Chapter 3: Strategic Issues

3.1 The Networks

The Welsh Context

The historic and on-going effects of geography and topography cannot be ignored when considering the transport networks in Wales. In particular, the road and rail networks closely follow the hilly terrain, as well as reflecting the ebb and flow of economic development of the country, and their development reflects a combination of historic economic requirements over the years.

Hence, although there are main road and rail routes running close and parallel to the north and south coasts of Wales, in the rural areas of Mid and North Wales networks are more limited, as they generally follow the paths of rivers through valleys rather than crossing upland areas.

In more urban areas, such as the South Wales Valleys, the network of roads, railways and ports was initially developed to serve the industrial needs of the 18th and 19th centuries. The road and rail networks follow the Valleys into the city centres and port areas of Newport, Cardiff and Swansea. Substantial changes have occurred in more recent years with increases in the amount of road infrastructure, though even today links between the Valleys themselves are sometimes difficult. There have been significant reductions to the rail network, whereas much of the early port infrastructure remains, albeit in many cases exceeding the operational requirements of the 21st century.

The road network is the most extensive and comprehensive transport network in Wales, and hence the most flexible individual mode for freight. It is of particular importance to consider that the road network provides the basic connections for most potential and existing freight users, as well as at ports and rail terminals. For many places, and in particular much of the rural areas of Wales (and especially mid-Wales), the road network offers the only freight transport option, and furthermore is not always well-suited to the needs of heavy freight movements. For instance, two elements of the economy of rural Wales that routinely require freight transport include forestry and agriculture. Livestock movement in particular has increased as a result of less abattoir facilities being available.

Existing rail terminals generally have good road connections, though adding more terminals could reduce the potential problems caused by the ‘final mile’ of a multi-modal movement; the first or last leg of a journey at the origin or final destination. Apart from some bulk commodities, origin and destination points of freight within Wales are often not both directly rail-connected. Ports in Wales are reasonably well-served by road and have generally adequate rail connections, although there is scope for development.

Connections between modes are important when planning the development of terminals, whether new or existing. For example, in developing a port or inter-modal terminal, the road, rail and shipping links should be considered for freight.

To illustrate the networks in context, population densities in Wales are shown in Figure 3.1, with the main transport networks themselves in Figures 3.2-3.4.
**Relationship with England and Ireland**

Transport networks within Wales must not be considered in isolation. Significant road and rail traffic moves between Wales and England, including traffic originating in both Wales and England, as well as elsewhere. The networks reflect these linkages with, for example, Wales’ motorway and key parts of the trunk road network being very much an extension of the English network, with the M4 linking South Wales to London and the A55 running along the North Wales coast from Holyhead to the motorway network on Merseyside.

There are also key international road freight movements between Ireland and the UK and the rest of Europe, a significant amount of which passes through Wales in transit. For instance, some 240,000 road freight vehicles were transported to/from Ireland through Welsh ports in 2006 (2-way, including unaccompanied trailers). UK and Irish-registered vehicles alone carried some 1.8 million tonnes of freight, of which around 12% came from or was destined for Wales. Almost 75% of freight vehicles (some 172,000) used ports in North Wales, with the majority of these travelling through Holyhead.

In a similar way, the main railway lines in Wales were historically built as extensions of the Great Western Railway and the London & North Western Railway (now the West Coast Main Line). As a result of network rationalisation over the years, all rail movements between North and South Wales have to use lines in England, most direct movements using the Marches line through Hereford and Shrewsbury. All rail freight (and passenger) operators in Wales run services between Wales and England, and a significant amount of rail freight in Wales travels to/from places in England and beyond.

The UK’s main deep sea ports of Felixstowe and Southampton are in south-east England and, as a result, much Welsh international maritime traffic (often originating in the Far East) reaches Wales via England, mainly by road but also an amount by rail to the Wentloog International Freight Terminal.

The relationship between the networks of England and Wales is thus both a matter of historical development as well as modern day usage, and should be taken into account in planning within Wales. Consideration of rail network improvements in Wales needs to take into account proposals in England, and vice versa.

**Road User Charging**

A key future issue facing freight transport in Wales, and indeed the wider transport of goods and people throughout the UK, is charging for road use. At present, charges are only directly levied for discrete sections of the road network, generally with specific reasons for charging. Charges are typically higher for goods vehicles than passenger cars, with the highest charges for the largest vehicles.

