

The Marches & Mid Wales Freight Strategy



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Executive Summary

Strategic scope

The Marches Local Enterprise Partnership, the Growing Mid Wales Partnership, the Welsh Government, and Ceredigion, Gwynedd, Herefordshire, Powys, Shropshire and Telford and Wrekin Councils jointly commissioned this freight strategy. Its objective is to provide an evidence base to determine the interventions in the freight sector that will support the economic development and operational efficiency of businesses in the Marches and Mid Wales, while also seeking to enhance the quality of life of its residents and reduce environmental impacts from freight transport activity.

The commissioning and development of this strategy has been managed by a steering group of officers from the commissioning organisations.

Aim of the strategy

The overall aim of the Marches and Mid Wales Freight Strategy is:

To ensure the efficient movement of freight in the Marches and Mid Wales while minimising impacts on the environment and residents.

In essence, the strategy should lead to a reduction in costs for the freight and logistics industry and its customers and at the same time reduce the negative impacts of freight movements on people who live and work in the Marches and Mid Wales.

Key issues

The key issues that emerge for businesses in the Marches and Mid Wales are:

- The quality of the single carriageway road network and the resulting slow door-to-door journey times and lack of journey time reliability;
- Tailbacks and slower journey times due to the number of farm vehicles that use the network to access farms and fields;
- Levels of congestion at some junctions and through some towns and cities.

Interventions

Some 33 interventions were identified and appraised, which would help the Marches and Mid Wales to meet its strategic objectives in relation to freight and logistics. The interventions were established following a review of best practice, discussions with the Steering Group and receiving feedback from businesses through the stakeholder consultation programme. The business community stressed, in particular, the importance of interventions that would increase the capacity of the road network in the Marches and Mid Wales and reduce the impact of bottlenecks thereby increasing journey time reliability, as well as the need for improved maintenance of the road network.

The interventions were grouped into the following categories:

- **Highways management and maintenance:** defining, for the purposes of transport planning, a Freight Route Network (FRN) on which strategic freight movements are likely to be concentrated and upon which infrastructure enhancements can be focused. This also includes interventions on the FRN to maintain the existing highway network and ensure that it is fit for purpose for freight movements.
- **Highways enhancements:** specific schemes on the FRN that would reduce journey times and increase journey time reliability for the freight and logistics industry and their customers.
- **Planning and regulation:** interventions to ensure that development opportunities take account of the associated freight movements, to reduce emissions from HGVs and LGVs in areas of poor air quality and to ensure that HGVs are only using appropriate routes.
- **Rail freight:** potential interventions to encourage a switch of some traffic to rail.
- **Dissemination & liaison:** provision of accurate information to users of the road network to facilitate informed decision-making by transport operators alongside other 'soft' interventions to develop solutions to conflicts between the interests of road hauliers and their customers and local residents.

Highways enhancements

The key interventions, which were also highlighted by the business community, relate to the need to reduce journey times and increase journey time reliability for freight movements to, from, within, and through, the Marches and Mid Wales area, while relying on an essentially single carriageway network. The strategy therefore includes several interventions that would provide opportunities for the overtaking of farm vehicles and slow-moving HGVs by other freight vehicles and cars. These interventions would also reduce driver frustration and increase safety on the network. The proposed interventions are:

- Short sections of '2 on 1' roads, Differential Acceleration Lanes (DALs) and crawler lanes to provide safe overtaking opportunities on otherwise single carriageway roads;
- Online enhancements, such as straightening, removing bends and widening of narrow sections at selected locations;
- A programme of enhancements to selected structures to allow 44 tonne HGVs to operate across the whole of the FRN.

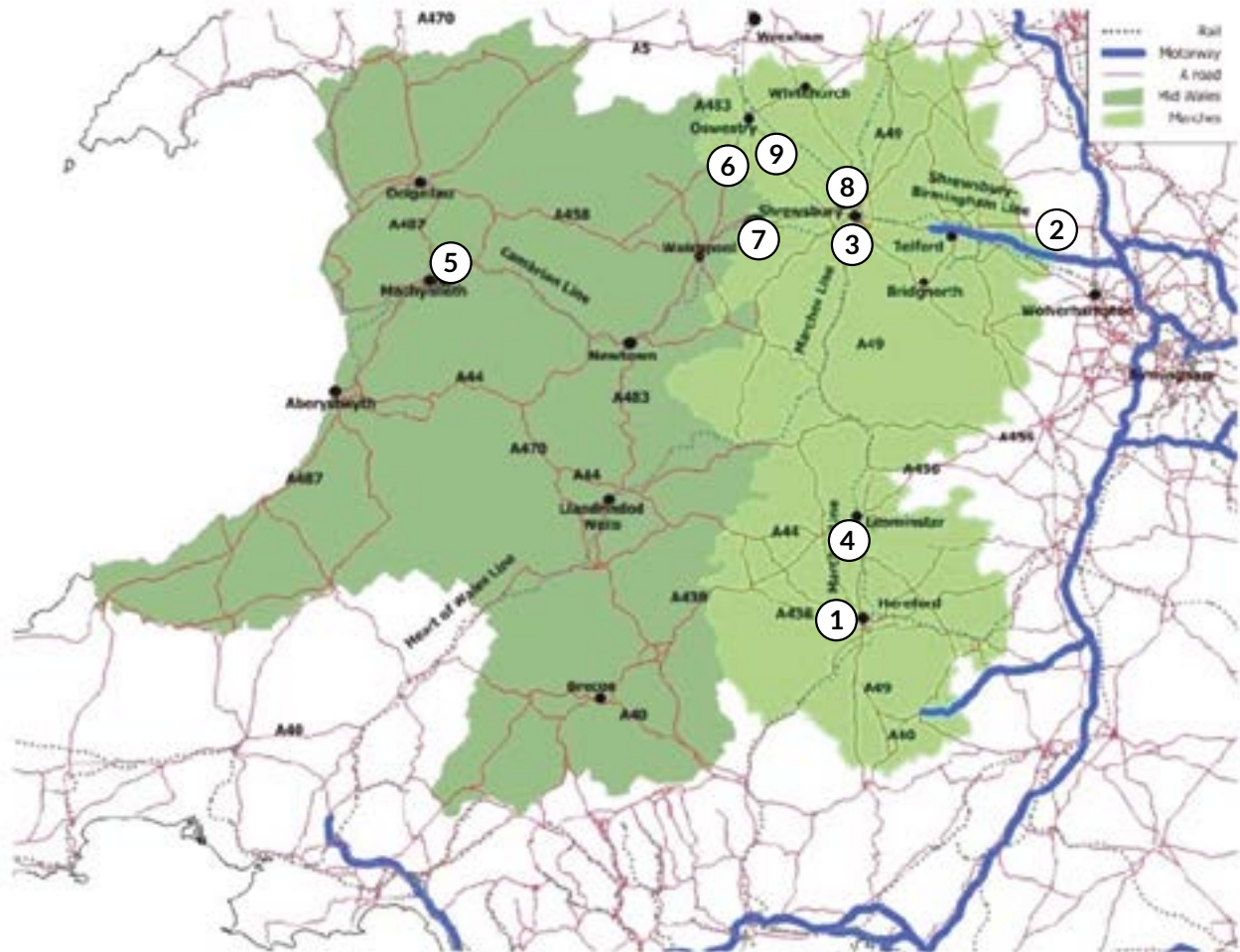
Schemes for increasing the number of opportunities for overtaking, online enhancements, and enhancements to selected structures, should be considered as part of route strategies on the FRN; this is likely to include the following routes in the Marches and Mid Wales: A49, A483, A470, A5, A487, A458, A44, A438, A456 and A40 as well as the M54 and M50 motorways.

There are also a number of major schemes which would reduce the impact of bottlenecks on the FRN, providing journey time savings and increased journey time reliability for freight movements. These are:

- Hereford Bypass and Southern Link: bypass to the west of the city with a new crossing of the River Wye, with the objective of removing north-south strategic traffic from the centre of the city.
- M54 link to northbound M6/M6 Toll: new motorway link so that northbound traffic on the M54 can access the M6 directly rather than via the A449; the scheme would also provide a direct link between the M54 and the start of the M6 Toll road.
- A49/A5 Dobbies Island Junction Improvement: enhancements to the junction to the south of Shrewsbury between the A49 north south route and the A5 Shrewsbury ring road.
- Leominster Bypass: a bypass to the southwest of Leominster allowing east-west traffic on the A44 to avoid the town centre.
- New Dyfi Bridge: a scheme to replace the bridge across the River Dyfi (which is prone to flooding) on the A487 to the north of Machynlleth.
- A483 Pant to Llanymynech Bypass: bypass of two villages on the A483 between Welshpool and Oswestry, which will reduce journey times between Mid Wales and Deeside and the North West of England.
- A458 Buttington Cross to Wollaston Cross: scheme to improve about 9km of sub-standard trunk road, which will reduce journey times between Mid Wales and the West Midlands via Shrewsbury and also improve the accident record on the route.
- Shrewsbury North West Relief Road: a scheme to complete the final section of the ring road around Shrewsbury to link the A49/A53 at Battlefield to the A5/A458 at Bicton Heath, which will reduce journey times between the west and the north of Shrewsbury.
- Dualling or partial dualling of the A5/A483: a scheme to provide a dual carriageway route from the end of the A5 Shrewsbury Bypass to the start of the dualled A483 at Ruabon.

The estimated benefits for HGV traffic from the implementation of the major highways projects included in the strategy are at least **£149 million**. This excludes benefits for vans and for passenger traffic. Most of these benefits for heavy freight traffic would be secured initially by the freight transport operators but would then be passed on to shippers and receivers of freight through competitive market forces. These benefits would also therefore help to reduce the cost base of businesses located in the Marches and Mid Wales and support the creation or retention of employment.

Figure 1: The Marches & Mid Wales, identifying major schemes



Major Schemes

- | | |
|----------------------------------------------|--------------------------------------------|
| 1 Hereford bypass | 6 A483 Pant to Llanymynech bypass |
| 2 M54 link to northbound M6/M6 Toll | 7 A458 Buttington Cross to Wollaston Cross |
| 3 A49/A5 Dobbies Island Junction Improvement | 8 Shrewsbury North West Relief Road |
| 4 Leominster bypass | 9 A5/A483 Dualling Shrewsbury to Ruabon |
| 5 New Dyfi Bridge on the A487 | |

1. Introduction

1.1 A cross-border strategy

The Marches Local Enterprise Partnership, the Growing Mid Wales Partnership, the Welsh Government, and Ceredigion, Gwynedd, Herefordshire, Powys, Shropshire and Telford and Wrekin Councils jointly commissioned this freight strategy. Its objective is to provide an evidence base to determine the interventions and interventions in the freight sector that will support the economic development of the Marches and Mid Wales, while also seeking to enhance the quality of life of its residents and reduce environmental impacts from freight transport activity.

