

BRISTOL CITY COUNCIL

**Place Scrutiny Commission
9 April 2015**

Report of: Alistair Cox, Service Manager – Strategic City Transport

Title: Freight in Bristol

Ward: Citywide

Officer Presenting Report: Melanie Bufton, Transport Planner

Contact Telephone Number: 0117 9036815

RECOMMENDATION

- Consider report and background information.
- Consider options for developing actions to address issues.

Summary

Whilst road freight is necessary to a successful economy, it brings with it several issues in terms of air quality, congestion, noise, wear and tear on road surfaces, environment and safety of vulnerable road users. Other localised problems are also experienced. Trends indicate that the use of goods vehicles is expected to grow which will exacerbate these issues.

Bristol has a Freight Consolidation Centre which is held as a good example nationally and abroad, however its impact is limited by its scale. We need to consider all options to ensure issues associated with road freight are tackled.

1.0 Policy

West of England Joint Local Transport Plan (JLTP3 March 2011) 2011-2026
(Appendix 1)

JLTP3 Freight Supplementary Document, Refresh Document 2013 (Appendix 2)

Bristol Development Framework Core Strategy, adopted June 2011. Policy

2.0 Consultation

Internal / External

Internal and External consultation would take place as part of developing any freight policy or strategy. Views will be sought from external parties including but not limited to the following; the Road Haulage Association, the Freight Transport Association, Business West, Business Improvement Districts, Police, local bus operators.

3.0 Context

Air quality and congestion are significant issues in Bristol. Road freight is critical to the economy of the country and the city and whilst only makes up 3% of traffic it has a disproportionate impact on congestion and air quality according to international evidence.

Current conditions

Access of vehicles to Central Bristol is largely unregulated, allowing relatively easy access for any type of goods vehicles to make deliveries.

There are some restrictions around the city which fall into the following categories:

- **Weight restrictions** can be for **environmental** or **structural** reasons. Environmental weight restrictions are in place for amenity reasons, eg to deter HGVs from using residential streets. Structural weight restrictions are in place where a structure may weaken, collapse or fail if too great a weight is placed up on it.
- **Width or length restrictions** are in place where there is a physical constraint so that vehicles of a greater width or length would be at risk of causing damage or not being able to pass.
- Where **loading restrictions** are in place for waiting vehicles whilst loading and unloading. If it is desirable to keep space for loading and unloading vehicles, bays can be provided where there is a requirement, ie retail or commercial concentration creates demand. Loading bays are created by way of a Traffic Regulation Order which includes a formal consultation process inviting comments.
- Broadmead, Corn St and Small St, where alternative arrangements are in place for vehicles to make deliveries. Bollards are in place to restrict access.

4.0 Freight Issues

The 'last mile', where goods travel to their final destination in the city centre is considered a significant issue in terms of air quality, congestion, noise, wear and tear on road surfaces, environment and safety of vulnerable road users.

- **Pollution:** Freight vehicles, due to their engine size and currently being predominantly diesel powered (diesel is much worse in regards to emissions of NOx and Particulates to air) contribute to a disproportionate share of poor air quality when compared to the number of freight vehicles on the road. Freight transport generates between 20-60% of local transport based pollution (depending on the pollutants considered), *NCFRP Report 23, Synthesis of Freight Research in Urban Transportation Planning, 2013*.
- **Congestion:** Due to vehicle size, poor loading and use of inappropriate route, for e.g. when blocking a running lane or bus lane. Whilst we have reports of this happening there is very little robust data to establish the scale of the problem.
- **Noise and vibration:** Although the international evidence base is poor, there are many reports of negative impact from HGVs along busy roads. This is a particular issue for deliveries made at night, when residents' sleep can be disturbed.
- **Wear and tear on road surfaces** due to vehicle weight, especially if turning using power steering.
- **Safety:** Vehicles over 3.5t only account for 2.5% of all accidents (compared to 5% of traffic mileage). Goods vehicles are involved in a small share of accidents in cities compared to the percentage of miles travelled, but the accidents involving them are serious.
- **Other more localised issues**, eg those reported to Neighbourhood Partnerships, :
 - Unsuitable vehicles have been used to make deliveries resulting in blocked roads
 - Anti-social behaviour from HGVs parking in residential streets rather than using the lorry park as experienced in Avonmouth (Appendix 4)
 - Issues experienced by emergency vehicles specifically related to freight vehicles are not recorded in sufficient detail to quantify (Avon & Somerset Police, Corporate Communications).
 - Delivery vehicles to households, for example on-line shopping deliveries, or deliveries of white goods, create congestion by blocking roads. Regarding deliveries of electric and electronic equipment, which includes white goods, to avoid an additional goods vehicle trip a retailer may take back the old appliance in the

same vehicle, however whilst legislation is in place requiring consumers to dispose of any electric and electronic equipment in the correct manner (The Waste Electric and Electronic Equipment (WEEE) Regulations 2013), there is no legal requirement for retailers to collect items. For other bulky items there is no legal obligation for retailers delivering new items to collect old ones using the same vehicle. In some circumstances it would be considered unhygienic to have new and old items in the same vehicle, eg mattresses.

