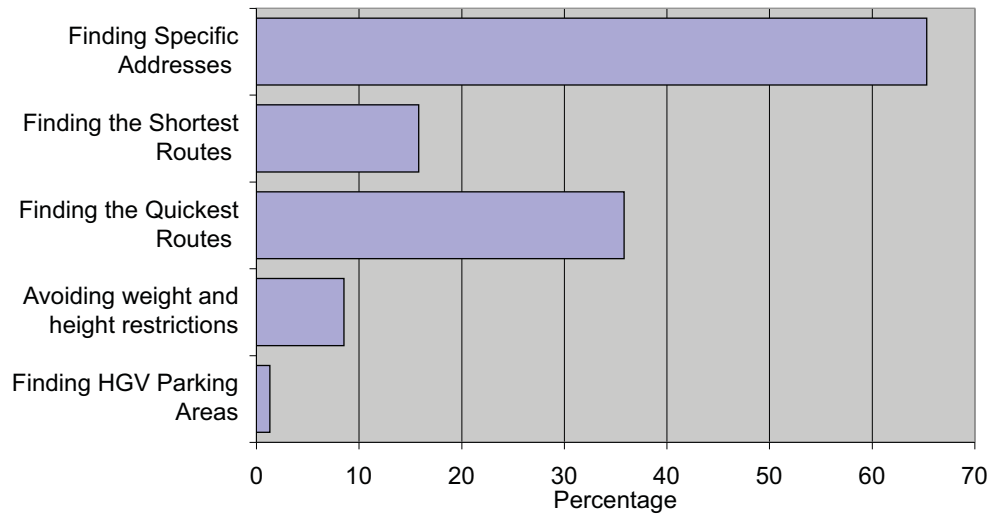


Figure 36: Staffordshire HGV Drivers Survey Response to Question 10D - Use of Satnav rated as Very Important / Important



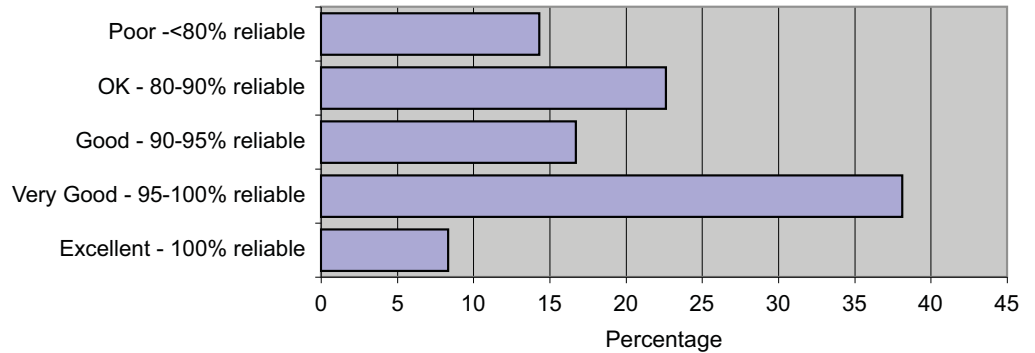
Without quantitative data to qualify the assertion the majority of drivers in the Staffordshire survey reported doing regular trips and/or being familiar with their destinations. To crudely categorise drivers into 'regular routers' and 'multi-droppers' it was found that the majority of 'regular routers' use SATNAV as a reserve and of the 'multi-droppers' destined for locations well off the primary route network they typically had smaller vehicles (the majority with rigid bodies).

Some drivers with SATNAV (10.5%) already used truck compatible systems with a similar proportion reporting having downloaded weight and height information for a car-based system. On the whole though very few companies fitted their vehicles with truck compatible systems and this may at least in part be a reflection of the nature of haulage industry characterised by many operators with small average fleet sizes.



The SHGVDS (January 2010) found 82.1% of drivers who carried SATNAV had bought their own. Truck systems and weight and height 'download' information remain relatively expensive, some of the better systems typically costing £300-£500. Because of the high use of car-based systems the reporting of reliability (see figure 37) is no doubt suppressed than if the survey sample had found more truck-based systems. The override remains however that very few drivers stated that they relied on SATNAV (see figure 35) and expressions amounting to 'not taking the eye off the ball in unfamiliar surroundings' were common offerings.