The Marches and Mid Wales both have highly dispersed patterns of freight activity, both are relatively peripheral to the economic core of the UK - focused on the major conurbations of London, Birmingham, Manchester and Leeds - and both rely very largely on a single carriageway road network. Given the common economic and geographic context and shared transport issues, this strategy has therefore been developed as a cross-border strategic initiative for both areas.

The development of the strategy has been guided by a Steering Group consisting of:

- The Marches Local Enterprise Partnership;
- The Growing Mid Wales Partnership;
- The Welsh Government;
- Herefordshire Council;
- Shropshire Council;
- Telford and Wrekin Council.

There is also an accompanying Technical Annex, which sets out the more detailed evidence to support development of the strategy. A glossary of terms is provided at the end of this document.

1.2 The role of the public sector in developing a freight strategy

Freight transport and logistics services are delivered almost exclusively by private sector companies which invest heavily in infrastructure and equipment such as warehouses, trucks, vans and fork lift trucks. The private sector needs, however, to use publicly owned road and rail infrastructure and is subject to the taxation and regulatory regimes that the public sector puts in place. It follows that a successful freight strategy for the public sector in the Marches and Mid Wales will involve a combination of public investment in road and, to a lesser extent, rail network infrastructure, some limited changes in the regulatory framework and the application of appropriate planning policies. These changes should be designed, wherever possible, to increase the efficiency of the freight and logistics sector – which will support the business community located in the Marches and Mid Wales that rely on their services. The strategy therefore has a strong economic focus and has involved businesses as key stakeholders in its development. However, freight transport movements also have impacts on residents and the environment and an appropriate balance needs to be found in the strategy between economic and quality of life/environmental objectives.

As the freight transport industry is highly competitive, any cost efficiencies resulting from the implementation of the strategy will be passed on, in the medium to long-term, to its customers and, ultimately, to the wider economy. While the freight strategy must be appropriate for the specific economic, geographic and social context of the Marches and Mid Wales, it also needs to avoid changes to the regulatory environment that reduce regulatory harmonisation at a national level; for example, new regulations that require particular types and sizes of vehicles to be used to carry out deliveries and collections only in the Marches and Mid Wales will only increase industry costs.

The strategy needs to find therefore 'win-win' solutions that facilitate economic efficiency and economic development while minimising impacts. Much of the investment will be funded by the private sector, but the strategy needs to show how the public sector can stimulate this investment and reduce the freight industry's costs through the adoption of an appropriate regulatory environment and land use planning policies, and through its own investment in road and rail network infrastructure.

1.3 Stakeholder consultation

Businesses, local, parish and town councils and other key stakeholders were consulted at various points during the process of developing the strategy. The business community was consulted by means of an online survey which was publicised by the Marches LEP, the Growing Mid Wales Partnership and the Welsh Government and received a response from 58 companies. In addition, parish and town councils in the Marches were offered the opportunity to respond to a separate survey to which 60 councils responded. Two business workshops were held in Ludlow and Newtown. Shippers and receivers of goods and road hauliers were interviewed on the telephone to obtain more detailed evidence in relation to their specific experience of operating in the area. Finally, infrastructure managers, policy-makers and economic development partnerships were contacted for face-to-face meetings or telephone interviews; these included the Marches Local Enterprise Partnership, the Growing Mid Wales Partnership, the Welsh Government, Midlands Connect and the air quality and highways network managers of the local authorities.

2. Objectives of the Strategy

The overall aim of the Marches and Mid Wales Freight Strategy is:

To ensure the efficient movement of freight in the Marches and Mid Wales while minimising impacts on the environment and residents.

This overall aim seeks to encapsulate several different objectives, namely:

- To reduce the cost of and increase the journey time reliability of freight transport movements to, from, within and through the Marches and Mid Wales; as the freight and logistics industry is highly competitive, these cost savings for the freight transport operators will be passed on to their customers in the medium to long term and will therefore support business competitiveness.
- To support the economic growth and prosperity of the Marches and Mid Wales by stimulating new (and safeguarding existing) inward investment and providing employment in the logistics industry.
- To increase the safety of the transport network in the Marches and Mid Wales.
- To reduce emissions, particularly greenhouse gases, particulate matter and nitrogen dioxide.
- To minimise as far as possible the other negative impacts of freight transport on residents of the Marches and Mid Wales, such as the contribution that freight transport makes to levels of congestion and noise and intimidation of vulnerable road users.

In essence the strategy needs to lead to a reduction in costs for the freight and logistics industry and its customers and at the same time reduce the negative impacts of freight movements on people who live and work in the Marches and Mid Wales.

The overall aim and the specific objectives take into account the current situation in the Marches and Mid Wales (section 3 of the strategy), the potential future trends up to 2030 (section 4) and the results of a programme of stakeholder consultation. Stakeholders were highly supportive of the priorities that lie behind the aim and the objectives of the strategy. Both businesses and parish and town councils supported economic efficiency, improving the environment and the quality of life of residents as being priorities, although the parish and town councils tended to regard the quality of life issues as being a slightly higher priority than the businesses.

3. The current position

3.1 Economic and geographic context

The Marches and Mid Wales have a combined population of just over 1 million, living in a total land area of some 15,000 km². While Telford and Wrekin occupies a smaller land area and is, as a whole, more urbanised, most of the rest of the area has a relatively dispersed population; England and Wales as a whole has a population density of 371 persons per km², but the Marches and Mid Wales has on average only 65 people per km².

Table 1. Mid Wales & the Marches: population & GVA, 2015

	Land area (km ²)	Population	Population density (persons/km ²)	GVA per head
Herefordshire	2,180	188,000	86	£20,600
Telford and Wrekin	290	171,000	590	£21,200
Shropshire	3,483	311,000	89	£19,300
Gwynedd	2,548	123,000	48	£18,900
Powys	5,179	133,000	26	£17,000
Ceredigion	1,783	75,000	42	£17,000
Total Mid Wales & Marches	15,463	1,001,000	65	£19,000
Total England & Wales	151,149	56,012,000	371	£26,600

Source: MDS Transmodal, based mainly on ONS data

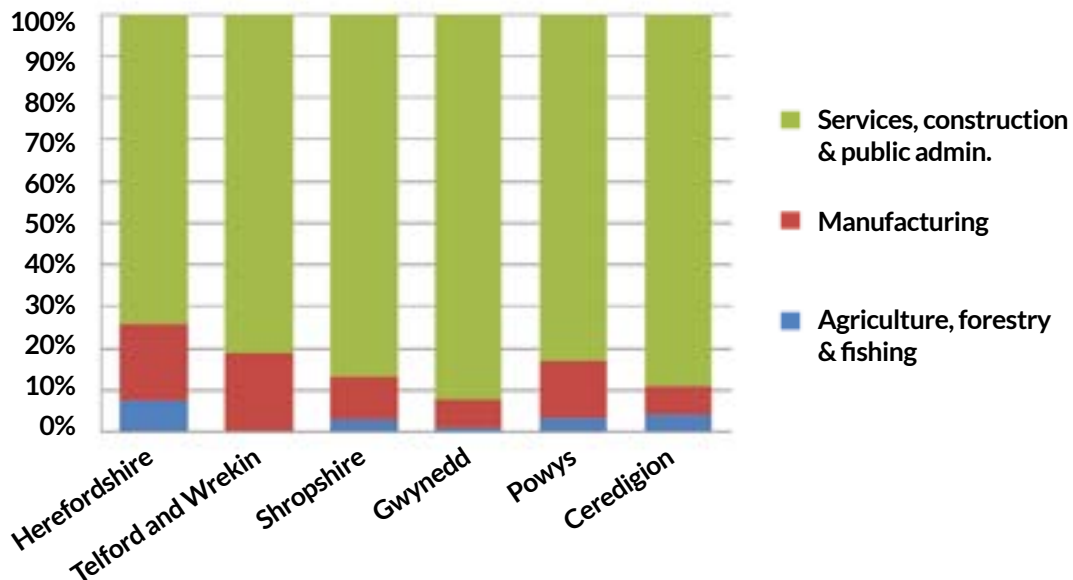
While average Gross Value Added (GVA) per person in the area varies from £17,000 to almost £21,000, the average GVA is only some 70% of the average for England and Wales as a whole. This reflects greater levels of employment in non-financial service industries and agriculture than the average in England and Wales as a whole. Nevertheless, manufacturing represents over 18% of total GVA in Herefordshire and Telford and Wrekin and over 10% of total GVA in Powys and Shropshire.

With their focus on the agricultural, automotive and defence sectors and their strong economic links with the West Midlands conurbation, both the Marches and Mid Wales have strong economic links with the wider Midlands region. The area can therefore make a significant contribution to the Midlands Engine, which is a government-led initiative to support the Midlands to become a growth engine for the whole of the UK.