5.0 Comparison of Bristol volume/percentage of lorries with core cities in UK and abroad and expected growth

According to DfT statistics, Heavy Goods Vehicles on major roads in Bristol accounted for 30 million vehicle miles in 2013, or 5% of all traffic. Light Goods Vehicles accounted for a further 83 million vehicle miles (14% of all traffic).

As shown in Table 1, Bristol has the second highest percentage of goods vehicles on its major roads of any of the core cities.

Table 1: Core city comparison

Core Cities	%HGV	%LGV	%Goods Vehicle
Leeds	7%	14%	22%
Bristol	5%	14%	19%
Birmingham	6%	13%	19%
Glasgow	6%	13%	19%
Sheffield	5%	13%	18%
Cardiff	5%	12%	17%
Newcastle	3%	13%	16%
Liverpool	3%	12%	15%
Nottingham	3%	12%	15%
Manchester	4%	11%	15%

The share of goods vehicles in European studies is broadly the same as the UK. A major EU study, BESTUFS, reported that 1/3 of goods trips are related to heavy freight transport (>3.5t) and 2/3 of trips are less than 3.5t. The study estimated 12% of all urban trips are deliveries by LGVs.

Table 2: EU comparison¹

EU Comparison	%Goods Vehicle
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¹ Intelligent Energy Europe (2014) Cyclelogistics – moving Europe Forward

Berlin	20%
Graz	20%
Bristol	19%
Urban	
Switzerland	15%
Stuttgart	15%
Urban	
France	9-15%

Future growth expectations with supermarkets/general on-line.

Figure 1 shows the change in goods vehicle traffic on major roads in Bristol since 2000. HGV traffic dropped by 17% between 2000 and 2013. A large percentage of this drop may have been caused by the recession in 2008/9. Between 2010 and 2013 HGV traffic rebounded by 10%, albeit this is still significantly below pre-recession levels.

On the other hand, Light Goods Vehicle traffic has grown by 29% since 2000 and 12% since 2010, with only a very minor drop during the 2008/9 recession.