Most current charging schemes are stuarial crossings (including the Severn crossings), where revenues are used to pay costs of development through private concessions or local authority mechanisms. More recently, schemes such as the M6 Toll, an alternative to the M6 through the West Midlands and London congestion charge, have levied charges for using other sections of the road network. A number of similar schemes are being considered.

The DfT is currently leading work on national road pricing for the UK as a whole, which could cover all roads at all times. The idea behind this sort of scheme would be to spread traffic more evenly...
Strategic Issues

One Wales: Connecting the nation - The Wales Freight Strategy

across the network, address congestion and environmental problems, and remove boundary issues. This approach could be applied in addition to or including a restructuring of motoring taxation. As a result of this, the proposed Distance Based Charging (DBC) scheme for goods vehicles has been shelved pending further work on the national charging system for all vehicles.

Complementary nature of the modes

In considering modes of freight transport there can be a notion that one is superior in some way to another. Some products have a ‘natural’ mode such as refrigerated goods for a supermarket on road, bulk coal to power stations on rail, or scrap steel by sea. However few rail or sea freight journeys are completed using only a single mode, though there are exceptions for (particularly) bulk commodities.

Goods arriving in Wales by sea or rail are often taken by road to their final destination. Likewise, freight originating in Wales may need a road leg to connect to a rail-head or port to complete its journey. As the focus on sustainable transport continues it is important to note that a short road leg may be necessary and complementary to a longer journey by rail or sea.

To get the most from the natural advantages of each mode, consideration of the need for efficient interchange is required; inter and intra-modal interchange is just as important for freight as for passengers. Modal transfers in some cases may be direct, for instance when a maritime container is transferred directly between ship, truck and train, but in other cases may involve intermediate storage or re-packing (for instance break-bulk activities). Inter-modal facilities within Wales need to be properly equipped to allow these transfers to take place, or there is a risk that movements will take the most ‘convenient’ mode (often road) for the whole journey, rather than incorporating sustainable modes in the journey.

3.2 The Freight Industry

There are a number of issues affecting the freight transport industry as a whole, the impacts of which can be observed or felt across all of the modes.

Freight – the forgotten service

There is a risk that transport planners and politicians focus on the needs of passenger transport to the detriment of freight. The profile of the freight transport industry is low. There appears to be a distinction in public perception between the negatively viewed ‘freight’, largely based on sight of lorries (passing through towns and villages or judged to ‘delay’ journey progress for car drivers), and the more positively viewed ‘shopping’ or ‘utilities’ (such as heat and light), which will use that same ‘freight’ for some of its delivery. There is consequently a need to raise the profile of freight as being essential in a working and healthy economy, rather than something to be sidelined, and segregated away from people in both urban and rural areas. There is need to understand the impact of freight traffic on a working and healthy economy.

Who is the freight customer?

In the passenger transport business, it is readily possible to identify the customer. There are essentially two elements; the ‘customer’ who pays and the ‘customer’ who travels, and more often than not, these are one and the same person. The customer of a freight transport service is more difficult to identify. In transporting freight, a customer pays for the transport service, but it is the goods that actually travel. Furthermore the ultimate customer may be:
a product manufacturer;
• another business user of the goods, such as a retailer or assembler of components;
• the end customer for the goods being transported; or
• a logistics and transport provider working on behalf of one of the other three categories.

Each of these ‘customers’ may place a different value on the key variables of time, cost and quality of the transport. For example, a retailer who operates with limited stocks in stores may regard on-time reliability of freight as fundamental. Perishable goods may have a greater requirement for speed of transfer. However, someone buying marble tiles may consider the quality and condition of the product on arrival to be more important than the length of time taken, though might also need delivery at a specified date and time to fit in with building schedules, thus also needing high reliability.

The costs of transport are typically passed on to a supplier or buyer of the goods, albeit not necessarily directly identified. For instance, the end customer for any product will seldom know how much of the price they pay for the product is made up of transport considerations, or what modes of freight transport are used.

**Modal choice in freight**

Understanding how the mode of freight transport is chosen is also important. Overall, an EU study of Freight Integrators (September 2003) identified that transport decisions are typically taken firstly on price, secondly on timescale, and thirdly by journey time and reliability. Choice or preference for a particular transport mode is not usually part of the decision.