Figure 2

Proportion of GVA by broad economic sector in Mid Wales & the Marches, 2015

Source: ONS

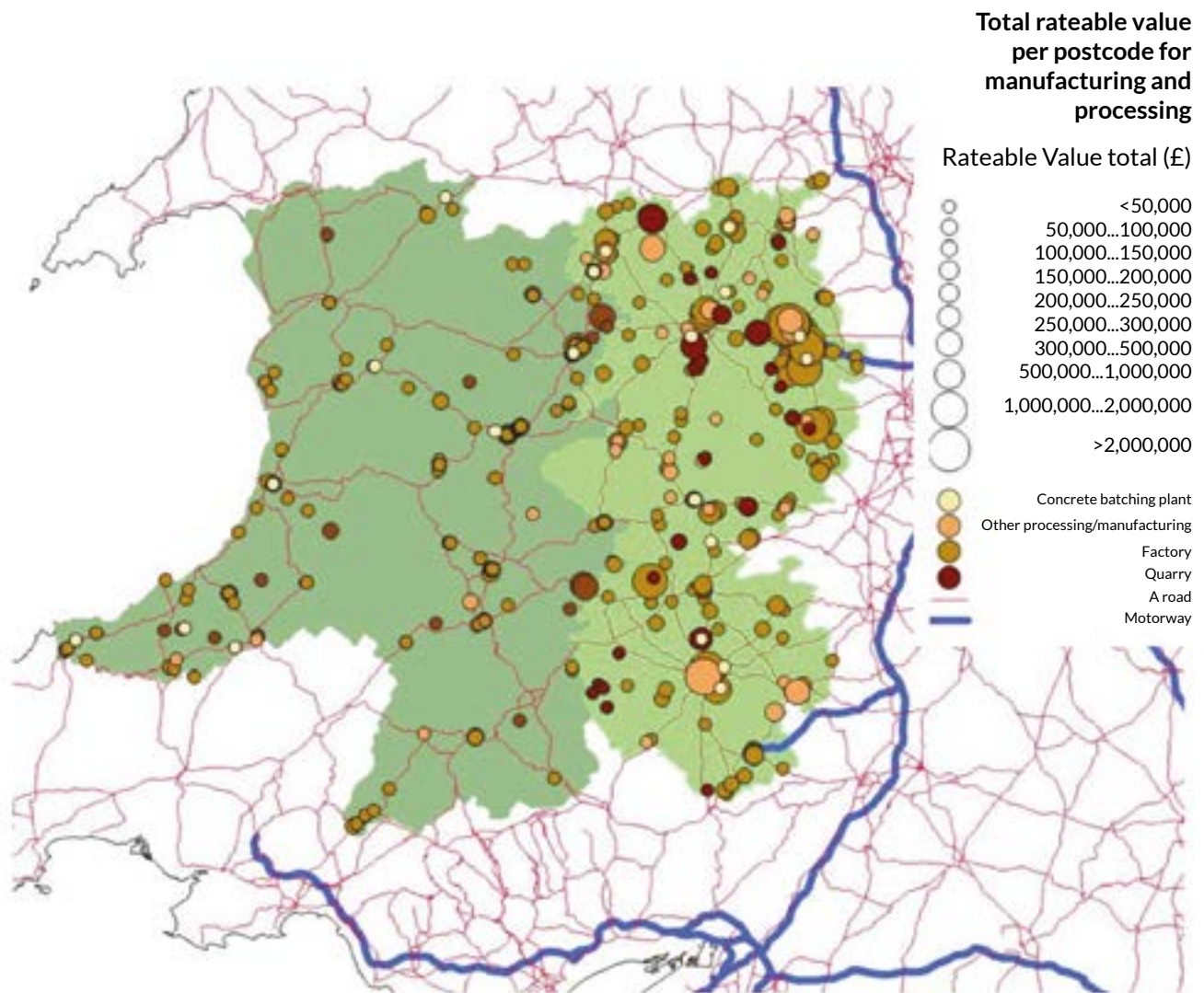


3.2 Manufacturing & processing

The economy of the Marches that is served by the freight and logistics industry is characterised by its essentially agricultural nature, with a focus on food and drink production and on the processing of agricultural products. Collections are made from highly dispersed locations such as farms for delivery to processing facilities prior to onward distribution to retailers' distribution centres. There are also important clusters of manufacturing activity, particularly related to the automotive and defence sectors, in and around Telford, Shrewsbury and Hereford. These sites receive raw materials and semi-finished goods from suppliers and despatch finished goods to customers.

The Mid Wales economy is also very reliant on the agricultural sector, but with a cluster of manufacturing activity mainly along the Severn Valley. Other significant sources of freight activity in Mid Wales are related to the collection of timber from forests and then delivery to manufacturing and processing sites.

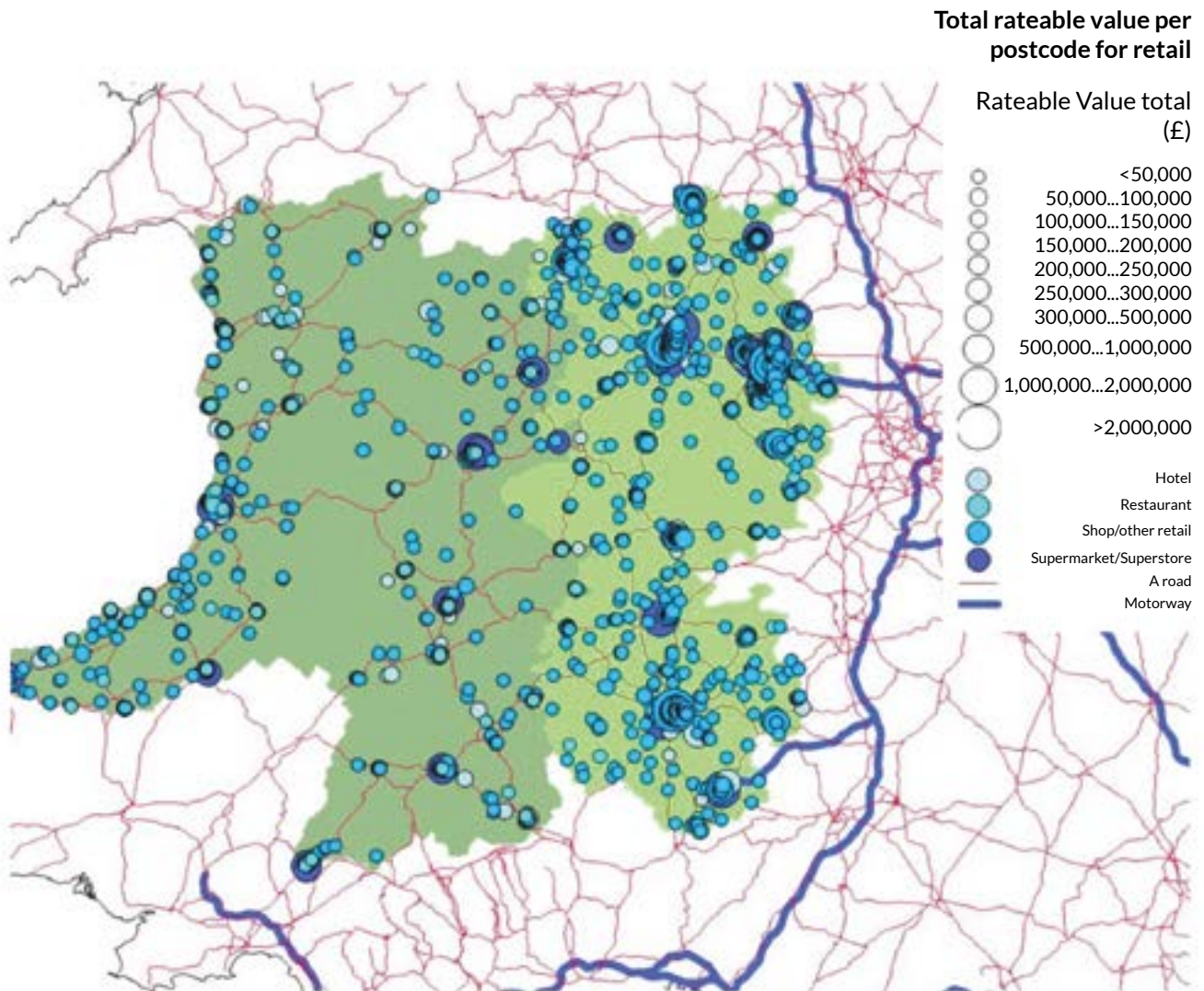
Figure 3: Location of manufacturing & processing activity in the Marches and Mid Wales



3.3 Retail deliveries

There are also clusters of retail activity, both superstores/supermarkets and more local stores, as well as restaurants and hotels which receive inbound food and drink and other goods and despatch waste materials such as packaging. These are closely related to where people live and work. The Marches and Mid Wales retail outlets, hotels and restaurants will often be supplied from distribution centres located in the Midlands, but outlets in the southern areas of Mid Wales may also be supplied by distribution centres in South Wales or the Bristol area and those in the north of Mid Wales may be supplied by warehouses located in the North West of England.

Figure 4: Location of retail activity and hotels and restaurants in the Marches and Mid Wales



3.4 Transport geography

Given its relatively dispersed pattern of origins and destinations for freight movements and its low population density, the area is highly dependent on road freight transport and this means that the quality of the almost entirely single carriageway road network has a significant impact on the economy of the area.

In May 2016 the Marches LEP published a report entitled *Investing in Strategic Transport Corridors in the Marches*, which described the key road/rail transport corridors:

- The 'North-South Spine' corridor consisting principally of the A49 and the Marches Line and linking the North West of England to the South West and South Wales via Shrewsbury and Hereford;
- The 'East West Central' corridor consisting of the M54/A5/A458 route and the Birmingham-Shrewsbury Line, linking the West Midlands conurbation with Mid Wales via Shrewsbury;
- The 'North West Frontier' corridor consisting principally of the M54/A5/A483 route, linking the West Midlands conurbation with Deeside via Shrewsbury and Oswestry and including the proposed Shrewsbury North West Relief Road;
- The 'Wales and Marches to Midlands' corridor consisting principally of the A44 and the A438 between Worcestershire and Mid Wales via Hereford.

Further road-based corridors are to be found in Mid Wales along the A470/A483 which links North Wales with South Wales via Newtown and Llandrindrod Wells and the A487 coastal route which links Snowdonia with Pembrokeshire via Aberystwyth.

Figure 5: Faster moving freight vehicles behind HGVs on the Marches road network



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Road network

The road links in the area that are included on the comprehensive network of the Transport Trans-European Network (TEN-T) are limited to the M54/A5/A483 route between Birmingham and Chester via Shrewsbury and the M50/A40/A465 route from the M5 south west of Birmingham to Swansea.

The Strategic Road Network (SRN), managed by Highways England and the Welsh Government consists of the A470, A483 and A487 north-south routes and the A40, A44, A494, A489, A485 and A5 east-west routes, while the SRN in the Marches is more limited and consists of:

- The M54 and M50 motorway connections;
- The A49 between Ross-on-Wye and Shrewsbury;
- The A5 between Shrewsbury and the Welsh border at Chirk;
- The A483 between Pant and Oswestry;
- The A458 between Shrewsbury and the Welsh border to the west of Wollaston.

Figure 6: Roads for HGVs in Mid Wales



Rail network

By comparison with the road network, all four railway lines in the area are included in the TEN-T comprehensive rail network. These are:

- The Marches Line between Newport in South Wales and Crewe in North West England via Hereford and Shrewsbury;
- The Shrewsbury to Birmingham Line via Telford;
- The Cambrian Line from Shrewsbury to Aberystwyth via Newtown;
- The Heart of Wales Line from Craven Arms (south of Shrewsbury on the Marches Line) to Swansea.