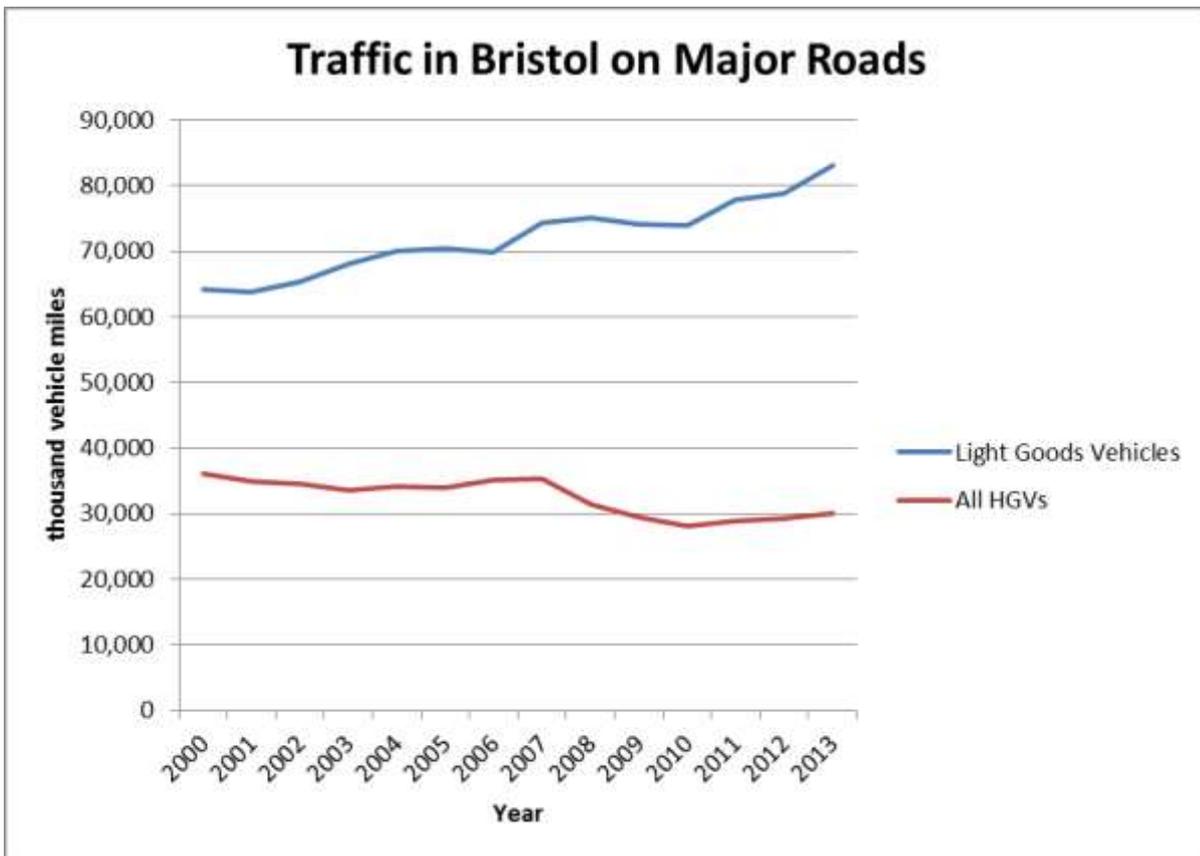


Figure 1: Growth in goods vehicle traffic on major roads

The Department for Transport estimates¹ that between 2010 and 2040 HGV traffic will increase by 18.8% and LGV traffic will increase by 79.6%. As shown in Figure 2, this broadly continues the recent trends seen in Bristol.

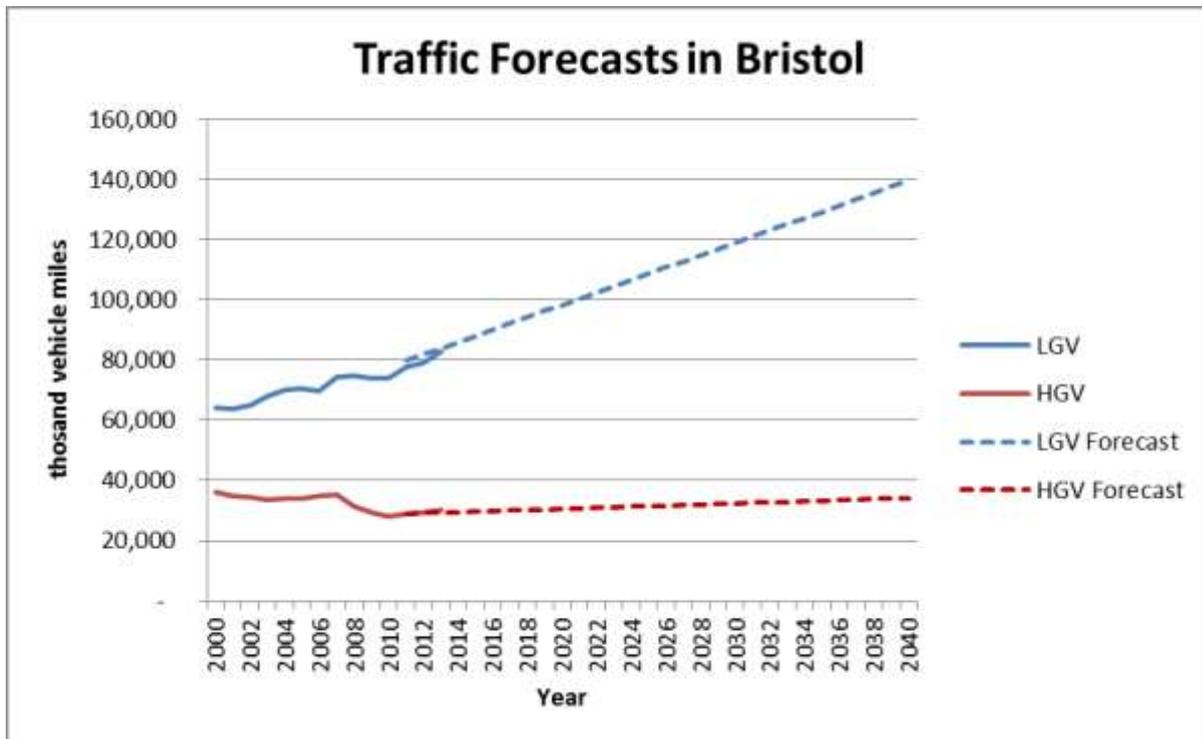


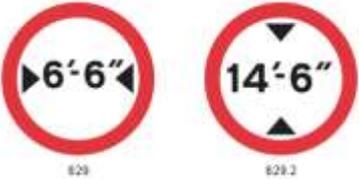
Figure 2: Forecast growth in goods vehicle traffic (DfT Central Forecast)

6.0 Enforcement

The table below sets out who is responsible for enforcing different restrictions in place affecting freight vehicles.