Figure 37: Staffordshire HGV Driver Survey Response to Question 10C - Rating the Reliability of SATNAV



The use of SATNAV systems by foreign drivers is difficult to quantify. The SHGVDS January 2010 found less foreign drivers to interview than anticipated (7 from 200, 3.5%) and mutual language difficulties resulted in only four satisfactory discussions from seven interviews. The extent of any problem would be limited by both the relatively small numbers of non-GB registered vehicles and that foreign drivers have less of a desire to stray off the motorway and trunk network.

Primary research for DfT (Faber Maunsell/AECOM 2009) on the use of SATNAV suggested a safety benefit in its use allowing freedom to listen to a voice command rather than the encumbrance of maps and instructions for locating destinations (the research was not specific to HGV's). Further uses of SATNAV reported to DfT (Faber Maunsell/AECOM 2009) included taking advantage of live traffic updates, locating speed cameras and mobile Bluetooth functions. Further uses suggested in the

SHGVDS included more industrious logistic operational benefits such as vehicle tracking and security and the softer more human benefit of the company of a voice to a lonely driver.

SATNAV information specific to HGV routing, although currently expensive, is becoming more widely available and used and support should be given to any initiative to support the adoption of a single European standard for data. There would also seem to be a good case for all new HGV's to have a fully functional weight and height information SATNAV system fitted as standard particularly given the negligible proportional cost in comparison to a new truck.

Related Actions and Priorities 4.



Rail Freight

In terms of total freight movement rail nationally accounts for 4.6% of the modal share of goods lifted and 8.6% of the total goods moved (tonne kilometres GB 2008). In many commodity sectors the rail freight share of the market is negligible although it is significant for primary and bulk goods notably solid mineral fuels, metal products, crude and manufactured minerals and building products.

As figure 38 shows rail has made significant gains in market share in the last decade although this is from a low base and is very low when compared to the structure of the freight transport market over 30 years ago. The general economic benefit that tips towards rail for long distance journeys and long-term flows of bulk goods between major hubs means statistically rail shows a better performance in terms of total tonne distance than total goods lifted.

In Great Britain a typical freight train has the same capacity as 50-60 HGV's (Network Rail 2008). For particular bulk goods freight trains can have a greater capacity, for aggregates in specially adapted wagons for example, a typical train would be equivalent to the load capacity of 120 HGV's (Network Rail 2008). In Great Britain the 332,000 freight train movements in 2007/08 were calculated to be the equivalent of 1.4 billion road vehicle kilometres and 6.7 million road vehicle journeys (Office of the Rail Regulator 2008). Some of the advantage of bulk rail freight is the volume of rail wagons rather than weight bearing capacity.

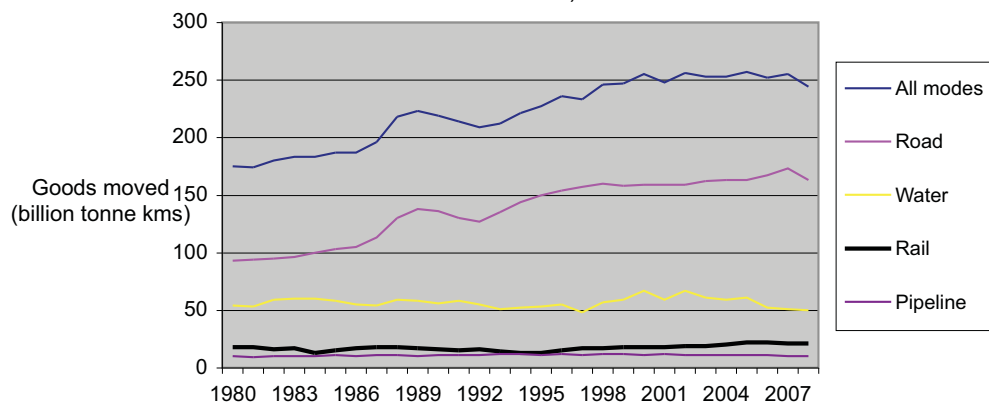
Rail freight is generally regarded as having environmental advantages over road freight particularly over long distances. By unit capacity CO2 emissions are



generally lower, other pollutant emissions lower and the potential for technological innovation similar to that of road freight.

