

Mid Wales Regional Highways Strategy

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Mid Wales Regional Highways Strategy

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1 Introduction

1.1 Overview

The Highways Strategy has been produced for TraCC. Trafnidiaeth Canolbarth Cymru (TraCC) is the Regional Transport Consortium for the Mid Wales region, made up of the counties of Ceredigion, Powys and part of Gwynedd (the former Meirionnydd district) and includes parts of the Snowdonia and Brecon Beacons National Parks. The Consortium seeks to work together and with partners to deliver improvements to the transport system in and to the TraCC region.

The TraCC Regional Transport Plan (RTP) was approved by the TraCC Board in September 2009 and subsequently endorsed by the Welsh Government. The RTP established a vision for the TraCC region:

'To plan for and deliver in partnership an integrated transport system in the TraCC region that facilitates economic development, ensures access for all to services and opportunities, sustains and improves the quality of community life and respects the environment'

Ten regional priorities were also established, as set out below:

- Reduce the demand for travel;
- Minimise the impact of movement on the global and local environment and ensure the highest levels of protection to European Sites;
- Improve safety and security for all transport users;
- Improve travel accessibility to services, jobs and facilities for all sectors of society;
- Improve the quality and integration of the public transport system including the role of community transport;
- Provide, promote and improve sustainable forms of travel;
- Maintain and improve the existing highway and transport infrastructure;
- Ensure travel and accessibility issues are properly integrated into land use decisions;
- Improve the efficiency, reliability and connectivity of movement by all modes of transport within and between Mid Wales and the other regions of Wales and England; and
- Deliver a co-ordinated and integrated travel and transport network through effective partnership working.

The RTP thus prioritises the maintenance and improvement of the existing highway and transport infrastructure, as well as addressing issues of safety, accessibility, efficiency, reliability and regional connectivity.

In relation to the road network, the RTP delivery has focussed to date on bringing forward the Pont Briwet scheme at Penrhyndeudraeth. There has been an emphasis in the programme on sustainable travel improvements including walking and cycling infrastructure, smarter choices

and public transport. Whilst this has reflected the availability of funding, TraCC recognise the importance of improving the highway network to the economy, social fabric and environment of the Region.

The road network of Mid Wales is extensive with nearly 11,000 km of roads of which 93% are roads managed by the three Local Authorities (the remaining 7% are Trunk Roads managed by the North and Mid Wales Trunk Road Agency). Figure 1.1 shows the road network indicating the trunk roads and principal roads in the Region and the key settlements (as defined in the Wales Spatial Plan).