Channel	Responsible for Enforcement	Notes
Weight Restriction – Structural 	Police	Restrictions in place as structure may fail or collapse
Weight Restriction –	Police	Restrictions in place for

¹ DfT (2013) Road Traffic Forecasts 2013 - Central forecast. All Roads

<p>Environmental</p> 		<p>amenity reasons, eg to deter HGVs from using residential streets except for access. For example TRO 7913, provides for an environmental weight limit in the St Werburghs area (NB it was varied in 1990 to replace the 3 imperial tons unladen weight classification with 7.5 metric tonnes gross vehicle weight.</p>
<p>Width or Height Restriction</p> 	<p>Police</p>	<p>Whilst this is enforceable by Police there is an element of self-enforcement as if a vehicle chooses to ignore restrictions it may get stuck due to physical constraints</p>
<p>Length Restriction</p> 	<p>Police</p>	<p>Whilst this is enforceable by Police there is an element of self-enforcement as if a vehicle chooses to ignore restrictions it may get stuck due to physical constraints</p>
<p>Obstructing the Highway</p> 	<p>Police</p>	<p>This applies to any vehicle physically blocking the street.</p> <p>This would be applicable to on-line delivery vehicles blocking a road.</p>
<p>Loading Restrictions</p> 	<p>Bristol City Council civil enforcement officers</p>	<p>Bristol City Council civil enforcement officers can take action against contraventions of traffic orders that restrict loading or unloading, using the powers available to the Council under the Traffic Management Act 2004.</p>
<p>Vehicles not correctly parked in loading bay</p>	<p>Bristol City Council civil enforcement officers</p>	<p>The Traffic Regulation Order (TRO) which sets out the restrictions would include a provision that the vehicle must be within the bay,</p>

			<p>however there are exceptions which would be set out in the TRO</p>
<p>Construction Management Plan or Construction Method Statement secured through Planning process by way of a Planning Condition. To restrict vehicles whilst construction is underway</p>	<p>Bristol City Council Planning Enforcement</p>	<p>The approved plan / statement must be adhered to throughout the construction period. In the interests of safe operation of the highway.</p>	
<p>Servicing Management Plan secured through Planning process by way of a Planning Condition. A longer term strategy for managing servicing, eg only small vehicles can be used.</p>	<p>Bristol City Council Planning Enforcement</p>	<p>When a planning application is received, the final occupant is not always known, making it difficult to know what vehicles will be used. However colleagues have learned from experience and have utilised the Servicing Management Plan accordingly</p>	

7.0 Freight Consolidation

Bristol has a Freight Consolidation Centre (FCC) which is recognised as an example of best practice both nationally and with EU partner cities. We regularly receive groups on study tours. Freight Consolidation is where deliveries are made to an out of town consolidation centre and then grouped onto dedicated delivery vehicles for onward delivery.

Benefits of consolidation

- Improve air quality – reduce emissions and congestion
- Benefits achieved – improve safety of vulnerable road users eg pedestrians & cyclists, cycle eye, noise reduction, improve environment, reduce wear and tear
- Most efficient vehicles used to deliver to the FCC and therefore do not need to come in to the central area, ie large HGVs, not electric due to longer mileage
- Most suitable vehicles used for the ‘last mile’, ie smaller vehicles best suited to road layout, full vehicle making lots of smaller deliveries to suit end user requirements
- Deliveries can be made by low emission vehicles or ultra-low emission vehicles because of the shorter distances involved.

Bristol and Bath Freight Consolidation Centre was initially set up as a pilot in May 2004 to help alleviate issues associated with freight. The combined operation supported jointly with BANES has been serving Bristol and Bath since January 2011.

Deliveries are made to an out of town consolidation centre, currently located in Avonmouth, and then grouped onto dedicated delivery vehicles for onward delivery. Currently two electric vehicles are in operation, with Euro 5 specification vehicles to be used as a backup.

This operation results in a reduction of the number of delivery vehicles by 80% on average. For the month of February 2015, the scheme has directly saved 918 kg CO₂, 30kg NO_x, 1kg PM₁₀s, 6kg CO in Bristol. 530kg of cardboard and plastic has also been collected to be recycled.

Since 2004 it has directly saved some 323,000 lorry kilometres with the resulting reduction in emissions of 46 tonnes CO₂, 1,469kg's NO_x, 292kg CO and 45kg's PM₁₀'s. Businesses also have waste and packaging material collected which has meant 58 tonnes of cardboard and plastic being recycled.