However, notwithstanding that in some places there will be restrictions on the availability of options (such as alternatives to the road network in rural areas), many ‘decisions’ on mode are not active decisions at all, but are passive decisions of habit and to ‘do what happened last time’. This may be because of contracts with existing partners, or simply a form of inertia because of the convenience and effectiveness of previous or existing arrangements. The customer of the transport service will also generally have an idea of what transport costs are affordable, based on an historical view of ‘what it cost last time’.

When a new freight movement is identified, a mode-choice decision may be made. However, even then, in many instances the ‘choice’ is often based on extending previous transport patterns, or using existing partners. For example, if a new delivery point ‘B’ is 100km further away from base than a current delivery point ‘A’, the customer is intrinsically prepared to pay a proportional amount more based on the cost of delivering to ‘A’ using the same method. Hence, the benchmark, and thus often the decision, is to place this extended movement with an existing transport partner (who are unlikely to vary the current mode of transport).

If there is a specific decision to change mode of transport, that decision may then not be immediately implemented. The EU Freight Integrators study also found that, for an existing freight movement, it can take 6 to 12 months to make a change in the mode of transport used. Hence it is a considered view that a new transport service needs at least three years of operation to reach a stable level of traffic.

**Marketing and information distribution**

Marketing freight transport can be a challenge given a habitual price-driven market that is slow to change. In price-driven consumer markets there is great transparency on product prices, but this is
not the case in the freight transport market. Freight transport pricing is generally kept confidential allowing providers to negotiate at the margins and transparency is limited.

This means that for transport operators, in whatever mode, getting information to new and potential customers can be difficult. Marketing and business development is often focused on existing routes and/or current customers, rather than developing genuinely new business. Potential customers often need to get in touch with service providers themselves. Further details of this sort of corporate behaviour can be found in the report: ‘Wales and the Atlantic Arc: Developing Ports’ (WTRC 2006).

There are agencies which can help with general or mode-specific marketing and information distribution, such as the Rail Freight Group. However, providing targeted information is difficult as, for example in the rail industry, a complex and generally bespoke set of agreements is needed to ensure provision of locomotive and wagons, train paths, and terminal facilities and handling at either end of a journey. All of these can affect the price, which is the key factor in decision-making. Rail freight operators carry out their own marketing activities, typically focussed on commodity categories such as coal or steel, rather than in a specific geographic area such as Wales.

There is scope for better information provision on the sorts of facilities and services for all freight transport services, but the deciding factor of price is likely to remain individually negotiated.

**Logistics approach and distribution networks**

As many companies have sought to reduce their storage and inventory levels, as well as transport costs, there has been a trend towards an ‘end-to-end’ approach, using logistics companies to manage the inventory from component elements to final delivery. This has led to changes in industry structure with some companies previously specialising in a single mode becoming multi-modal logistics specialists, as they seek to make the most efficient use of all options available to them, particularly if large-scale trunk hauls are required. It has also meant that distribution networks develop on the basis of organisations, rather than commodities. For example the major retailers now have sophisticated supply chains to keep shelves full of the variety of commodities sold, often using distribution centres as central storage points. Whilst superficially there may be some additional tonne-km using centralised depots, the ability to manage the whole supply chain has generally led to overall efficiencies.

For so called ‘just-in-time’ supply systems, reliability and robustness throughout the whole supply chain is vital. Within a distribution network, modal choice becomes a multi-dimensional issue and the need to consistently supply a number of outlets can mean road haulage, typically the most flexible option, tends to dominate.

Resilience is also seen as important. Rail for example, can be seen as inflexible, with largely fixed timetable paths and a limited number of alternative routes in the event of network disruption, although UK rail freight reliability is generally good. However, the range of options available in response to a problem on the road network are significantly greater than those available on rail or sea. With road freight the smaller unit load per vehicle also means that an individual breakdown is likely to affect only one small part of the distribution, whereas other modes put much greater volume in a single movement unit.

There has however been a move away from hub and spoke operations using few, but very large, distribution centres particularly in the retail business. This is likely to continue
as pressures on the transport network, driver availability and changes in wider distribution systems occur.

The mechanism that this potential change in the distribution model could deliver is a move towards regional consolidation centres, feeding more ‘local’ distribution networks. This in turn could introduce opportunities to develop local sources of goods, delivered to the nearest centre for onward transmission through its network. In addition, movements between distribution centres are more likely to be practical by rail, though increasing the number of centres should not ideally increase the amount of trunk movement required.