Ports

While not technically land-locked, the area contains no commercial ports and the nearest ports are the Irish Sea ferry ports of Fishguard in Pembrokeshire to the south and Holyhead on Anglesey to the north. Access to ports and the Channel Tunnel for importers and exporters to the European continental mainland and other global markets is therefore mainly via the Midlands to reach ports such as Dover, Felixstowe and Southampton.

Canals & airports

There are four canals that pass through the Marches and Mid Wales:

- The Shropshire Union Canal, linking the West Midlands conurbation with the Mersey at Ellesmere Port;
- The Llangollen Canal, linking the Shropshire Union Canal at Hurlleston with Llantysilio to the west of Llangollen;
- The Monmouthshire and Brecon Canal in South Powys;
- The Montgomery Canal, which originally linked Welshpool with the Llangollen Canal but now has a disused section to the north east of Welshpool.

There are three airports or airfields in Wales within the scope of the strategy, but there are no airports in the Marches. The Welsh airports are:

- Welshpool Mid Wales Airport, which has a 1020 metre tarmac runway;
- West Wales Airport at Aberporth, which has a 1,188 metre tarmac runway;
- Llanbedr Airport in Gwynedd, which has three runways with longest 2,286 metres long.

3.5 Road freight

Mid Wales

Excluding transit traffic, about 7 million tonnes of road freight is distributed in HGVs to Mid Wales by road, with a high proportion of the total traffic being within Mid Wales. Inbound freight from outside the area mainly comes from other neighbouring regions, such as the West Midlands, Wales and the North West.

Table 2: Road freight tonnes in HGVs to/from Mid Wales

Million tonnes	Powys	Ceredigion	Gwynedd	Total
Inbound	2.8	1.5	2.9	7.2
Outbound	2.7	1.3	2.0	6.0

Source: MDS Transmodal GB Freight Model

Outbound road freight flows are smaller with some 6 million tonnes of road freight distributed from Mid Wales. Outbound freight to the rest of Wales and to the North West is particularly important, highlighting the significance of the economic linkages between the north of Mid Wales with the North West and the south of the area with South Wales.

Inbound freight relates to retail products and some food products for processing as well as construction materials. The main outbound volumes are raw materials (such as timber) and manufactured goods.

Table 3: Mid Wales: inbound & outbound road freight in HGVs by commodity

	Inbound road freight	Outbound road freight
Total traffic (million tonnes)	7.2	6.0
Temperature controlled foodstuffs	19%	14%
Other Foodstuffs	13%	4%
Construction & Metals	44%	19%
Crude Materials & Manufactured Items	13%	64%
Petrol and Petroleum Products	8%	0%
Other Bulks	3%	0%

Source: MDS Transmodal GB Freight Model

The Marches

Excluding transit traffic, about 20 million tonnes of road freight was distributed to the Marches by road, with 35% of the total traffic being within the Marches area itself; the percentage of intra-Marches traffic highlights the importance of strategic routes that link the main population centres, principally the A49 trunk road, as well the main east-west routes. Inbound freight from outside the area mainly comes from other neighbouring regions, such as the rest of the West Midlands, Wales, the North West and the South West. Only 21% of inbound road freight is from regions that are not bordering the Marches area.

Table 4: Road freight tonnes in HGVs to/from the Marches

Million tonnes	Telford and Wrekin	Shropshire	Herefordshire	Total
Inbound freight	8.5	5.7	6.1	20.2
Outbound freight	8.1	6.2	8.4	22.7

Source: MDS Transmodal GB Freight Model

Outbound road freight flows are larger with some 23 million tonnes of road freight distributed from the Marches, with some 30% of the total within the Marches area. Outbound freight to the rest of the West Midlands is particularly important, showing the economic linkages with the rest of the region, facilitated by the east-west strategic road links provided by the M50 and M54.

Analysis of the road freight movements by commodity shows the extent to which the agri-food industry is important for the area, with outbound flows of food representing just over 50% of total volume. However, the area is also producing manufactured goods and components for factories in other parts of Great Britain, such as the automotive sector in the West Midlands conurbation. Inbound freight relates to retail products and some food products for processing as well as construction materials.

Table 5: The Marches: inbound & outbound road freight in HGVs by commodity

	Inbound road freight	Outbound road freight
Total traffic (million tonnes)	20.2	22.7
Temperature controlled foodstuffs	20%	25%
Other Foodstuffs	25%	26%
Construction & Metals	20%	23%
Crude Materials & Manufactured Items	27%	23%
Petrol and Petroleum Products	5%	1%
Other Bulks	2%	2%

Source: MDS Transmodal GB Freight Model

Transit traffic and length of haul

As well as traffic within and to and from the Marches and Mid Wales area, there are also significant volumes of HGV traffic that transit the area, to and from South Wales and West Wales via the M50/A40 and to and from Deeside and the North West via the A41 and the A5/A483. An estimated 2.16 million annual HGV movements out of a total of 10.56 million in the Marches (20%) are transit movements. An estimated 0.93 million annual HGV movements out of a total of 2.64 million in Mid Wales (35%) are transit movements.

The average length of haul for HGV movements within, to, from and through the Marches is relatively short, with 39% less than 50km, a total of 59% less than 100km and 80% less than 200km. Similarly for Mid Wales, 48% of HGV movements are over distances of less than 50km, a total of 62% less than 100km and 81% less than 200km. This reflects in general terms the UK pattern of HGV movements, which is dominated by relatively short distance movements.

Agricultural vehicles

Agricultural vehicles, sometimes with trailers and other equipment, need to use the public highway to move between farms and fields. In 2015 the speed limit for these vehicles was increased to 25 mph and the gross vehicle weight was increased to 31 tonnes. These regulatory changes should help to reduce, if only marginally, the time these vehicles have to spend on the public highway. However, while these movements on the single carriageway network of the Marches and Mid Wales are necessary and important for the economy of the area they can also lead to tailbacks and increased driver frustration and will lead to longer journey times and an increased risk of accidents.

3.6 Rail freight

Rail freight traffic is concentrated on the Marches Line, which provides a link between North West England (Crewe and Chester) and South Wales (Newport and Cardiff) via Shrewsbury and Hereford; this line provides an alternative north-south route to the more heavily used West Coast Main Line and has a reasonably generous loading gauge to accommodate intermodal rail freight services carrying containerised freight. The Shrewsbury to Birmingham Line provides access to the main general-purpose rail freight terminal in the Marches at Donnington near Telford, but this site suffers from a loading gauge between Donnington and the West Coast Main Line in Birmingham that is insufficient for efficient intermodal rail freight services.

Rail freight flows in the Marches have declined in recent years, with the loss of coal and biomass flows to the Ironbridge coal-fired powered station following its closure in November 2015. The main existing flows to and from the Marches area are of construction materials; these are principally limestone from Derbyshire to Donnington rail freight terminal and construction materials from Moreton-on-Lugg in Herefordshire to various locations around the country, but mainly to the Greater South East. Overall we estimate that the modal share for rail in the Marches is relatively low at less than 2% of total tonnes lifted by road and rail in the Marches.

In Mid Wales both the Cambrian Line between Shrewsbury and Aberystwyth via Newtown and the Heart of Wales Line from Craven Arms to Swansea have no active rail freight flows within the geographic scope of the study. The loading gauge on both lines is restricted, which limits the potential for the development of intermodal services, and settlements are geographically dispersed so there is a lack of critical mass of traffic for any particular location. Both lines are mainly single track (with passing loops in some stations) with long sections between signals which restricts their capacity.

While the rail terminal at Donnington near Telford could have an enhanced role in the future, the Marches and Mid Wales area is likely to lack the critical mass of traffic to justify the development of further rail-connected distribution parks and the area is likely to remain reliant to a great extent on long distance road-based distribution to and from the Midlands, including to and from existing and potential future rail-connected distribution parks.

3.7 Airports & canals

The canals in Mid Wales and the Marches are all narrow gauge canals that are currently exclusively for pleasure use. While it is possible that a small-scale freight operator could secure a niche market in a non-time sensitive market such as waste or aggregates where both the origin and destination of the flows are adjacent to a canal, this is unlikely on a purely commercial basis because of the flexibility and cost-effectiveness of road haulage in competition with slower-moving narrow gauge barges that would be unable to provide significant economies of scale.

None of the airports in Mid Wales handles any freight traffic that is recorded by the Civil Aviation Authority or any scheduled passenger services. Air freight is expensive compared to transport by any other mode and so is used only for very high value or urgent cargo such as seafood, electronic equipment, precious metals and express parcels and is mainly transported in aviation containers to and from long haul locations as bellyhold freight in wide-bodied aircraft. The smallest size of aircraft that can carry containers is the Boeing 737/Airbus A320 and two airports in Mid Wales do not have a runway which is long enough to allow these aircraft to land or take off. Most air freight is consolidated into container loads at regional airports (such as Bristol, Birmingham or Manchester) and then transported by road – often to Heathrow or even Schipol or Frankfurt – to obtain the most cost-effective bellyhold freight rates per kilogramme of weight. In this context it is unlikely that any of the Mid Wales airports would be able to secure any significant volumes of air freight traffic. Businesses located in Mid Wales and the Marches that need to secure access to air freight services are likely to use specialist air freight forwarders that will transport the cargo by road to an air freight consolidation centre before it is transported to a major UK freight airport such as Heathrow, East Midlands or Stansted.

3.8 Warehousing

There are relatively few 'large' distribution centres (more than 8,000 square metres of space) located in the Marches and Mid Wales, which means that distribution flows for the major retailers are to and from large distribution centres located in the Midlands and, for parts of Mid Wales, North West England, the South West and South Wales. However, there is a significant amount of smaller scale warehousing and other storage located in the Marches and in Mid Wales, along with depots for road haulage businesses.