Since 2011 use of the scheme has steadily increased from 55 to 93 businesses in Bristol as shown in Figure 3. Use of the scheme is estimated to be < 1% of HGV/LGV trips into Central Bristol

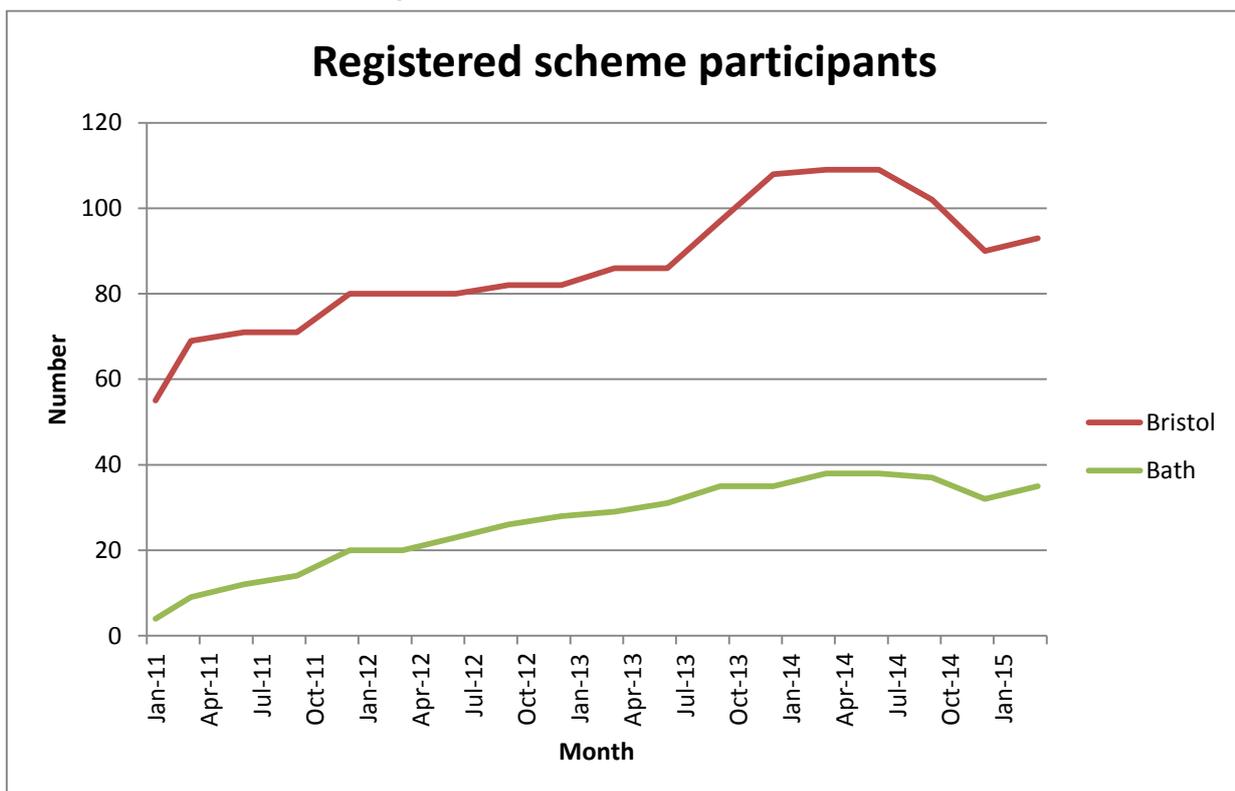


Figure 3. Registered scheme participants - Bristol

8.0 Potential examples of initiatives

- Council corporate use of freight consolidation (for stationery and cleaning products etc.) Camden trial up to April 2015
- Deliver to freight consolidation centre and use cycles for 'last mile', eg Last Mile Leeds and DHL
- Micro-consolidation centre using cycles to deliver the office supplies to individual businesses in London
- Light EVs in combination with urban consolidation centres eg Gnewt Cargo, London and Cargohopper, Netherlands
- Use rail to deliver into Central area, and then make onward journeys by more appropriate vehicles and cycles eg Colas Rail and TNT Express Central London freight trial, Monoprix rail freight deliveries into central Paris
- Use of water transport eg 'Beer Boat', Netherlands
- Restriction zones and charging depending on emissions, eg Budapest
- Customer collection points to reduce need for vehicles to make home deliveries, eg Network Rail has invested £24m in the co-owned online shopping collection and returns business, Doodle, and plans to launch parcel shops at more than 300 stations. Customers can use the shops to collect and return parcels. Many of the parcel shops will feature changing rooms to enable customers to try on any clothing purchases before deciding whether to keep them. The parcel shops are open to all retailers and parcel delivery companies to use, with brands such as online clothing store ASOS and New Look already on board. This open access approach allows consumers to combine collections and returns from multiple retailers into one trip, at a time that them or coincides with an already planned journey