**Local Supply Chains** – examples of the development of local supply chains reducing the need to transport goods long distances include Jaguar in Liverpool, which achieves just in time deliveries by encouraging co-location of suppliers ‘across the fence’. This improves efficiency and strengthens particular industrial clusters. Another example is at the Hawarden Business Park in Flintshire, where suppliers can co-locate with Airbus at Broughton.

**International trade**

Creating a more robust and reliable logistics network (both in terms of the physical linkages and information flows required) will help to increase the competitiveness of existing Welsh industries, as well as to make inward investment opportunities more attractive. For example, improved links with deep sea shipping operations, perhaps via short-sea shipping through Welsh ports to hub ports such as Southampton or Le Havre, would bring Wales itself closer to main trade routes and offer new trade opportunities to Welsh businesses. Promoting this will also be important.

The eastwards shift of the so-called ‘blue banana’ (the area of the European Union with the highest GDP per head) and the recent entry of geographically near member states with low labour costs (such as Poland and Lithuania), means that existing peripheral nations such as Wales will seek to partly balance those lower labour costs with efficient freight operations, making an efficient and effective international freight network even more important. Particularly as, if the costs of freight movements change (up or down), there would be an impact on the producer as well as the mode to be used.

A specific tool that could be considered to enhance international trade opportunities are ‘Free Zones’. These are designated areas for processing goods in which non-EU goods are treated as being outside the customs territory of the EU, which means that import duties are not due, provided the goods are not released for free circulation. Import VAT is also suspended until the goods are removed to the UK/EU market or used or consumed within the Free Zone.

There are a number of potential benefits that could result from such international changes:

**Social** – protecting and increasing investment in Wales should bring jobs to Wales; in addition there would be corresponding increases in port operations, logistics and haulage within the Welsh economy.
**Economic** – protecting and attracting business should encourage a rise in GDP per head. Changes that re-focus (short-sea) shipping to Welsh ports, even though the destination or source of the goods may not always be in Wales, would increase the freight transport industry’s contribution to this.

**Environmental** – maximising the use of environmentally more efficient modes in developing an efficient international freight network should provide environmental benefits. However, as there could be more freight movement within Wales, there is a potential local environmental disbenefit, albeit with commensurate reductions in traffic and consequent benefits elsewhere.

**Waste**

A number of EU directives and other international treaties deal with waste. Prominent among these are the WEEE directive (discussed earlier) and the management of end-of-life vehicles. These initiatives seek to prevent waste from end-of-life electrical products and vehicles respectively, and to promote the collection, re-use and recycling of their components. The Sustainable Transport Resources and Waste Report (STRAW, May 2006) identifies a need for the whole life of all products to be considered in sourcing and production, with a linked waste and recycling system, making use of the most environmentally friendly freight transport available. The Welsh Assembly Government has a 40% recycling/composting target for local authorities to reach by 2009/10.

In effect, these and other initiatives are already placing different, and more complex, demands on the freight transport industry. While transport of waste is clearly part of the freight transport industry, it has typically in the past been carried out by specific waste-related transport organisations and vehicles, not least municipal refuse operations. However, these are typically geared to collection and disposal of waste within local areas, often in land-fill or incineration, though with increasing amounts being recycled. This greater emphasis on recycling is leading in turn to a requirement to sort waste, and transport it to appropriate destinations, often further away than the more local disposal facilities.

While this is important element of recycling, the ‘product’ is of intrinsically low value has a low time imperative. On one level this makes it an unattractive prospect as a commodity to transport, but also supports development of opportunities for the carriage of waste by more sustainable modes, in particular through promotion of rail and water transfer terminals. An example of efficiency in transporting waste includes utilising the cheap transport available in vehicles (be it containers, rail wagons, ships or trucks) returning after delivery of goods.

**Corporate social responsibility**

Corporate social responsibility represents a key business contribution to sustainable development goals, which both the Welsh Assembly Government and the UK government see as important contributions that businesses can make.

Essentially, corporate social responsibility is about how business takes account of the economic, social and environmental impacts in the way it operates – maximising the benefits and minimising the downsides. Specifically, this relates to the voluntary actions that business can take, over and above compliance with minimum legal requirements, to address both its own competitive interests and the interests of wider society.

However, it is worth noting that in the context of freight transport, corporate social responsibility not only includes the specific effects of the industry itself (such as on its own people, wider society and...
Strategic Issues

the environment) but also in procurement decisions made by the users of freight. Increasing emphasis on corporate social responsibility is likely to have an effect to encourage businesses to question procurement decisions in the widest context, including sources of goods and freight transport, as well as those of its suppliers and contractors.