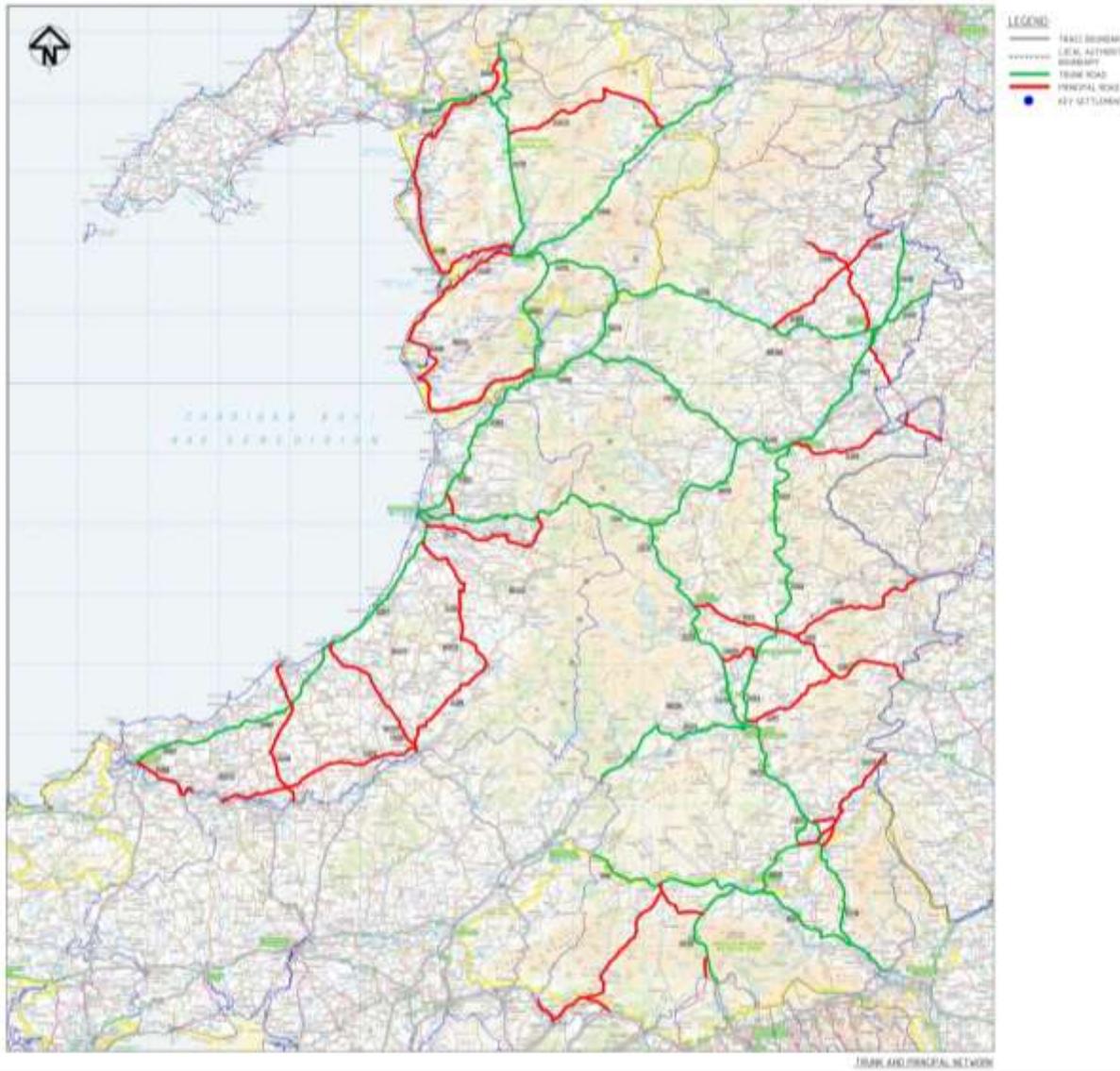


Figure 1.1: Trunk Road and Principal Road Network

1.2 Strategy Purpose and Process

TraCC has commissioned the Regional Highways Strategy in order to put in place a coherent approach for highways in the Region which can be used to guide RTP investment, ensure regional priorities are fully represented in national spending and support the Local Authority programmes for highways investment and maintenance. The strategy is for all highways in the Region, whether they are managed by the Local Authorities or the Trunk Road Agencies, in order to ensure that priorities are based on need and potential benefits rather than on responsibilities.

The purpose of this strategy is therefore to provide a framework for highways investment. The strategy document provides a long-term direction. The document comprises an overview of the policy context, the highways context, problems and opportunities, and the strategy.

Accompanying this strategy will be a separate document entitled 'Prioritised Programme for Highways Investment 2012'. This comprises a five year programme of schemes, prioritised using the evaluation framework from the strategy together with priorities for the region which may be delivered by Welsh Government. The separation of the Highways Strategy into two parts will enable the five year programme to be updated regularly, depending on funding and delivery issues.

This document is the Draft Highways Strategy. It has been developed by Hyder Consulting on behalf of TraCC. In developing the Draft Strategy, consultations have been carried out with each of the Local Authorities together with officers of MWTRA and the Welsh Government. The discussions have helped to confirm the issues for the highway network, establish the priorities for each Authority including which routes are strategically important and what types of improvements would be most beneficial and invited Local Authorities to submit potential schemes for the programme.