Figure 7: Location of large warehouses in the Marches and Mid Wales and surrounding areas

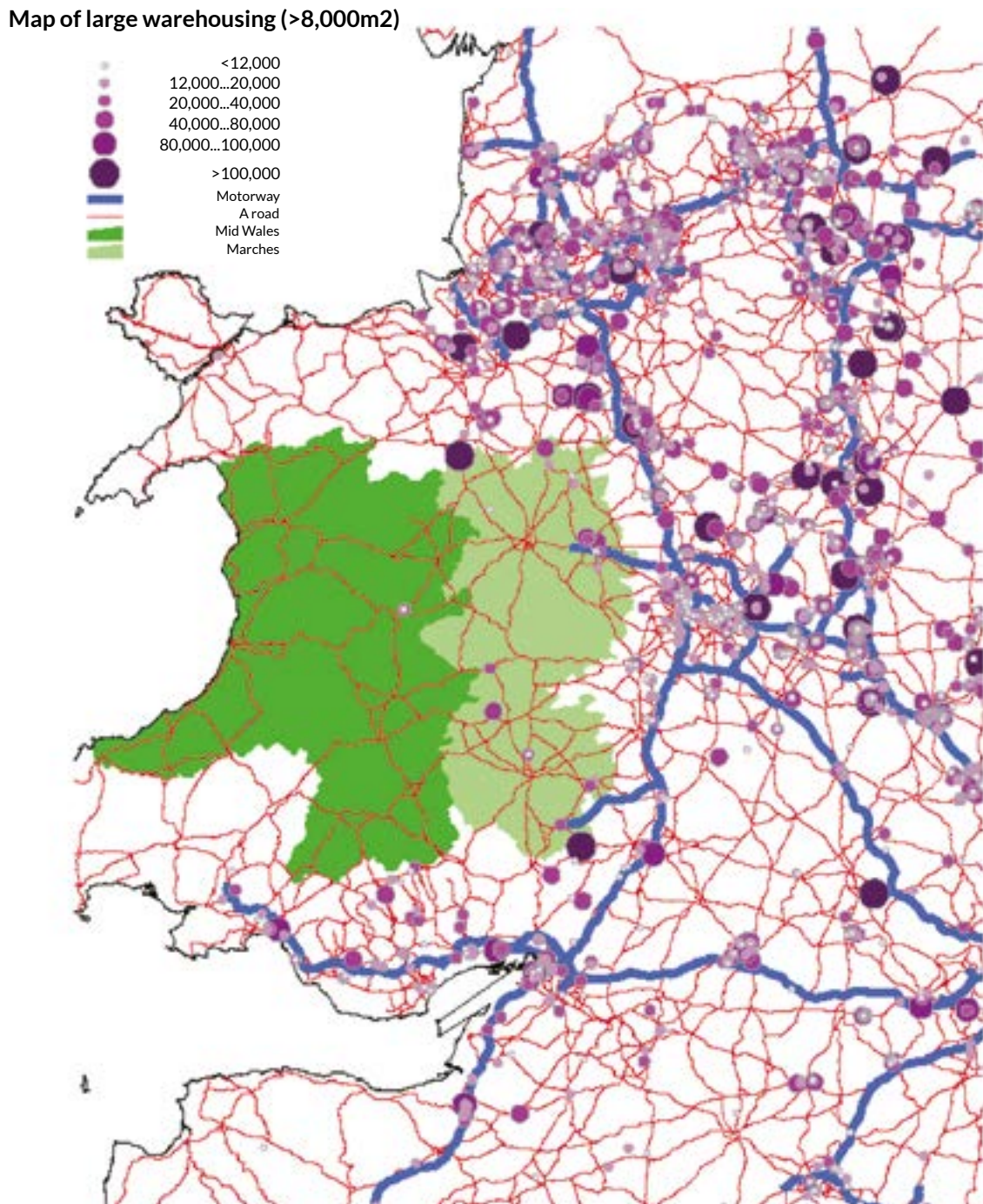
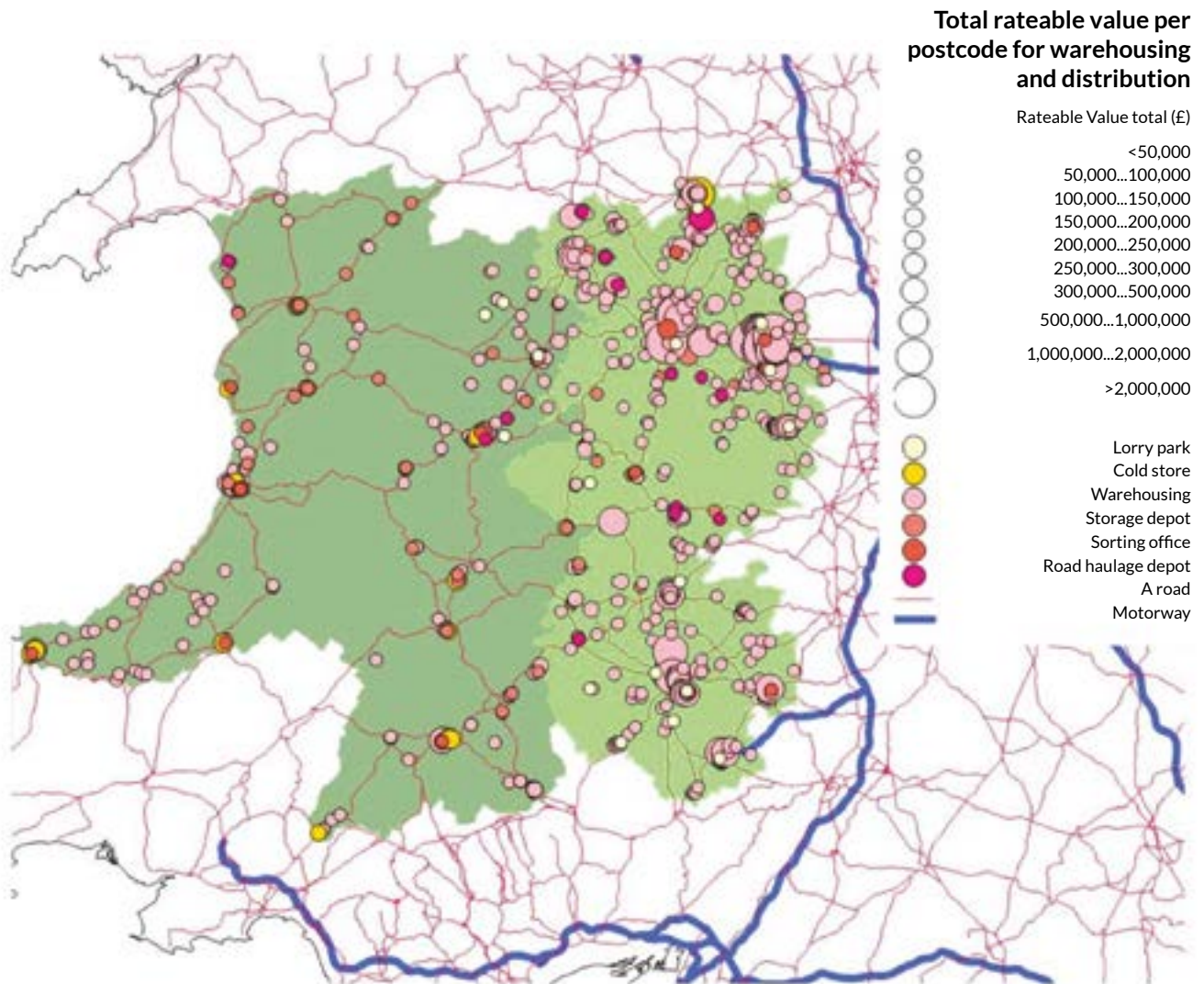


Figure 8: Freight vehicles on the single carriageway road network in the Marches



© Marches Local Enterprise Partnership

Figure 9: Location of warehousing and distribution in the Marches and Mid Wales



3.9 Policy

In January 2017 the UK Government published its *Building our Industrial Strategy* Green Paper, with the objective of improving living standards and economic growth by increasing productivity and driving growth across the whole of the UK. The Government has set out 10 pillars which evidence suggests will drive that growth and the 3rd pillar relates to upgrading infrastructure, including aligning infrastructure investment with local growth priorities. In support of the 3rd pillar, the Government announced a new National Productivity Investment Fund (NPIF) in autumn 2016 that will add £23 billion in investment from 2017-18 to 2021-22, including £2.6 billion for improvements in transport projects to reduce journey times.

In July 2017 the Department for Transport announced there will be a ban on the sale of diesel and petrol cars in 2040. This policy is designed to signal that there will be a shift towards greater use of electric cars and LGVs and also reflects the UK Government's increasing confidence that electric propulsion technology is now sufficiently mature to meet the future requirements of mobility in smaller vehicles.

Otherwise, transport policy set out by the Department for Transport in relation to freight in England focuses on the economic imperative of accommodating long distance heavy freight traffic on the strategic highway network and reducing road congestion, particularly as the Department for Transport has forecast 40% growth in HGV freight traffic between 2010 and 2040. Policy also stresses the need to encourage more sustainable distribution of freight through, where possible, a shift of freight to rail - particularly by locating distribution centres on rail-connected sites - and by encouraging the take-up of alternative low emission fuels for HGVs.

While the regulation of freight transport is a reserved matter for the UK Government, transport policy is devolved to the National Assembly for Wales. Freight policy in Wales and Mid Wales specifically recognises the importance of road freight to the economy and the fact the network is single carriageway with often poor alignments and limited opportunities for passing slow-moving vehicles. There has been a focus in Wales as a whole on seeking to secure modal shift of freight from road to rail and sea, with support in the form of grant funding from the Welsh Government.

At a regional level in England the *Midlands Engine Strategy* sets out how the Government's Industrial Strategy will be applied in the region, with a focus on improving connectivity to raise productivity, strengthening skills, supporting enterprise and innovation, promoting the Midlands nationally and internationally and enhancing quality of life. The Government will invest in local transport projects to enhance regional connectivity and has invited Midlands Connect, the proposed Sub National Transport Body, to develop proposals for improving connectivity across important corridors in the region, including east-west transport links. The *Midlands Connect Strategy: Powering the Midlands Engine* sets out proposals to use a rolling 25-year programme of strategic road and rail improvements to help secure additional employment and more trade and investment for the Midlands. The strategy provides support for a new bypass for Hereford to relieve congestion in the city on the A49 and facilitate the strategic movement of goods through the Marches. Midlands Connect has also published a strategy for freight, which has the objective of providing congestion-free motorways/expressways radiating in all directions from the two hubs for freight and distribution activity around Leicester/Coventry and Birmingham/Black Country.

At a sub-regional level in the Marches, a report published for the Marches LEP and entitled *Investing in Strategic Transport Corridors in the Marches*, describes the key road/rail transport corridors for freight and passengers on both the east-west axis – linking the area to Wales and the rest of the West Midlands – and the A49 on the north-south axis. The report sets out an investment project pipeline, including the M54/M6/M6 Toll Link Road, the A49/A5 Dobbies Island Junction, the Hereford Bypass and Southern Link and the Shrewsbury North West Relief Road.