The concept of corporate social responsibility runs as a thread through this strategy, suggesting that the procurers of freight should consider the consequent effects of their decisions on others, not least the effect that transporting their goods will have.

3.3 People in Freight Transport

Trends and developments

The logistics industry in Wales contains many small firms, of which around 50% are road haulage companies, with some 85% having less than 10 employees. There has been a trend in recent years towards larger companies, and some 66% of the workforce is now actually employed by organisations with over 50 employees (Skills for Logistics). This is in sharp contrast to Ireland, where a large number of small owner/operator road haulage companies still remain.

A number of employment and worker trends are common across all the freight transport modes:

- In some areas there are shortages of qualified staff. This is often for skills where an individual can be expected to finance their own training and qualification, such as (for example) goods vehicle driving, rather than train driving where staff are trained by their employer.
- Safety rules governing working time and hours have existed in the rail industry for many years. These have now been extended to all areas of work through the European Working Time Directive, which has had particular effect on working practices in road haulage. In some instances this has led to an increase in staff numbers required.
- Pressure on costs has led to an increase in flexible employment contracts, for example based on a number of annual hours. These allow staffing levels to be adjusted to seasonal and short term variations in traffic without needing a permanent staff to cover peak levels.
- Flexible working and multi-skilling are increasingly common and have enabled efficiency savings to be made as well as in some instances providing job enrichment. For example, train drivers undertake duties on freight trains that were traditionally the responsibility of the shunter or guard, and dock stevedores can be transferred from port to port to meet work requirements.
- Low skilled jobs have disappeared as equipment and technology, such as cranes and computer tracking systems, have reduced the need for staff in terminals and changed the job requirements of those employed today.

Many freight infrastructure and service operators in Wales have indicated they experience problems recruiting and retaining suitably-skilled workers. This is experienced across the whole of the logistics industry to a greater or lesser extent.

This has resulted in, and indeed is also exacerbated by, an unrepresentative workforce. For instance, only 17% of those employed in the freight logistics industry in Wales are women, where workers are overwhelmingly male, white and have European ethnic origin. The workforce also has an increasingly ageing profile. In 2006 an estimated 33% of goods vehicle drivers in Wales were aged over 55, with only 9% being under 25. In addition, the number
of younger people entering the logistics workforce is disproportionately low in comparison with other Welsh industries.

While a shortage of recruits is well documented, more recent research has revealed that a major reason for this is the poor image that can be projected by the industry. Much of this is to do with working conditions, such as pay, long and generally inflexible working hours, shift patterns, stress factors, working environment and career prospects. In addition, role models for the industry depicted in the press and wider media are often stereotypical and negative. There are also problems at management levels in logistics industries, which have been linked to limited and inconsistent progression opportunities into management roles, limited success in attracting graduates into logistics and specific skills gaps among junior and middle managers.

**Skills for Logistics**

To help address these problems, ‘Skills for Logistics’ has been given the remit to represent the skills needs of freight logistics industries and companies involved in the moving, handling or storing of goods – covering freight transport by rail, road, air, sea and inland waterway. Skills for Logistics is the ‘Sector Skills Council’ for logistics industries, one of 25 similar organisations in the UK that seek to reduce skills gaps and shortages, improve productivity and increase opportunities to boost the skills and productivity of everyone in the workforce. Skills for Logistics’ specific remit is to:

- Identify and address the skills and training needs of all companies involved in logistics;
- Present the development needs of employers to government and its agencies;
- Present the development needs of employers to the training supply industry in order to maximise the relevance of training programmes;
- Design qualifications in response to the industry’s needs;
- Collaborate with other industry bodies and other Sector Skills Councils;
- Raise the standards of training within the sector; and
- Improve the industry image to attract an increased and diversified workforce.

Research by Skills for Logistics demonstrated a need for the freight logistics industry to move away from typical current practices of ad hoc training, largely targeted at meeting statutory or regulatory compliance needs, to systematic and continuing professional development (CPD) for all staff. This has been demonstrated in the ‘Professional Development Stairway’, which it is intended will act as a potential careers path for everybody that works in the industry. (For more details of the ‘stairway’ concept see www.thestairway.org).

Skills for Logistics has prepared a Logistics Skills Agreement to reshape the supply of training to the industry to better meet its needs, by ensuring it is both relevant to the needs of the industry and has a consistency of provision and availability, and to ensure that it deals with specific problems and issues identified in the freight transport industry workforce. Agreements are being implemented region-by-region across the UK, including one for Wales. (For more information see www.skillsforlogistics.org).