TraCC has separately developed a Draft Passenger Transport Strategy and a Walking and Cycling Strategy (approved by the TraCC Board in March 2012). Once the three strategies are complete, there will be a comprehensive approach to future transport priorities and investment in Mid Wales in support of the Regional Transport Plan.

2 Policy and Strategy Context

2.1 Introduction

This section provides a review of the relevant policy documents and strategies of relevance to the Mid Wales highway network. The documents provide the policy framework for the development of the Highways Strategy and Prioritised Programme for Mid Wales.

2.2 National Policies and Plans

Wales Spatial Plan (2008 update)

The Wales Spatial Plan (referred to as the WSP hereafter) provides a broad 20 year agenda for spatial planning in Wales and sets out its' overall role, purpose and principles, which are:

- Making sure that decisions are taken with regard to their impact beyond the immediate sectoral or administrative boundaries and that the core values of sustainable development govern everything the Assembly Government do;
- Setting the context for local and community planning;
- Influencing where money is spent by the Welsh Assembly Government through an understanding of the roles of and interactions between places; and
- Providing a clear evidence base for the public, private and third sectors to develop policy and action.

It is a principle of the WSP that development should be sustainable. The Wales Spatial Plan aims to deliver sustainable development through its Area Strategies, setting out cross-cutting national spatial priorities. These provide the context for the application of national and regional policies for specific sectors, such as health, education, housing and the economy, reflecting the distinctive characteristics of different sub-regions of Wales and their cross-border relationships.

The WSP identifies six sub-regions in Wales without defining hard boundaries, reflecting the different linkages involved in daily activities. The Central Wales Spatial Plan Area is larger than the TraCC region, but the Area Framework developed for Central Wales clearly reflects the objectives and aspirations of the TraCC region. The Central Wales vision is for *'high quality living and working in smaller-scale settlements set within a superb environment, providing dynamic models of rural sustainable development, moving all sectors to higher value added activities'*.

Achieving the vision for Central Wales requires collaborative action and the agreed priorities for the area include in summary:

- Building on the important key centres in the Area, whilst improving linkages and spreading benefit and growth to the wider hinterlands and rural communities that fall outside those immediate places; Responding to the needs of our rural communities and hinterlands by enabling appropriate and integrated growth and development, and empowering local communities to enhance their level of sustainability
- Supporting the existing rural economic sectors, including agriculture, non-food and food production to develop their potential and create higher value production opportunities;
- Broadening the economic base, building on the Area's higher education infrastructure and introducing new sustainable economic opportunities including those of the knowledge economy sectors across the rural area;

- Realising the full potential of the Area's diverse environment and its unique cultural identity as a means of maintaining the region's rural and natural integrity, to build higher value sustainable tourism and to enhance its role in responding to the effects of climate change; and
- Maximising internal and external accessibility (including the improvement of broadband and telecommunication links), building effective cross-border collaboration within Wales and with neighbouring English and Irish regions, increasing access to a wide range and quality of services and enhancing the overall economic growth of the area whilst widening employment opportunities.

The Spatial Plan identifies two key issues for future transport and communication networks, firstly to improve accessibility to jobs and services and secondly achieving changes in travel behaviour in response to the effects of climate change. The primary settlements, hubs and clusters as illustrated in the Central Wales Spatial Plan Area map (included as **Figure 2.1**) are:

- **Aberystwyth**, identified as a primary settlement consistent with its role as a strategic centre for Central Wales, and its national significance for Wales, forming a cluster with Aberaeron;
- The **Brecon Beacons** cluster;
- **Carmarthen**, identified as a primary settlement with a strategic role in three Spatial Plan Areas;
- The **Llandrindod Wells** cluster;
- The **Rural Meirionnydd and Conwy** cluster;
- The **Severn Valley** cluster with **Newtown** identified as a primary settlement; and
- The **Teifi Valley** cluster.