The Route Plans and the Freight Utilisation Strategy of Network Rail recognise the greatest potential capacity for rail freight growth from long distance intercontinental container traffic particularly from the sea ports of Felixstowe and Southampton. The critical factor in the expansion of this market is to provide a national core rail gauge (to W10) with adequate diversionary capacity within the network. The rail freight operators generally have ambitions for a next level of investment to clear to W12 gauge for compatibility with major European freight rail routes that allow slightly wider container wagons. Network Rail is taking this as a starting point when structures in the network are renewed and in many cases this does not involve very substantial infrastructure over and above W10 gauge. From the demand side another potentially significant market driver is likely to come from alternative sourcing of the electricity supply industry (particularly from flows of imported coal).

Figure 38: Domestic Freight Transport: By Mode (GB data 1980-2008 includes HGV's and LGV's)



Enhancement of the network infrastructure is critical to a major expansion of freight on rail in the long term. In the shorter term more capacity can be achieved from technological innovation that allows expansion of the number of train paths to be created in the timetable and the use of faster and more efficient rolling stock. Considerable enhancements have been made in increasing the speed of freight trains and the conflict with faster passenger trains is generally diminishing. Freight trains have a timetabling advantage over local passenger services in not having to make regular stops. In some critical areas of the network additional sidings or the re-employment of branch lines can very effectively increase capacity where slower freight or passenger trains can be removed from the path of faster traffic.

As Plan 4 shows Staffordshire is placed at the centre of some important regional and national rail routes. The West Coast Mainline (WCML) crosses the County from the south-east to the north-west, in the same corridor as the Trent valley line (TVL), and is the most important route with over 50 freight trains per day in each direction. Other significant freight route links across the County are the Wolverhampton, Crane Street junction through to the WCLM and TVL at Stafford and from Water Orton and Kingsbury junctions through Wilnecote, Tamworth to Burton-upon-Trent and beyond to the north-east. The rail junctions north of Stafford at Norton Bridge on the WCML and Burton-upon-Trent on the Midland Mainline are particular hotspots with single directional flows of rail freight traffic of over 50 trains and 35 trains respectively on the busiest weekdays.

Staffordshire has no intermodal rail freight facility. The County has two active rail sidings at Wetmore in Burton-upon-Trent, handling steel, and at Rugeley Power Station, handling coal. Cockshute sidings in Longport, Stoke-on-Trent receives china clay. The rail network across the County allows scope for a freight terminal and the scale of regional and national logistics operations already provide an origin and destination market for freight transport.

The County is to some extent served by rail freight facilities at Hams Hall, (North Warwickshire) Birch Coppice (near Tamworth) and Hortonwood (Telford). The planned expansion of these facilities would generally have a positive impact for allowing more viable options to road freight movements in and out of Staffordshire.