The key issues addressed by the Logistics Skills Agreement include:

- Poor image of the logistics sector;
- Unrepresentative labour force;
- Deficiencies in basic skills;
- Skills gaps such as progression from operatives into management and poor operational management skills;
- Recognition of the business case for training; and
- Quality of training supply.
The Logistics Skills Agreement has three Strategic Objectives in Wales; these are to:

1. Ensure that ‘The Stairway’ is considered to be the framework on which careers planning, manpower planning, CPD, qualifications, training programmes, funding and public policy are based.

2. Develop an effective and responsive training supply industry which delivers programmes that are relevant and consistent across Wales, helping to make CPD support available to companies of all sizes.

3. Move logistics towards being a sector with a professional image, that people want to work in and stay working in and is seen as modern, progressive, attractive and central to the economic health of Wales.

To this end, it has been identified that logistics employers would benefit from a ‘one-stop-shop’ through which high quality relevant and consistent training can be sought and delivered; it is proposed that this be achieved through the development of a Logistics Skills Academy for Wales.

### 3.4 Key Growth Areas

#### Growth in container traffic

There has been significant recent growth in container traffic entering the UK, with an increase of some 16% in unitised cargo tonnage from 1997 to 2004 (including containers carried individually or on road trailers). Note though that the weights of individual units have fallen, resulting in an over 30% rise in the number of actual units carried over the same period.

Use of containers is projected to increase further over the next 10-20 years. Much of the growth is in goods produced in the Far East and brought to Europe by sea. There has also long been a trend towards increasing containers sizes (so-called ‘hi-cube’ 9ft 6in tall containers) and larger ships. Ship sizes have had a concentration effect, with container liner shipping vessels sometimes only serving the major European container ports (such as Rotterdam and Felixstowe), which in turn serve an increasing proportion of all movements.

Within the UK, container shipping is concentrated at ports in South East England. Felixstowe alone deals with over 35% of all container movements in the UK; throughput at Welsh ports accounts for less than 1% of the UK total. Hence containers associated with Welsh industry typically enter Wales by road (with a few by rail), either direct from the port, or from a distribution centre in England.

Transporting the increasing number of hi-cube containers by rail can be a problem, as they do not fit within loading gauges on many existing lines when carried on standard deck-height wagons, including routes to/from Wales. Some routes are being modified to increase loading gauges, such as Felixstowe to the West Coast Main Line and destinations in the Midlands of England and Scotland. Alternatively, wagons are available with lower loading decks (and smaller wheels) that can carry hi-cube containers within conventional loading gauge. A limited number of containers reach Wales using these wagons. As rail routes elsewhere are modified, more of these wagons may become available for use on a wider range of unmodified routes, such as those to/from Wales.

#### Food and drink – ‘food miles’ and the battle between year-round & seasonal

Another trend of recent years is the increase in freight associated with food and drink, which currently represent some 30% of all goods moved (tonne-km) into Wales. A large proportion of this increase relates to
perishable goods, particularly as consumers are increasingly said to want a year round supply of a full range of fresh produce, regardless of local seasonality. For example, strawberries, grapes and green beans are now available every day of the year, from suppliers in places as diverse as South America, India and Kenya. A generation ago these were either confined to the summer growing season in the UK and Europe or preserved using freezing or canning.

It is also worth considering though that out of season supply is not just met using transport. Options can include artificially extended growing seasons using heated greenhouses, long-term cold storage and long-distance transport, as well as combinations of all three. Energy-use profiles will therefore vary according to choices made and product needs. In some cases this will actually favour (even long-distance) transport. In all cases though, it is apposite to note that out of season supply can only be met through greater use of energy than accepting seasonal availability only.

Consumer awareness of issues such as ‘food miles’ (the distance their food has travelled to reach them) is growing, and could ultimately affect retailers’ responses. For instance, direct purchase by consumers from local suppliers at farm shops and local ‘green markets’ is available and popular in some places, and major supermarket chains often advertise when they are able to source produce or goods locally. However, in this respect reducing ‘food-miles’ can be compared with the growth in organic food products. Although there may be an increase in the supply of ‘local’ produce, such foods tend to be more expensive and (if so) can remain a niche market, with mass-market consumers preferring the predictability and (typically) cheaper supply that comes from a global approach to product sourcing.