The strategy was released in 2003 and set out a number of ambitious targets for casualty reduction. By 2010, the strategy sought to reduce recorded casualties in relation to the average for 1994-98, aiming to achieve the following:

- 40% reduction in the total number of Killed or Seriously Injured (KSI) casualties.
- 50% reduction in the total number of child Killed or Seriously Injured casualties.
- 10% reduction in the rate of slight casualties per 100 million vehicle kilometres travelled.

The strategy sees a threefold approach from Local Authorities, the Welsh Government and the police. The strategy stipulates that behavioural change is a key focus for improving road safety. The document aims to focus on local communities in order to tackling road safety as many incidents of excessive and inappropriate speed involve people local to the area.

The vision for the Strategy is to reduce the real and perceived danger on Welsh roads in order to promote safe and sustainable access for all members of society. The strategic objectives surrounding the Strategy include sustainable development, tackling social disadvantage and promoting equal opportunities. In order to meet these objectives, the following areas are to be targeted:

- Improving safety for children – especially pedestrians and cyclists.
- Promoting safe use of “vulnerable” transport modes – walking, cycling, motorcycling and horse riding.
- Reducing excessive and inappropriate speed of motor vehicles.
- Targeting other poor driving practices – use of mobile phones, drink-driving, drug-driving and driving whilst tired.

It should be noted that this Strategy is now considered to be in need of a review and the DfT strategy ‘Strategic Framework for Road Safety’ is being used by some Local Authorities as a point of reference.

The Wales Transport Strategy (2008)

The Wales Transport Strategy (WTS) seeks to provide a stable, long-term framework for the development of all modes of transport – the road network, railways, coaches and buses, air and water – as well as implications for other policy areas. It specifies the outcomes and strategic priorities that link the Wales Spatial Plan, the Welsh Government’s wider strategies and the development of plans at the local level.

The strategy encourages sustainable access with a view to achieving positive social, economic and environmental outcomes. This includes improved access to healthcare, to education and lifelong learning opportunities, improved access to shopping and leisure facilities, visitor attractions and generally both nationally and internationally.

The strategy states the priorities that are expected to help contribute to the outcomes in the first five years of the strategy. This includes improving access between key settlements and sites partially by improving the reliability of the road system, especially between key settlements. Another priority is enhancing international connectivity. These connections are recognised as vital for business and tourism, with reliability at least as important as the time taken for a journey. In Mid Wales, this includes enhancing the road and rail links between Aberystwyth and Birmingham.

Wales Freight Strategy (2008)

The Wales Freight Strategy, produced in 2008, identifies that freight transport forms a key element of the economy in Wales and is fundamental to the Welsh way of life. It reflects both the demand for goods and the demand for goods to be moved. It is estimated that logistics activities account for up to 7% of employment in Wales.

The Wales Freight Strategy establishes high-levels aims and policies for freight transport in Wales and outlines a number of 'steps' towards their delivery. Sustainability forms a key aspect of the strategy with a number of the 'steps' aimed at reducing the environmental impacts of freight transport through modal shift or efficiency measures, with increased pertinence regarding the contribution of freight transport to greenhouse gas emissions.

In 2006, around 63 million tonnes of freight was distributed between places in Wales with a further 57 million tonnes moving between Wales and other parts of the UK and some 1.2 million tonnes to/from places outside the UK. The strategy states that road freight originating from Wales generated over 7 billion tonne kilometres. Since 1990, road freight has increased significantly across in Wales with imports from elsewhere in the UK rising in excess of 30% and doubling from outside the UK. Moreover, exports to the rest of the UK have risen 7% and internationally by 43%, although the amount of road freight wholly within Wales has declined by around 9%. The largest category of road-base freight imported into Wales is 'food, drink and tobacco'. It should be noted that there is no formally designated lorry route network within Wales apart from trunk roads and the Trans-European Networks (TEN-T) designated by the EU.