At a local level policy in the Marches and Mid Wales is focused on providing strong support for strategic highways projects that would increase the efficiency of road freight movements to, from and through the area, as well as managing the impacts of freight activity on residents through:

- Encouraging HGVs to use the strategic highways network rather than using local roads that may not be suitable for heavy traffic;
- Applying planning controls where developments generate significant volumes of HGV traffic;
- Encouraging HGVs to park in suitable locations such as lorry parks or, if necessary, laybys adjacent to the highway.

In addition, while there are no significant air quality issues in Mid Wales and Telford and Wrekin, there are localised air quality issues in the centre of Shrewsbury, in Bridgnorth (both High and Low Towns), in the centre of Hereford and in Leominster. These locations are designated as Air Quality Management Areas (AQMAs) and the local authorities are required to develop Air Quality Management Plans (AQMPs). While poor air quality is often due to the volumes of relatively short distance car traffic, heavy and light goods vehicles - which are almost all diesel-powered - are likely to contribute to the issue of poor air quality in these locations.

4. Potential future trends

4.1 Introduction

While the future structure of the Marches and Mid Wales economies up to 2030 remains inherently uncertain, particularly given the UK's decision to leave the European Union, it seems likely that they will continue to be focused on agricultural production, food and drink processing and high value manufacturing activities, perhaps with an increasing focus on automation to increase productivity. Policy-makers at a local level are likely to continue to focus on enhancing the transport infrastructure to help sustain the economic efficiency of the area, while also seeking to ensure that the Marches and Mid Wales remains an attractive place to live and work.

The economies of scale that are available to large-scale manufacturing plants, allied with increasing automation, will mean that 3D printing and other local manufacturing facilities are unlikely to change the structure of the UK manufacturing sector to any great extent. This means that most manufactured goods will continue to be produced close to the major conurbations, but there are likely to remain opportunities for companies in the Marches and Mid Wales in the high value added manufacturing sectors as products from these sectors can bear the additional freight transport costs involved.

4.2 Retail & distribution

The freight and logistics industry will therefore continue to be essential to the competitiveness of the Marches and Mid Wales economies and, given the dispersed population and low population density, it is likely that retail distribution will continue to be focused, in particular, on deliveries from distribution centres in the Midlands. The key trends in retail are for 'little and often' purchases of groceries and online purchases of non-grocery items and it is likely that this will mean that the 'average' freight vehicle seen in the Marches and Mid Wales will become smaller in the future as there is greater demand for deliveries to smaller convenience stores located in urban areas and villages (rather than large out of town supermarkets) and for the convenience of e-commerce deliveries in smaller HGVs and LGVs to residents' homes and places of work.

4.3 Impact of Brexit

The UK Government has stated that, as a result of Brexit, it wishes to reduce net immigration from the EU and not be subject to the jurisdiction of the European Court of Justice (ECJ). As a result the Government has explained that this means the UK will be leaving the EU Single Market and the Customs Union because continued access would imply acceptance of the free movement of labour and legal oversight by the ECJ. The UK Government is aiming to secure a free trade agreement with the EU following Brexit.

The results of the negotiations between the UK Government and the EU are inherently uncertain and the potential impact of the UK's departure from the EU on the economy of the Marches and Mid Wales is beyond the scope of a freight strategy. However, it appears likely that the impacts on the freight transport sector will be as follows:

- According to the Freight Transport Association some 13% of HGV drivers and 26% of warehouse operatives are citizens of other EU countries and this implies that labour costs in the road haulage and wider logistics sector will rise as a continuous supply of employees from the EU will no longer be available. This is likely to lead to an increase in labour costs as employers will need to offer higher wages, pay for HGV driver training and improve working conditions in order to attract British workers into the industry. These costs will be passed on to businesses and, ultimately, onto consumers across the UK through higher prices. These additional costs would have a proportionally greater impact on businesses in the Marches and Mid Wales than many of the more centrally located areas of the country because of the greater distances involved in accessing key markets.
- Warehousing is likely to become more automated in an attempt to reduce the requirement for labour and to reduce costs. However, this investment is likely to be focused on larger distribution centres that are not generally located in the Marches and Mid Wales.
- Manufacturing and food processing businesses in the Marches and Mid Wales are likely to become less integrated into supply chains in the EU unless a tariff free trade agreement can be secured. This is likely to have a particularly significant impact on industries that rely on cross-border supply chains, such as the automotive sector and some food processing. While inbound movements of imported semi-finished goods from the EU will continue to be transported by overseas hauliers, their ability to take advantage of cabotage rules to carry out domestic movements on behalf of UK shippers is likely to cease. This means that UK hauliers will experience less competition and will tend to lead to increases in road haulage costs.
- Any restrictions to trade with the EU may provide a stimulus to domestic production and imports from non-EU countries. An increase in domestic production will tend to confirm the Midlands and some areas of the North of England as the most cost-effective location for distribution centres, while there may be a switch of some distribution activity towards the deep sea ports such as Felixstowe, Southampton, London Gateway, Liverpool and Immingham.

4.4 Technological change

The main technological change in the road haulage industry up to 2030 at a national level may be the introduction of 'platoons' of HGVs that travel together on the strategic highways network and provide fuel efficiencies to road hauliers due to being more aerodynamic. These would not be genuinely autonomous vehicles because they would still require a driver to be located in each cab. Without significant technological improvements it seems unlikely that these platoons would be seen on the Marches and Mid Wales road network apart from on the M54 and the M50 and, except on motorways and dual carriageways, these platoons would reduce overtaking opportunities and raise safety concerns.

The HGV fleet will gradually become cleaner as road hauliers increasingly purchase new HGVs which have to conform to Euro VI standards. These vehicles meet stricter emissions standards under both laboratory and real world conditions and remove almost all emissions of particulate matter and reduce nitrogen oxide emissions from HGVs by up to 95%. Further improvements in engine technology up to 2030 may focus to a greater extent on increasing the efficiency of diesel engines and therefore reduce emissions of carbon.

Given the UK Government's decision to ban the sale of diesel and petrol cars and LGVs from 2040, it seems increasingly likely there will gradually be a greater take-up of electric HGVs and LGVs at a national level for relatively short distance flows, but – without a step-change in battery technology - this is most likely to be for deliveries from distribution centres located close to the major conurbations rather than to towns and cities located in more peripheral locations.

Figure 10: Cargobike deliveries in Hereford



© Hereford Pedikabs & Cargo, 2017

Deliveries of parcels by bicycle are already possible in Hereford and this concept could be expanded to other towns and cities for light-weight and smaller parcels, particularly as separate infrastructure is developed for cyclists. With the increased importance of e-commerce, which involves the delivery of smaller parcels rather than larger consignments to retail outlets, the international parcels delivery companies that work for e-commerce retailers are more prepared to hand over parcels for 'last mile' deliveries to local courier companies for city centre deliveries and for deliveries to relatively remote locations such as parts of Mid Wales.

5. Strengths, weaknesses, opportunities & threats

5.1 Introduction

The Marches and Mid Wales Freight Strategy needs to take advantage of the opportunities and strengths that emerge from the evidence base that has been developed, while also highlighting any weaknesses and constraints that should, as far as possible, be addressed. This is summarised in the following SWOT analysis, which is based on analysis of the business environment within which companies in the Marches and Mid Wales are operating and also reflects the views of stakeholders who were contacted during the study. The key opportunities and constraints lead to consideration of the investments and other interventions that would address them in section 6 of this strategy.

5.2 SWOT analysis

STRENGTHS

- Agricultural base to economy in the Marches and Mid Wales with key strengths in agricultural production, processing and agri-tech, as well as advanced manufacturing and security.
- Proximity to the Midlands, the North West and South Wales to support key supply chains (e.g. automotive) and for retail distribution.
- M54 and M50 links providing motorway standard east-west links to and from the West Midlands conurbation.
- Non-motorway standard trunk roads on a north-south axis (e.g. A49, A483, A470 and A487) and an east-west axis (e.g. A44, A5, A458, A40, A483) providing connectivity to the North West, the West Midlands, the South West and North and South Wales.
- Access to the Marches Line for north-south rail freight movements with a reasonable loading gauge for intermodal traffic and via the Shrewsbury-Birmingham Line for bulk/conventional rail freight traffic.
- Cross-border partnership between Mid Wales and the Marches to address common freight issues.

OPPORTUNITIES

- Enhancements to the mainly single carriageway road network to reduce journey times and increase journey time reliability, such as the Shrewsbury North West Relief Road, the Hereford Bypass and Southern Link, the A483 Llanmynech-Pant Bypass and the A458 Buttington Cross to Wollaston Cross scheme.
- The Midlands Engine and Midlands Connect, providing a regional focus for economic growth and enhanced connectivity.
- Highways maintenance investment strategy to maintain the quality of the existing highway network for HGVs.
- Developing high value added manufacturing, which is less sensitive to the cost of transport of raw materials, semi-processed goods and finished products.
- Greater focus on domestic production of food following Brexit.
- Further analysis of the (limited) potential of rail freight to secure modal shift.
- Lower emissions from HGVs due to greater take-up of Euro VI HGVs.
- Greater focus on managing road freight movements on unsuitable roads in order to reduce their impacts.

WEAKNESSES

- Relatively peripheral compared to the West Midlands conurbation, which increases costs for manufacturers and processors located in the Marches and Mid Wales.
- Mainly single carriageway highways network on the main north-south routes and on many east-west routes, leading to poor average speeds, long journey times and poor journey time reliability.
- Poor condition of the highways network.
- Lack of alternative routes, with low network resilience in the event of incidents.
- Congestion on the strategic highways network on the M6 and M5 through the West Midlands conurbation.
- Villages and hamlets situated on trunk roads that are physically and environmentally sensitive to heavy traffic.
- Transit traffic through the area en route to Ireland, the North West and South Wales.
- Slow-moving farm traffic on the road network, leading to queues of traffic and risky overtaking manoeuvres.
- Short average length of haul for HGVs, limiting the potential for modal shift to rail.
- Business premises not always located adjacent to the strategic road network, which sometimes requires navigation of narrow streets to gain access.

THREATS

- Increasing peripherality due to poor quality road infrastructure, leading to lower business efficiency and businesses relocating to more cost effective areas of the UK.
- Impacts on residents such as the intimidation of vulnerable road users (pedestrians and cyclists) and HGVs using routes, which are unsuitable for heavy goods traffic.