9.0 Future options for Freight Management in Bristol

1. Re-establish the Freight Quality Partnership, as referred to in the JLTP3 Freight Supplementary Document (Appendix 2). A Freight Quality Partnership was in existence until approximately 2011 and brought together the four unitary authorities with interested organisations and businesses, including the Bristol Chamber of Commerce, the Freight Transport Association, the Road Haulage Association and major retailers, distributors and freight handlers.
2. Develop freight strategy / Sustainable Urban Logistics Plan
3. Improve existing freight consolidation scheme
 - a. Expand into areas other than retail, ie construction (Enterprise Zone, Arena), office & food
 - b. Bristol City Council to use the scheme
 - c. Bristol City Council as landlord to oblige tenants to use scheme eg St Nicholas Markets
 - d. University of Bristol to use the scheme
 - e. Replace FCC backup vehicles with ULEVs
 - f. Using best practice consider other models for use of FCC and if suited to Bristol, eg using micro consolidation centres and cycles

- g. Added Value Services, i.e. Third party warehousing with on-demand delivery, Park&buy, Specific solution for “self supply”, Special urban quick deliveries, Out of hours deliveries
- 4. Access restrictions eg Bath
- 5. Queuing restrictions eg London
- 6. Ultra Low Emission Vehicle (ULEV) Zone trial in Old City. Bristol, alongside Turin, is leading the Arcadia consortium to secure CIVITAS funding to deliver a project 2016-2020 that will see ULEV use promoted in the Old City. A trial will identify freight needs of businesses and the freight consolidation scheme will be tailored to cater for their requirements using ULEV. If found to be successful, the concept could be rolled out to other parts of the City.
- 7. Rail freight in Bristol – investigate viability
- 8. Investigate options for water transport
- 9. Micro consolidation centres in the central area
- 10. Freight map
- 11. Improved information and signage
- 12. Quiet deliveries, off peak, night time deliveries