The policies for road freight are set out in **Table 2.1** below.

Table 2.1: Wales Freight Strategy Policies

Ref	Policy	Priority
Ro1	Improve the efficiency of road freight transport	Medium
Ro2	Use ITS and telematics to improve efficiency	Medium
Ro3	Reduce the environmental impact of road freight vehicles, in particular the effects of greenhouse gases emissions and pollutants	Long
Ro4	Identify a strategic lorry route network for Wales, and key links across borders	Short
Ro5	Develop localised lorry route maps	Medium
Ro6	Maintain consistent network (particularly in rural areas)	On-going
Ro7	Provide parking for road freight transport (locations, facilities required, pricing)	Long
Ro8	Consider specific parking for drivers' rest area	Medium
Ro9	Identify pilot freight consolidation centre and understand role of distribution centres in (and serving Wales)	Short

The Wales Freight Strategy identifies the following three principles:

- Minimise the demands on the transport system.
- Promote more sustainable and healthy modes of travel.
- Make maximum use of existing infrastructure.

The potential to develop the role of rail freight in order to reduce the pressure of heavy goods movement on the road network has been a consideration for some time, particularly for timber, slate waste and supermarket supply. This has included the proposal for a consolidated freight distribution centre in Mid Wales to reduce the environmental impacts and ease pressure on the single carriageways throughout the region. An effective working relationship and coordination with freight transport services is required in the region to improve movement on the roads.

Climate Change Act 2008

The Climate Change Act established a target for the reduction of greenhouse gas emissions in the UK and makes it the duty of the Secretary of State to ensure that this target is met. The greenhouse gases targeted are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydro fluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆). The Climate Change Act sets out a legally binding target for the UK's carbon account for the year 2050 to be at least 80% lower than the 1990 baseline. Greenhouse gases are measured in terms of their carbon dioxide equivalent which relates to the global warming potential of the gases. Transport has a key role in reducing this target as hydrocarbons; nitrogen oxides and carbon dioxide are all products of the combustion of air and water.

Climate Change Strategy for Wales (November 2010)

The Climate Change Strategy for Wales is a key tenet of Welsh Government policy and becoming of increasing importance in the development and evaluation of national projects. The Strategy and delivery plans confirm the areas where the Welsh Government will act to reduce emissions and enable effective adaptation in Wales.

The transport sector is one area where smarter travel choices such as driving efficiency, improving bus services, developing Sustainable Travel Centres, improving traffic management and reducing the number of vehicles entering major towns and cities can reduce emissions. The strategy also support a more efficient and integrated approach to freight transport.

The Climate Change Strategy for Wales is accompanied by a 'Delivery Plan for Emission Reduction' setting out how emission reductions will be delivered in Wales. The anticipated contribution from transport is 0.44% of the 3% target for emissions reductions. The delivery plan estimates that Welsh Government action in the transport sector will deliver 0.29 MtCO₂ savings in 2020 with UK action delivering 1.07 MtCO₂ savings. The key Welsh Government interventions of relevance to the Highway Strategy are:

-
- **WT5 – Promotion of eco-driving;**
 - **WT9 - Improving traffic management on the strategic road network;**
 - **WT10 - Supporting the freight industry to reduce emissions;**
 - **WT11 - Alternative fuels infrastructure.**
-

Looking specifically at the delivery plan for this strategy **WT9** focuses on improving the traffic management on the strategic road network. Better traffic management including variable speed limits on the busiest part of the network, is recommended to improve traffic flows and reduce greenhouse emissions. Similarly, improvements to the way in which incidents and accidents are managed are recommended to significantly reduce delays and disruption and help restore traffic flow.