Retailers can also continue to offer both ‘premium’ and ‘budget’ lines to customers.

Notwithstanding this, changes in distribution patterns outlined earlier that could result in more localised distribution systems being developed will if anything make it easier to ‘localise’ the sources of many products, particularly food. What would thus be required alongside this would be marketing initiatives to raise consumer awareness as well as to encourage the private sector to source locally.

There is also increasing use being made by consumers of internet shopping, which can improve access to cheap goods for those without access to a private car. However there is a resultant increase in delivery vans bringing the goods to people’s homes.

3.5 Impacts and Outcomes

Social

Appropriate use of the various transport modes can have impacts on employment, although the numbers concerned are generally low. Inter-modal terminals employ small numbers of people although intensive operation can increase this number. There are shortages of trained staff such as goods vehicle drivers in some areas but it is likely that this is a temporary situation. When planning freight terminals, access for employees should be considered – it is not just access for the freight vehicles themselves that is relevant.

A rebalancing between the modes with greater use of sea or rail for long haul may marginally improve road safety.

Locally sourced produce has the potential to be fresher and more nutritionally sound, and can help in understanding of the role of
Strategic Issues

regional agriculture within Wales. Increased local sourcing can also help support jobs in the local economy, as well as in locally transporting the goods. For example, an emphasis on local sourcing could encourage community businesses to be developed to look at supply and distribution of local products. Another role for community businesses could be in considering the transport and processing associated with recycling.

Economic

The role of price in freight transport decisions must not be underplayed. As freight modal choice is generally price based, there needs to be consideration of financial rebalancing through positive measures such as revenue or capital grants to ensure that the most socially or environmentally acceptable methods of transport do not simply disadvantage freight users in Wales, to the extent that the economy is itself affected. Note that restriction measures such as parking charges or lorry bans at certain times may also have an impact on modal choice.

Careful planning of inter-modal interchange and links between the various modal networks can support economic development. Trends such as increasing levels of freight travelling from outside Wales need to be understood. In some instances planning authorities may wish to become involved in what are currently largely private sector decisions such as the location of distribution centres in or for Wales. It is important to seek a balance between the modes, not the pursuit of just one at the cost of another. Note that the inter-relationship between transport networks and the economies of Wales and England can have a distorting effect, with transport employment being based in England but delivery to areas in Wales, and vice versa.

The difficulty in obtaining information on freight transport options can mean that the overall ‘best’ decision is not always taken as social or environmental issues are ignored and prices from alternative transport providers may not be sought. There is a need to work with the distributors of major flows, such as food and drink, to understand their plans for future development as well as how they might be influenced.

Environmental

Improved connections between modes can allow use to be made of more sustainable transport where appropriate – such as rail for long distance haulage, connecting with road for local and regional distribution. If modes are not well integrated there is a risk that road, as the more flexible option, is always chosen for the full end-to-end journey. There can be local concerns about large trucks using rural roads through small villages, often decried as unsuitable but sometimes with no alternatives. More regionally focused distribution arrangements may reduce this, for example allowing loads to be transferred to smaller vehicles for final distribution.

In planning new developments, freight access and options for the potential use of different modes should be considered, as well as consequent transfer requirements between modes. If road is the best (or only) option for the first or last part of a journey this should not preclude the use of other modes to carry goods for perhaps a substantial part of the journey, and the development of inter-modal terminals and distribution centres needs to reflect this.

An increase in the volume of international freight by sea or air may require enhanced provisions at ports and airports to ensure the requirements of the 2005 World Health Organisation (WHO) International Health Regulations (as they apply to ports/airports)
are met and public health is protected. It is acknowledged that if freight items pose limited contamination risk and/or come from areas that have strict public health arrangements, then there would be a limited impact of increasing freight to Wales from a public health point of view.

Any new freight-related developments should be designed to the highest environmental standards and use more sustainable materials. In addition, efforts should be made to consider, and where possible enhance, habitats and diversity. Addressing climate change, both in terms of its potential effects on freight transport and the affect of freight transport on it is another key environmental issue to be considered.