Proposal

N/A

Other Options Considered

N/A

Risk Assessment

N/A

Public Sector Equality Duties

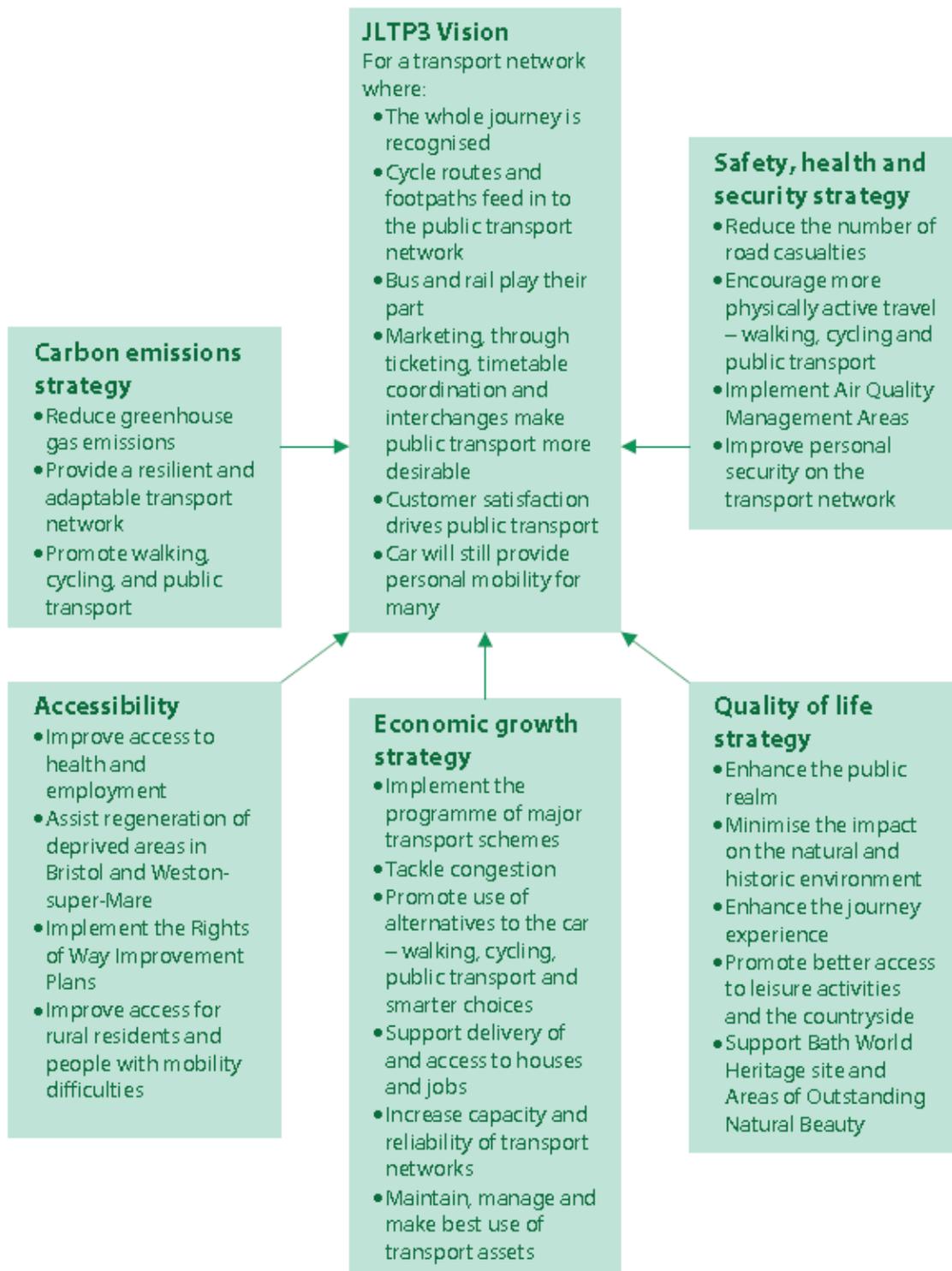
N/A

Legal and Resource Implications

N/A

Scrutiny Report

Figure Five : Joint Local Transport Plan 3 2011 to 2026



Freight Supplementary Document

1. Vision

Our vision is to work in partnership with the freight industry to achieve:

- the reliable and efficient movement of goods on appropriate routes.
- assist modal shift to rail and coastal shipping.
- minimise the adverse impact of heavy goods vehicles on safety, air quality and the quality of life for those living and working in the area.

2. Strategy

2.1 Over the life of the Joint Local Transport Plan (JLTP3) 2011 to 2026 our freight strategy is underpinned by three themes:

- Influencing the movement of goods through Local Plans and development management process.
- Promoting use of rail and coastal shipping for freight in preference to road transport.
- Managing parking and arrangements for loading and unloading of goods.

2.2 Crucial is the efficient and safe movement of freight by road that minimises the impact on communities and the environment.

See also the Network Management Supplementary Document.

F1 Engage with the freight industry, neighbouring authorities and local communities

- Work with the Highways Agency, Network Rail and the freight industry to deliver our Freight strategy.
- Focus on freight issues that directly concern our area through freight quality partnerships.
- Continue to work with business interests, transport user groups, parish councils and local communities.



F2 Promote the use of the rail network for freight

- Work with Network Rail and the logistics industry to promote the use of the rail network for freight, acknowledging the need for new infrastructure to cater for both increased freight and passenger demands.
- Support the proposed designation of the Great Western Main Line through Bristol Parkway and the cross country line to the Midlands as 'core trunk routes' in the Strategic Freight Network and the Great Western Main Line through Bath Spa and Bristol Temple Meads as a 'diversionary route'.
- Support Network Rail's Five Year Business Plan proposal to invest £206m to fund improvements on the Strategic Freight Network.
- Sites for rail freight facilities identified in our Local Plans will continue to be safeguarded where appropriate.

See also the **Public Transport Supplementary Document**.

F3 Promote the use of coastal shipping for freight

- The new container terminal proposed by the Port of Bristol Company represents a major investment in freight infrastructure in the West of England.
- Work with the Port, Network Rail and the Highways Agency on

maximising the amount of freight that can be transported by rail or coastal shipping rather than by road. The importance of the port for the economy is recognised along with an understanding that road freight has a significant role to play.

- Continue to seek funding for a new passenger rail service between Portishead and Bristol as part of MetroWest Phase 1 freeing up capacity at M5 Junction 19.

F4 Ensure the needs of freight and logistics industry are considered when carrying out network management duties

- Preparation of network management plans, including defining routes for abnormal loads, priority routes for winter maintenance and diversionary routes when motorways and other key routes are affected by accidents and incidents.
- Reviewing the road hierarchy to better reflect the nature of each road and its suitability for current and future lorry movements.

See also the **Network Management Supplementary Document**.

F5 Pursue opportunities to use ITS to improve management of freight on the network

- Continue to publish all street works on the National road works portal, ELGIN.

- Installation of additional traffic information Variable Message Signs along key corridors, in strategic positions and at key times to direct traffic away from road closures, incidents or already congested areas.

F6 Ensure delivery requirements are taken into account on roads in city centres and promote greater use of freight consolidation facilities

- Promote greater use of the Bristol & Bath freight consolidation centre based at Avonmouth and work with retailers and the freight industry to move towards a more sustainable business model by providing value added services such as remote storage.
- Keep under review unloading arrangements and delivery times in our city and town centres.
- Work with freight quality partnerships to take account of delivery requirements in the re-modelling of roads in these centres, including those proposed in our major schemes programme.
- Look at the feasibility of giving greater priority to heavy goods vehicles (HGV) drivers on parts of the network where freight movements are particularly critical and hampered by private car traffic, for example traffic lanes in which only HGVs, buses or coaches might be permitted.

F7 Investigate opportunities for lorry parking

- Work with freight quality partnerships to monitor the demand for lorry parking in the West of England, taking account of best practice guidance developed as part of the DfT strategy.
- Assess the potential for using park and ride sites, operating bases and other available land and infrastructure for lorry parking, taking account of future developments at the Port of Bristol.