Programme for Government (September 2011)

The Welsh Government has produced a programme to identify priorities and actions over the forthcoming Assembly term to be delivered through the budget and legislation. Relevant actions include:

- Deliver the priorities of the National Transport Plan;
- Develop a 10 year, Wales-wide, National Infrastructure Plan to identify and prioritise capital schemes which are of national significance;
- Establish a single Welsh Government Capital Infrastructure Fund and explore innovative ways of raising capital for investment in public service infrastructure;
- Enhance safety and accessibility in communities through initiatives such as Safe Routes in Communities and local safety schemes;
- Prioritisation of the National Transport Plan to improve access to key sites and settlements, particularly in rural areas, with an emphasis on improving the quality and provision of healthy and more sustainable travel choices;
- Introduce the Active Travel Bill;
- Maximise the accessibility and safety of the trunk road and motorway network through timely maintenance;
- Implement the statutory National Flood and Coastal Erosion Risk Management Strategy which will direct £100 million of investment to flood and coastal erosion risk management across Wales; and
- Target high-risk road users (motorcyclists, young drivers and vulnerable road users) through a combination of measures including education, engineering and enforcement.

Planning Policy Wales (2011)

The Planning Policy Wales (PPW) document sets out how the Welsh Government aims to extend choice in transport and secure accessibility in a way which supports sustainable development and helps to tackle the causes of climate change. This will be done by encouraging a more effective and efficient transport system, with greater use of the more sustainable and healthy forms of travel, and minimising the need to travel. This will be achieved through greater integration:

- within and between different types of transport;

- between transport measures and land use planning;
- between transport measures and policies to protect and improve the environment; and
- between transport measures and policies for education, health, social inclusion and wealth creation.

Planning Policy Wales sets out how the Welsh Government is committed to improving regional and national transport, and improving accessibility. Land use planning can help to achieve the Welsh Government's objectives for transport through, of particular relevance:

- reducing the need to travel, especially by private car, by locating development where there is good access by public transport, walking and cycling;
- supporting traffic management measures;
- promoting sustainable transport options for freight and commerce;
- supporting sustainable travel options in rural areas;
- supporting necessary infrastructure improvements; and
- ensuring that, as far as possible, transport infrastructure does not contribute to land take, urban sprawl or neighbourhood severance.

PPW notes that any RTP proposal that directly involves the development or use of land, or has land use implications, should appear as a policy or proposal in the Development Plan and that Local Authorities should ensure that when planning transport centred projects their approach is compatible with the Welsh Transport Appraisal Guidance (WeITAG). They should ensure that the full range of possible solutions, including solutions other than road enhancement, is considered.

It is also noted that the Road Traffic Reduction Act 1997 requires Local Authorities to produce a report setting out an assessment of the traffic on the roads for which it is the local highway authority and a forecast of expected growth in traffic levels. The report should also contain targets for reducing levels of local road traffic or the rate of growth of those levels. Development plan policies should be consistent with the approach adopted to fulfil these obligations and any national targets set by the Welsh Ministers under the Road Traffic Reduction (National Targets) Act 1998.

PPW asks that Local authorities adopt an integrated approach to traffic management. They should consider how different measures can complement one another and contribute to the achievement of wider planning and transport objectives, taking into account the needs of the disabled and less mobile sections of the community. Within town centres priority should be given to walking, cycling, public transport and delivery vehicles through the reallocation of road space. In established urban and rural neighbourhoods, traffic management measures should be adopted to improve the street environment and promote road safety, whilst in areas of new development traffic calming measures should be incorporated from the outset. In appropriate areas local authorities should consider using powers available under the Transport Act 2000 to designate Home Zones. In rural areas, traffic management measures should be sympathetic to the character of the area whilst achieving reduced traffic speed, and environmental and safety improvements.

Local Authorities should utilise available powers to reduce the need to use trunk roads and other through routes for short, local journeys. Development Plans should specify the primary road network, including trunk roads, and separately identify the core network. These routes should be identified as corridors for movement adjacent to which development that would compromise this role will be resisted.