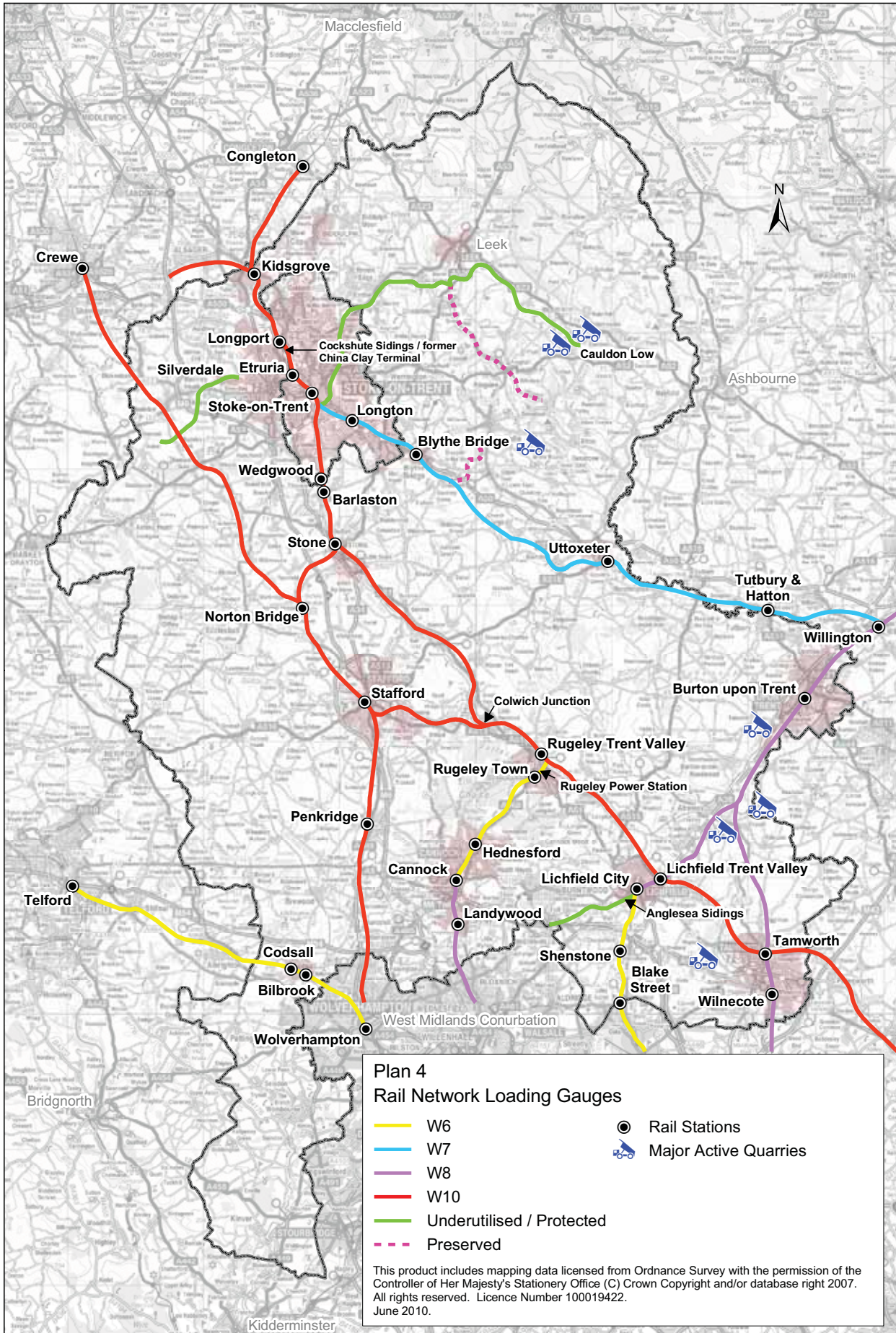
There is an image of the transfer of freight to rail as involving large scale expensive infrastructure. Although, national and international experience has tended towards increasing operational economies of scale much of the land-take associated with rail freight facilities is often for largely unrelated warehousing, storage and other road-based logistics activities. Infrastructure for freight transfer to rail can be relatively simple and low cost if substantial change to track layout and signalling is not required.

A number of opportunities exist within the County for both rail transfer 'hubs' that could serve wider existing logistics and warehousing activity and facilities for the handling and transport of minerals. An example of the former is the Pentolver depot in Churchbridge, Cannock on the Walsall-Rugeley rail line and the later the opportunity that would arise to transport cement and minerals from Cauldon Low by the re-opening of the Cauldon Low to Stoke rail line.

Related Actions and Priorities 19 and 20.



Plan 4 Rail Network Loading Gauges



Actions and Priorities

1 - as part of a wider review of the function and performance of the highway network, taking account of all traffic flows, assess the designation of road hierarchy below the primary network with due regard to the economic efficiency of the haulage industry and the environmental and social impact on communities of HGV flows. The assessment will have particular regard to the potential impacts on air quality and significant habitats. **[Ongoing]**

2 - work with local communities and the freight industry to consider areas for weight restriction on individual merit having particular regard to the impact and quantum of HCV traffic, the sensitivity of the area, the population effected, the level of access required and the availability of suitable alternative routes. In considering the use of Traffic Regulation Orders particular attention will be given to the potential impact of displacement traffic a designation might create and the impact on the area where HCV flow would be likely to increase. **[Ongoing]**

3 - acting as mineral and waste planning authority and through consultation with partner district local planning authorities promote the use of 'routing agreements' in relation to major generators of freight to minimise the impact of HGV traffic on local communities. **[Ongoing]**

4 - work with SATNAV system providers to improve the quality of information for the strategic routing of HGV's. **[Ongoing, increase priority]**