Delivery Strategy

Policy BCS10

The council will support the delivery of significant improvements to transport infrastructure to provide an integrated transport system, which improves accessibility within Bristol and supports the proposed levels of development. In particular it will support, subject to environmental impact assessment where appropriate:

1. The implementation of the Greater Bristol Bus Network.
2. The delivery of transport infrastructure improvements, including:
 - Rapid transit routes (Ashton Vale to Emerson's Green and Hengrove to the North Fringe, all via the city centre);
 - Rail improvements, including the following prioritised schemes:
 - ▷ The reopening of the Portishead rail line for passenger use; and
 - ▷ The Greater Bristol Metro Rail Project;
 - And the following potential long term schemes:
 - ▷ The reintroduction of a local passenger rail service between Avonmouth and Filton (Henbury Loop);
 - ▷ New rail stations, for example at Portway Park and Ride, Ashton Vale and Ashley Hill;
 - ▷ And other passenger rail stations where appropriate;
 - New and expanded Park and Ride facilities:
 - ▷ New site on the M32; and
 - ▷ Expansion of existing Park and Ride sites where appropriate;
 - South Bristol Link;
 - Callington Road Link; and
 - A network of routes to encourage walking and cycling.
3. Making the best use of existing transport infrastructure through improvement and reshaping of roads and junctions where required to improve accessibility and connectivity and assist regeneration and place shaping.
4. Appropriate demand management and sustainable travel measures.

Safeguarding of Routes and Facilities

Land required for the implementation of transport proposals will be safeguarded to enable their future provision. Corridors with the potential to serve as future routes for walking, cycling and public transport will also be safeguarded. Appropriate existing transport facilities such as transport depots will be safeguarded where required.

Development Principles

Without prejudice to the implementation of the major transport schemes listed above, proposals will be determined and schemes will be designed to reflect the following transport user priorities as set out in the Joint Local Transport Plan:

- a) The pedestrian;
- b) The cyclist;
- c) Public transport;
- d) Access for commercial vehicles;
- e) Short stay visitors by car;
- f) The private car.

The needs of disabled people will be considered within all of the above headings.

Development proposals should be located where sustainable travel patterns can be achieved, with more intensive, higher density mixed use development at accessible centres and along or close to main public transport routes. Proposals should minimise the need to travel, especially by private car, and maximise opportunities for the use of walking, cycling and public transport.

Developments should be designed and located to ensure the provision of safe streets and reduce as far as possible the negative impacts of vehicles such as excessive volumes, fumes and noise. Proposals should create places and streets where traffic and other activities are integrated and where buildings, spaces and the needs of people shape the area.

Crackdown on lorry parking in Avonmouth

Release date: Thu, 19/03/2015

Bristol City Council has launched a crackdown on HGVs parking overnight in Avonmouth, following complaints from local residents.

The Avonmouth and Kingsweston Neighbourhood Partnership set up Operation Sleep to try and prevent lorry drivers from causing a nuisance in the area.

The project took place over four evenings during February and March, with a focus on Portview Road and Gloucester Road.

The issue of HGVs parking overnight in Avonmouth has been a problem for a number of years.

The three key reasons for this were identified as being:

- Old and faded signage (potentially not clearly stating the law)
- Lack of Traffic Regulation Order (the legal document required to enforce the law)
- Easy access to facilities such as pubs, takeaways and shops without paying for over night parking.

In light of this, the signs in and around the village were replaced and improved. A Traffic Regulation Order (TRO) was also put in place to enable the appropriate authorities to legally deal with the issue.

During the operation, any vehicle over 7.5 tons entering those key roads was targeted with education material regarding the law and information regarding the lorry park in Avonmouth.

As a result, 15 vehicles were approached, of which six were sent for weighing, nine letters were sent to operators of the vehicles and two penalty charge notices were issued to cars parked on double yellow lines.

Assistant Mayor for Neighbourhoods, Daniella Radice, said: "This is a great example of how Neighbourhood Partnerships, made up of residents, council officers and councillors, work together to improve the quality of life for the community."

"There is a lorry park available in Avonmouth, so there are alternatives for these drivers who are looking for somewhere to sleep for the night

"We will continue to monitor this situation, and work with the people of Avonmouth, to make sure these HGVs are not allowed to cause a nuisance in the area."

This operation will also involve continued conversation with businesses on Portview Road to advise their drivers not to use the village for stopping overnight.

The partners involved in the operation included Avon and Somerset Police Officers and PCSOs, a Bristol Port Police Officer, the Bristol Vehicle and Operator Service Agency and officers from Bristol City Council Parking Enforcement, Street Waste Management and Neighbourhood Management.

Short link: <http://www.bristol.gov.uk/node/26533>

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