5.3 Feedback from consultation

The key issues that emerged for businesses in the Marches and Mid Wales from the stakeholder consultation programme are the poor quality of the single carriageway roads and the resulting slow door-to-door journey times that this leads to. A major issue is also the number of farm vehicles that use the network which lead to slow journey times and tailbacks. There is also concern about congestion at some junctions and through some towns. Many of the businesses which are receiving or despatching goods did not regard the additional cost of freight transport due to their more peripheral location as being a significant issue; however, this is likely to be reflected in the costs incurred by their freight transport contractors, which will normally have to pass these costs on to their clients.

6. Schemes and interventions

6.1 Introduction

Some 34 interventions were identified and appraised that would help the Marches and Mid Wales to meet its strategic objectives in relation to freight and logistics. The interventions were established based on a review of best practice, discussions with the Steering Group and feedback from businesses through the stakeholder programme. The business community stressed, in particular, the importance of interventions that would increase the capacity of the road network, reduce the impact of bottlenecks and increase journey time reliability, as well as the need for improved maintenance of the road network.

The interventions were grouped into the following categories:

- **Highways management and maintenance:** defining for planning purposes a Freight Route Network (FRN) on which strategic freight movements are likely to be concentrated and upon which infrastructure enhancements can be focused. This also includes interventions on the FRN to maintain the existing highway network and ensure that it is fit for purpose for freight movements.
- **Highways enhancements:** specific schemes on the FRN that would reduce journey times and increase journey time reliability for the freight and logistics industry and their customers.
- **Planning and regulation:** interventions to ensure that development opportunities take account of the associated freight movements and reduce emissions from HGVs and LGVs in areas of poor air quality.
- **Rail freight:** potential interventions to encourage a switch of some traffic to rail.
- **Dissemination & liaison:** provision of accurate information to users of the road network to facilitate informed decision-making by transport operators (particularly in relation to routes through settlements) and to encourage behavioural change.

A high level appraisal of the 33 interventions was carried out using multi-criteria analysis according to the following main criteria:

- **Economic impact:** The extent to which the measure would reduce industry costs, improve journey time reliability and create direct employment in the Marches and Mid Wales.
- **Environmental/quality of life impact:** The extent to which the measure would improve air quality, reduce greenhouse gas emissions, reduce the number of accidents and therefore increase safety and otherwise improve the quality of life for the people who live and work in the area.
- **Deliverability:** The extent to which the measure is likely to be feasible from a technical and political point of view.
- **Affordability:** The extent which the measure is likely to be costly and represent good value for money for the public sector.

6.2 Highways management & maintenance

The key highways planning concept is the development of the **Freight Route Network (FRN)**. This would be an informal definition for the purposes of transport planning only and would consist of the Strategic Road Network (SRN) plus selected additional county roads that accommodate significant volumes of HGVs in absolute and relative terms. The FRN would allow the available resources to be focused on key freight routes in the Marches and Mid Wales.

Physical signage should be reviewed to ensure that HGVs are encouraged to use suitable routes between the FRN and key freight generators and attractors of freight.

While major issues related to HGV parking have not emerged from the consultation for this strategy, it would be advisable to carry out a review of the **supply and demand for HGV parking** in the Marches and Mid Wales, with a focus on the provision of sufficient parking spaces on the FRN and close to industrial estates and warehousing. Where necessary, this should lead to the development of additional overnight parking facilities in a limited number of key locations.

The existence of the FRN would also encourage a strong focus on the **maintenance of the highways** that are most important for the circulation of HGVs by Highways England, the Welsh Government and the local authorities. This is particularly important because of the size, weight and height of HGVs, the wear and tear on the structures and the potential damage to HGVs as a result of poor maintenance. This focus on maintenance can be assisted by the use of highways maintenance planning tools, such as the Highways Maintenance Assessment Tool (HMAT), which allows councils to develop investment strategies that assess the contribution of highways maintenance to economic efficiency and economic growth.

Local authorities could introduce **speed limits and traffic calming interventions** in selected locations where these are required to slow HGV and other traffic in 'sensitive' locations. Speed restrictions could be introduced only for part of the day, such as when children are going to and from school, rather than throughout the day and night. Such schemes should only be introduced in selected locations as they lead to longer journey times and may lead to additional costs for business. The schemes should be developed for the particular circumstances of the location, taking into account for example where there is an absence of footpaths and narrow roads where HGVs are unable to pass each other and could include 30mph or even 20mph speed limits and other means to reduce speed such as the removal of centre and edge lines and differential surfacing. Where these schemes would be implemented on the FRN they should be supported by a strong business case and where they are also on the SRN they should only be introduced as part of a route strategy by Highways England and the Welsh Government.

Table 6: Summary of high level appraisal

Measure	Economic impact	Environmental & quality of life impact	Cost to public sector	Deliverability
Definition of Freight Route Network for transport planning purposes	Positive	Positive	Low	Good
Signing of access between the FRN and key attractors or generators of freight	Positive	Positive	Low	Good
Review of HGV parking provision on the Freight Route Network	Neutral	Positive	Medium	Good
30 mph speed limits with warning signs & traffic calming interventions in selected 'sensitive' towns and villages	Negative	Positive	Medium	Good
Improved maintenance of the FRN, including through the use of highways maintenance planning tools	Positive	Positive	Medium	Good

6.3 Highways enhancements

The key interventions, which were also highlighted by the business community, relate to the need to reduce journey times and increase journey time reliability for freight movements to, from, within and through the Marches and Mid Wales area, while relying on an essentially single carriageway network. The strategy therefore includes several interventions that would provide opportunities for overtaking farm vehicles and slow-moving HGVs by freight vehicles and passenger cars. These interventions would also lead to reduced driver frustration and increase safety on the network. The interventions are:

- **Sections of 2 on 1 roads:** short sections of carriageway of at least 13.5 metres in width which allow overtaking in one direction for a stretch of the highway for at least 600 metres and up to 2,000 metres. Overtaking opportunities should be available in both directions alternately and in reasonable proximity to each other and should be at least 2km from the nearest dual carriageway and 500 metres from an access point to the road.
- **Differential Acceleration Lanes (DALs):** provided on the exit from roundabouts to enable vehicles leaving the roundabout to overtake slower-moving vehicles.
- **Crawler lanes:** an additional lane added to a single carriageway to improve capacity and/or safety because of the presence of the steep gradient. A climbing lane can be considered on single carriageway roads with gradients greater than 2% and longer than 500 metres.

Online enhancements, such as straightening, removing bends and widening of narrow sections at selected locations to allow HGVs to pass one another would also increase the safety of the network and reduce journey times. A programme of **enhancements to selected structures** that are sub-standard would allow 44 tonne HGVs to operate across the whole of the network.

Schemes for increasing the number of opportunities for overtaking and online enhancements and enhancements to selected structures should be considered as part of route strategies on the FRN and this is likely to include the following routes in the Marches and Mid Wales: A49, A483, A470, A5, A487, A458, A44, A438, A456 and A40.

Figure 11: Enhancements to Junction 4 of the M54



© The Marches LEP, 2017

There are also a number of key schemes which would reduce the impact of bottlenecks on the FRN, providing shorter journey time savings and increased journey time reliability for freight movements. These are:

- Hereford Bypass and Southern Link: bypass to the west of the city with a new crossing of the River Wye, with the objective of removing north-south strategic traffic from the city.
- M54 link to northbound M6/M6 Toll: new motorway link so that northbound traffic on the M54 can access the M6 directly rather than via the A449; the scheme would also provide a direct link between the M54 and the start of the M6 Toll road.
- A49/A5 Dobbies Island Junction Improvement: enhancements to the junction between the A49 north south route and the A5 Shrewsbury ring road meet to the south of Shrewsbury;
- Leominster Bypass: a bypass to the southwest of Leominster allowing east-west traffic on the A44 to avoid the town centre.
- New Dyfi Bridge on the A487: a scheme to replace the bridge across the River Dyfi (which is prone to flooding) on the A487 to the north of Machynlleth.
- A483 Pant to Llanymynech Bypass: bypass of two villages on the A483 between Welshpool and Oswestry, which will reduce journey times between Mid Wales and Deeside and the North West of England.
- A458 Buttington Cross to Wollaston Cross: scheme to improve about 9km of sub-standard trunk road (also with a poor accident record), which will reduce journey times between Mid Wales and the West Midlands via Shrewsbury.
- Shrewsbury North West Relief Road: a scheme to complete the final section of the ring road around Shrewsbury to link the A49/A53 at Battlefield to the A5/A458 at Bicton Heath, which will reduce journey times between the west and the north of Shrewsbury.
- Dualling or partial dualling of the A5/A483: a scheme to provide a dual carriageway route from the end of the A5 Shrewsbury Bypass to the start of the dualled A483 at Ruabon.

Table 7: Summary of high level appraisal

Measure	Economic impact	Environmental & quality of life impact	Cost to public sector	Deliverability
Sections of 2 on 1 roads (online enhancements)	Positive	Positive	High	Good
Differential Acceleration Lanes (DALs)	Positive	Positive	Medium	Good
Crawler Lanes	Positive	Positive	High	Good
On-line enhancements to the trunk road network	Positive	Positive	High	Good
Hereford Bypass and Southern Link	Positive	Positive	High	Good
M54 link to northbound M6/M6 Toll	Positive	Positive	High	Good
A49/A5 Dobbies Island Junction Improvement	Positive	Positive	Medium	Good
New crossing of the River Dyfi on the A487	Positive	Positive	High	Good
Leominster Bypass	Positive	Positive	Low	Good
A483 Pant to Llanymynech Bypass	Positive	Positive	High	Good
A458 Buttington Cross to Wollaston Cross	Positive	Positive	High	Good
Shrewsbury North West Relief Road	Positive	Positive	High	Good
Dualling (or partial dualling) of the A5/A483 between Shrewsbury and Ruabon	Positive	Positive	High	Good
Enhancement of structures on the Freight Route Network to allow 44 tonne HGVs	Positive	Positive	Medium/High	Good

6.4 Planning & regulation

Much of the regulation in relation to freight transport is developed and implemented at a UK national and European level and unnecessary additional regulation at a local or regional level only reduces the degree of regulatory harmonisation and increases costs for the freight industry. The public sector at a local level can, however, have a major influence over freight movements through the land use planning and development process.

There should be a **review of the development control process** by the local authorities in relation to access to the key route network from developments that generate additional HGV traffic. As required by planning guidance there should be a presumption in favour of the development of activities which will create employment and economic development, but the impact of additional road freight movements on the area around new attractors or generators of freight should be considered as part of the development consent process. The development control process should also take into consideration the need for off-road parking for HGVs when making (or waiting for) deliveries and collections so that HGVs do not have to park on the public highway.