5 - promote and advocate through government, trade and manufacturer organisations that HGV compatible SATNAV systems with full height and weight restrictions information become mandatory for all new HGV vehicles. **[New priority]**

6 - ensure that freight and delivery issues are adequately addressed and prioritised in Travel Plans for major development proposals. **[Ongoing, increase priority]**

7 - with partner councils, the Highways Agency, the haulage industry and other organisations investigate and consider incentives to promote 'best practice' for freight operators in the County. **[New priority]**

8 - investigate, promote and encourage haulage and logistics operators to make best possible use of existing capacity, minimise empty vehicle running, and maximise co-operative working practices to reduce the unnecessary movement of freight traffic. **[New priority]**

9 - promote local food production, sourcing and delivery through retail associations, partner Councils and other organisations to reduce freight miles. **[Ongoing]**

10 - encourage and support the freight industry to promote best practice in HGV driver training, SAFED (DfT's Safe and Fuel Efficient Driving) and further fuel efficiency techniques. **[New priority]**

11 - with relevant partners including Staffordshire Police, adjoining authorities and the haulage industry trade bodies investigate options for a freight operator recognition scheme. **[New priority]**

12 - with partner organisations, Staffordshire Police and the haulage industry encourage awareness raising and training for cyclists, pedestrians and other vulnerable road users in relation to the operation of HGV's. **[Ongoing]**

13 - support and encourage the haulage industry to undertake innovative practice to increase awareness to cyclists, pedestrians and other vulnerable road users of the difficulties in the operation of HGV's and the limits to manoeuvring and driver visibility of other road users. **[New priority]**

14 - encourage and support the improvement of facilities of HGV parking areas particularly in the Staffordshire M6-A449, A5-M6 Toll and A38(T) corridors. **[Ongoing, increase priority]**

15 - encourage and support operators in the improvement of security of HGV parking areas to European (SETPOS) standards. **[New priority]**

16 - with local authority partners and the Highways Agency investigate and consider improvement of roadside signage across Staffordshire for HGV parking areas. **[Ongoing]**

17 - encourage local authority partners to favourably view planning applications from the private sector and make appropriate provision in Development Plans to provide for new or expansion of existing truck stops and service areas for HGV's particularly in the Staffordshire M6-A449, A5-M6 Toll and A38(T) corridors subject to environmental and residential amenity constraints. **[New priority]**

18 - with local authority partners, the Highways Agency and other organisations consider and investigate the provision of further public sector lorry parking and the potential for shared overnight use by HGV's of existing parking facilities (and proposed park and ride facilities) subject to environmental and residential amenity constraints. **[New priority]**

19 - with Network Rail, other local and regional partners and the private sector promote the appropriate provision of new and expansion of existing rail freight terminals in and close to Staffordshire with good access to the Primary Route Network and proximate to existing logistics activity. **[Ongoing, increase priority]**

20 - encourage the protection of land and facilities through the Development Plan process that could contribute to appropriate development or freight operations transferring from road to rail subject to environmental and residential amenity constraints and the development of local criteria-based policies. **[Ongoing, increase priority]**



Assessment Matrix

Actions and Priorities		Direction of Existing Trends		Influence of the County Council		Dependence on Partnership		Ease of Delivery		Cost		Effectiveness	
		Pos (+)	Neg (-)	Significant	Limited/Weak	Low	High	Easy	Challenging	Difficult	Low	High	Low
1 Network Review	[Ongoing]												
2 Traffic Regulation Orders	[Ongoing]												
3 Routing Agreements	[Ongoing]												
4 SATNAV Information	[Ongoing, increase priority]												
5 HGV SATNAV	[New priority]												
6 Travel Plans	[Ongoing, increase priority]												
7 Best Practice	[New priority]												
8 Empty Mile Running	[New priority]												
9 Local Food	[Ongoing]												
10 HGV Driving	[New priority]												
11 Recognition Scheme	[New priority]												
12 Road Safety Training	[Ongoing]												
13 Road Safety Training Best Practice	[New priority]												
14 HGV Parking	[Ongoing, increase priority]												
15 HGV Parking Standards	[New priority]												
16 Parking Signage	[Ongoing]												
17 Planning Applications	[New priority]												
18 Shared Parking	[New priority]												
19 Rail Terminals	[Ongoing, increase priority]												
20 Rail Safeguarding	[Ongoing, increase priority]												