### 3.6 Steps Towards Delivery

Suggested ‘steps towards delivery’ that relate to wider issues that cut across more than one mode of freight transport include the following. These are related back to the hierarchy themes of the strategy as indicated – Spatial, Mode Split (MS) & Making Best Use (MBU):

<table>
<thead>
<tr>
<th>SI</th>
<th>Description</th>
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<tbody>
<tr>
<td>S11</td>
<td>Overall, promote policies that support the transport of freight in the most environmentally sustainable manner, and in particular encouraging freight to transfer from road to rail and water-borne transport wherever practical.</td>
</tr>
<tr>
<td>S12</td>
<td>Encourage an integrated multi-modal approach to regional freight transport planning that seeks to achieve a sustainable balance between environmental and economic operational objectives.</td>
</tr>
<tr>
<td>S13</td>
<td>There is scope to review the current system of freight grants with a view to increasing availability of subsidies that encourage modal shift to rail and sea transport. This review could consider the relevance of both revenue and capital grants. This review could also consider the results from previously awarded grants with a view to identifying best practice.</td>
</tr>
<tr>
<td>S14</td>
<td>Land-use policy should take into account, and where necessary adapt, to ensure that opportunities for promoting environmentally sustainable freight facilities are protected (in particular rail and water-borne freight). This should be reflected through ongoing consideration of freight transport the Wales Spatial Plan (WSP) and Local Development Plans (LDPs).</td>
</tr>
<tr>
<td>S15</td>
<td>Consider the potential for developing inter-modal freight interchanges in Wales to facilitate and stimulate easier modal shift to more sustainable modes, in particular road to rail and road/rail to sea interchanges.</td>
</tr>
<tr>
<td>S16</td>
<td>In future investment and planning decisions about the rail infrastructure in Wales there may be a need to rebalance the focus and planning horizons between freight and passenger traffic to ensure that freight is accorded an appropriate priority. This should include renewals, and maintenance planning as well as longer term network developments.</td>
</tr>
<tr>
<td>S17</td>
<td>The future development of ports and airports in Wales should be pursued for the overall sustainability of transport rather than looking at modes in isolation.</td>
</tr>
<tr>
<td>S18</td>
<td>Develop a greater understanding of the patterns of demand for the movement of goods and the role of freight transport in Wales, to assist in targeting and planning for requirements/opportunities afforded by changing market-driven demands. This requires research into the activities of businesses and freight movers in and related to Wales, in particular evolving distribution patterns and the use of container and pallet-based networks and systems. This should also include consideration of the current and potential future movement of waste. The research in this ‘step’ also relates to a number of mode-specific suggestions.</td>
</tr>
</tbody>
</table>
 SI9 Related to this, there is a requirement for identification of suitable data sources to be monitored and subsequent collation of statistics.  

 SI10 There also needs to be a greater understanding of the current and likely future role of distribution centres, including those in England, and freight transport in Wales. This could lead to the investigation of opportunities for additional distribution centres within Wales which could also generate related employment opportunities. This should be taken forward by working with the major retailers where possible, to understand their predicted future requirements.  

 SI11 Consider the potential future impacts on freight movements by all modes, as a result of charging on the road network, including congestion charging, time/distance-base charging and specific charging (such as local tolling).  

 SI12 There are opportunities for joint work between national, regional and local authorities and the private sector to encourage more sourcing and consumption of locally sourced produce, particularly where this has the potential to reduce the distance travelled by freight and generate jobs. This could be linked to developments in the tourism sector.  

 SI13 Options for the development and promotion of a ‘Freight Direct’ information service for Wales could be explored. This service could provide information on alternative journey options, and give information on how to go about sending goods by rail or sea. It is acknowledged that commercial sensitivity will have to be taken into account, and any resulting service set up accordingly.  

 SI14 Maintain appropriate stakeholder partnerships, such as the well-established Wales Freight Group, and seek to develop new partnerships where appropriate. Freight Quality Partnerships (FQPs) can be considered at a variety of different levels.  

 SI15 Different areas of Wales will benefit from different types and scales of ideas and solutions. For instance, a key difference may be apparent between rural and urban freight issues, where comparatively small-scale rural projects could provide locally very significant benefits to a rural economy and communities.  

 SI16 Implementation of the Sector Skills Agreement for Skills for Logistics, to reshape the supply of training to the industry to better meet the needs of logistics employers, by ensuring it is both relevant to the needs of the industry and consistently provided and available.  

 SI17 Consider the way that the freight transport industry and networks are affecting and will be affected climate change. As a key part of a continuing economy, climate proofing of the wider transport networks will be important, particularly in coastal areas, but the specific needs of freight should be addressed.  

 SI18 Consider seeking to expand the Welsh Assembly Government’s powers relating to freight transport. In particular, relating to the rail network and ports.