Given that much of the retail sector in the Marches and Mid Wales is supplied from the Midlands and the business community based in the area rely on the Midlands motorway network to distribute their goods to customers, this strategy supports the **Midlands Connect Freight Strategy** and its focus on securing additional strategic road capacity through the Midlands. The strategy also supports the results from the **Transport for the North Freight Study**, which focuses on interventions which would lead to a reduction in the volume of road freight movements that transit the Midlands on the north-south axis.

The air quality issues in the Marches and Mid Wales are highly localised and where there are issues, they are unlikely to be mainly due to freight vehicle movements. However, movements of diesel-powered HGVs and LGVs will contribute to poor air quality and the strategy proposes that a **review is carried out of freight movements and deliveries and collections in Shrewsbury, Hereford, Leominster and Bridgnorth** to establish the extent to which freight activity is a major contributor to poor air quality and what local interventions could be introduced to reduce the impacts. Any interventions that are introduced should take into account the operational requirements of the freight industry and their customers.

Councils should use 'Unsuitable for HGVs' signs to encourage freight vehicles over a certain weight or size from using particular routes because they would not be able to be accommodated safely on the route.

As a last resort, highways authorities may also be justified in applying Transport Regulation Orders (TROs) in some locations to restrict access by some freight vehicles and to increase use of 'Except for loading' restrictions. However TROs should be applied sparingly and based on a strong business case to avoid significantly restricting the circulation of traffic and to avoid opposition from the business community.

Table 8: Summary of high level appraisal: planning & regulation

Measure	Economic impact	Environmental & quality of life impact	Cost to public sector	Deliverability
Review of development control process	Negative	Positive	Low	Good
Require adequate off-road parking for HGVs making deliveries & collections at development sites	Negative	Positive	Low	Good
Support for Midlands Connect & TfN freight strategies	Positive	Positive	Low	Good
Review of freight deliveries & collections in the centre of Shrewsbury, in Bridgnorth, Hereford and Leominster.	Neutral	Positive	Low	Good
'Unsuitable for HGVs' signs on certain routes	Positive	Positive	Low	Good
Restrict movements of freight vehicles over 7.5 tonnes gross vehicle weight using TROs.	Negative	Positive	Low	Good

6.5 Rail freight

Rail freight may be able to provide an opportunity to shift some road freight to rail in some markets. However, road freight will remain by far the dominant mode for freight transport in the Marches and Mid Wales because of the dispersed pattern of settlement and economic activity (which reduces the critical mass of traffic to fill a train for any particular location) and issues related to the infrastructure which reduce the capacity and capability of the network to accommodate rail freight services.

Some initial feasibility work has been undertaken on the potential for a 'supermarket train' carrying retail goods in containers between the Midlands and (say) Shrewsbury and Machynlleth or Newtown (to serve the wider Mid Wales area). The relatively short distances involved, the restricted loading gauge and capacity issues on the Cambrian Line from Shrewsbury to Aberystwyth and the cost involved in final collection and delivery between a rail head and supermarkets in Mid Wales are likely to make the concept quite marginal economically. The strategy proposes that a more detailed feasibility study is carried out in conjunction with the relevant supermarket chains to investigate the concept further. This feasibility work should consider the potential role of operating and capital grant funding from existing schemes run by the Department for Transport and the Welsh Government to support the service.

The **Telford International Railfreight Park at Donnington** is the only common user rail terminal in the Marches and Mid Wales and is at present being used to handle construction materials. It has struggled to secure additional traffic and the strategy proposes that a practical marketing exercise is carried out to establish potential new markets that the terminal could address. The attractiveness of the terminal would be enhanced by increasing the loading gauge for intermodal traffic between Birmingham and Shrewsbury via Donnington; this is likely to be achieved most cost-effectively when the route is electrified. Otherwise, the area would benefit indirectly from long distance intermodal rail freight traffic being handled at existing and proposed Strategic Rail Freight Interchanges in the Midlands, with onward distribution to and from the Marches and Mid Wales by road.

The strategy also proposes that a review is carried out of potential opportunities for major manufacturers located in the Marches and Mid Wales to use **local railheads** for the inbound distribution of raw materials and/or the outbound distribution of products. However, the number of such businesses is likely to be quite limited.

Table 9: Summary of high level appraisal: rail freight

Measure	Economic impact	Environmental & quality of life impact	Cost to public sector	Deliverability
Feasibility study for a 'supermarket train' between the Midlands area & (say) Shrewsbury & Machynlleth or Newtown	Positive	Positive	Low (for a study)	Good
Increased loading gauge from Shrewsbury to Birmingham via Donnington	Positive	Positive	High	Uncertain
Marketing study for Donnington rail freight terminal	Positive	Positive	Low (for a study)	Good
Review of potential railheads for key shippers of freight	Positive	Positive	Low (for a review)	Good

6.6 Dissemination, liaison & behavioural change

With the increasing use of satellite navigation systems, there is a need to ensure that the managers of HGV fleets and their drivers have up-to-date information on the status of structures such as bridge heights and width restrictions on roads. The strategy proposes that local authorities in the Marches and Mid Wales should contribute up-to-date data on structures and regulations affecting the highway network at a local level to the **Ordnance Survey National Digital Road Map Database**, so that this information can be made available to the major satellite navigation system manufacturers. The local authorities should also provide the same information to **private sector freight transport planning portals**, such as the internet-based Freight Journey Planner; the latter will not be effective unless mobile phone connectivity is adequate throughout the area.

There is also scope for the development of **local freight partnerships**, coordinated by the local authority, to raise awareness of the needs of local businesses in relation to freight movements and the impacts that freight movements have on local communities. These partnerships would be most likely to be developed for a small number of communities in the Marches and Mid Wales where there is a significant conflict between the interests of local businesses and those of local residents. The partnerships, which may only be required for a short period of time, could be used to:

- Bring businesses and residents together to increase mutual understanding and reach agreement on future actions; this could include practical awareness-raising projects where HGV drivers have the opportunity to walk or cycle through the streets through which they usually drive and residents have the opportunity to sit in the cab of an HGV.
- Allow local authorities to establish and explain the most appropriate routeing for HGVs to local businesses and their hauliers in order to avoid the application of a Transport Regulation Order or other regulatory measure.

There should also be a communications campaign, in collaboration with the National Farmers Union and the police, to encourage the drivers of **slow-moving agricultural vehicles** behind which queues of traffic have formed, to pull off the public highway into laybys where it is safe to do so and allow faster-moving traffic to pass.

This should be accompanied by the **installation of signs** a short distance before laybys where slow-moving agricultural vehicles might be able to safely pull off the road, stating for example, 'Slow-moving agricultural vehicles - Please pull over'. The precise wording should be agreed with the police and in liaison with the National Farmers Union (NFU).

At relevant junctions in towns and cities in the Marches where there is known to be relatively poor air quality, signs should be installed at the appropriate height for HGV cabs to encourage drivers to switch off their engines when they are waiting at junctions and stating, 'No idling – Please switch off your engines'. The precise wording should be agreed with the police and in liaison with the Freight Transport Association (FTA) and the Road Haulage Association (RHA).

Table 10: Summary of high level appraisal: dissemination, liaison & behavioural change

Measure	Economic impact	Environmental & quality of life impact	Cost to public sector	Deliverability
Contribute data to the Ordnance Survey National Digital Road Map database and private sector web-based portals	Positive	Positive	Low	Good
Developing local freight partnerships for specific communities	Positive	Positive	Low	Good
Communications campaign for the drivers of slow-moving agricultural vehicles	Positive	Positive	Low	Good
'No idling – Please switch off your engines' signs at relevant junctions in towns and cities where there are air quality issues	Neutral	Positive	Low	Good
'Slow-moving agricultural vehicles - Please pull over' signs on relevant stretches of single carriageway network	Positive	Positive	Low	Good

6.7 Potential benefits from implementation of the strategy

The estimated benefits for HGV traffic from the implementation of the major highways projects included in the strategy are at least **£149 million**. This excludes benefits for vans and for passenger traffic. Most of these benefits for heavy freight traffic would be secured initially by the freight transport operators but would then be passed on to shippers and receivers of freight through competitive market forces. These benefits would also therefore help to reduce the cost base of businesses located in the Marches and Mid Wales and support the creation or retention of employment.

An Action Plan for the strategy is being developed by the organisations that commissioned the strategy.

Glossary of terms

'2 on 1' roads only.	Short sections of mainly single carriageway road where overtaking is allowed in one direction only.
Cabotage	EU rules which allow foreign registered HGVs to carry out haulage work for UK clients before returning to their country of registration.
Common user rail freight terminal	An 'open access' rail terminal that can be used by a number of different rail freight operators to load and unload cargo.
Crawler Lane	An additional outside lane on an uphill section of a road to allow faster moving vehicles to overtake slower moving vehicles.
Differential Acceleration Lane (DAL)	Additional outside lane on the exits from a roundabout to allow faster moving vehicles to overtake slower moving vehicles.
Distribution centre	Warehouse used to store goods prior to distribution to final customers.
Heavy Goods Vehicle (HGV)	Commercial vehicle for the transport of freight with a gross vehicle weight over 3.5 tonnes.
Intermodal rail freight	The transport of goods in intermodal units ('boxes') which can be transported by rail and then transferred to road vehicles for final delivery.
Light Goods Vehicle (LGV)	Commercial vehicle for the transport of freight with a gross vehicle weight under 3.5 tonnes.
Loading gauge	The cross section of a railway line which allows a railway wagon with an intermodal unit to pass without hitting structures such as tunnels or bridges.
Online enhancement	Improvements to a highway on or immediately adjacent to the existing road alignment.
Passing loops	Sidings off a main railway line where slower moving freight trains can wait for faster passenger services to pass before continuing their journey.
Rail head	A rail terminal where cargo can be loaded and unloaded.
Transport Trans-European Network (TEN-T)	Designation by the EU of certain nodes and links on the transport network as being of European significance. The most important nodes and links are on the 'core network', while other links and nodes are on the 'comprehensive network'.

This strategy was commissioned by the following organisations:

- Ceredigion Council
- Growing Mid Wales Partnership
- Gwynedd Council
- Herefordshire Council
- Marches Local Enterprise Partnership
- Powys Council
- Shropshire Council
- Telford & Wrekin Council
- Welsh Government



Welsh Translation paid for using EU funding

The Marches & Mid Wales Freight Strategy