The strategic significance of freight access to industry and commerce should be taken into consideration by planning authorities. Wherever possible they should promote the carriage of freight by rail, water or pipeline rather than by road. Local Authorities should consider which routes are most suitable for use by road freight and encourage the location or relocation of distribution and operating centres to sites which have good access to these routes.

National Transport Plan (2011)

The Wales Transport Strategy established the framework for the creation of an integrated transport system to deliver One Wales. It set out that joining together proposals for road, rail and public transport would enable people and freight to travel more efficiently and sustainably, whilst being able to access the goods, markets, services, facilities and places they need.

The National Transport Plan was produced in March 2010 with the aim of taking forward the process of delivering this integration. It builds on previous plans, adding and integrating public and community transport, walking and cycling. The National Transport Plan sits alongside the Regional Transport Plans in delivering the Wales Transport Strategy.

Within the plan, specific reference is made to actions to operate, improve and maintain the trunk road network:

- Produce Route Management Strategies for the operation, improvement and maintenance of our trunk road and motorway network, for each corridor;
- Maximise reliability, improve journey times and the safety of the trunk road network;
- Review the classification of the trunk road network, so that the strategic network is defined in a way that best meets our transport needs;
- Actively promote our guidance on setting local speed limits in Wales, particularly outside facilities such as schools;
- Develop plans for the roll out of variable speed limits across the trunk road network where they can improve safety, reliability and journey times; and
- Include in plans for new roads or improvements to existing roads, where it is appropriate and practical or where there is no nearby alternative, safe provision for walkers and cyclists. Where this is not possible and where there are no nearby alternatives, work with the relevant authorities to develop safe routes.

The plan also commits to improving the safety of the road network, with special emphasis on reducing casualty rates of vulnerable users. The following actions stated are:

- Continue to work with the UK Government on the development of the new Road Safety Strategy, which will include new targets for 2020;
- Address road safety in areas where casualty and fatality rates are higher than the national average, or where there is an issue for particular vulnerable groups;
- Work with partners, including police forces and groups representing motorcyclists, to reduce casualties through a mix of education, enforcement and providing a safer physical environment;
- Introduce active traffic management on our busiest routes to improve safety and traffic flows, including average speed cameras and variable speed limits;
- Ensure that network maintenance makes roads safer for users;
- Promote and support more use of 20mph zones in residential areas, in line with guidance;

- Continue the pilot traffic officer service, to improve safety and traffic management on the A55 and M4; and
- Introduce new legislation to improve the safety of home to school transport.

The plan aims to improve the sustainability of freight movements, including supporting the modal shift of freight from road to rail where environmental, economic and social benefits can be achieved. The Government will continue to provide leadership and co-ordination of the freight transport sector to deliver the Wales Freight Strategy.

The plan aims to use sustainable construction and maintenance methods to reduce the environmental effects of the transport infrastructure for which the government are responsible. This includes reviewing the resilience of trunk road infrastructure to the effects of climate change and develop a climate change adaptation strategy for transport. The government will also include requirements in their agreements, contracts and specifications for the new and existing trunk road network to minimise waste, the use of energy and the use of finite natural resources, seeking to increase the use of more sustainable materials.

The plan's commitment to improving the reliability, journey time and safety along both the north-south and east-west road corridors is particularly relevant in the Mid Wales context. The proposals for improving the north-south and east-west corridors are outlined in **Table 2.2**.

Table 2.2: National Transport Plan Interventions

Interventions for North-South Corridor
59. A470 from Cwmbach to Newbridge
60. A470 at Gelligemlyn
61. A470 from Maes yr Helmau
62. A470 at Alltmawr
65. A483 at Four Crosses
66. A470 at Rhayader
68. A470 and A483 through Builth Wells
70. A483 in Newtown
Interventions for East-West Corridor in Mid Wales
98. Deliver interventions identified for the A458 from Buttington Cross to Wollaston Cross
99. A470 and A483 through Builth Wells and A483 through Newtown

Prioritised Wales National Transport Plan

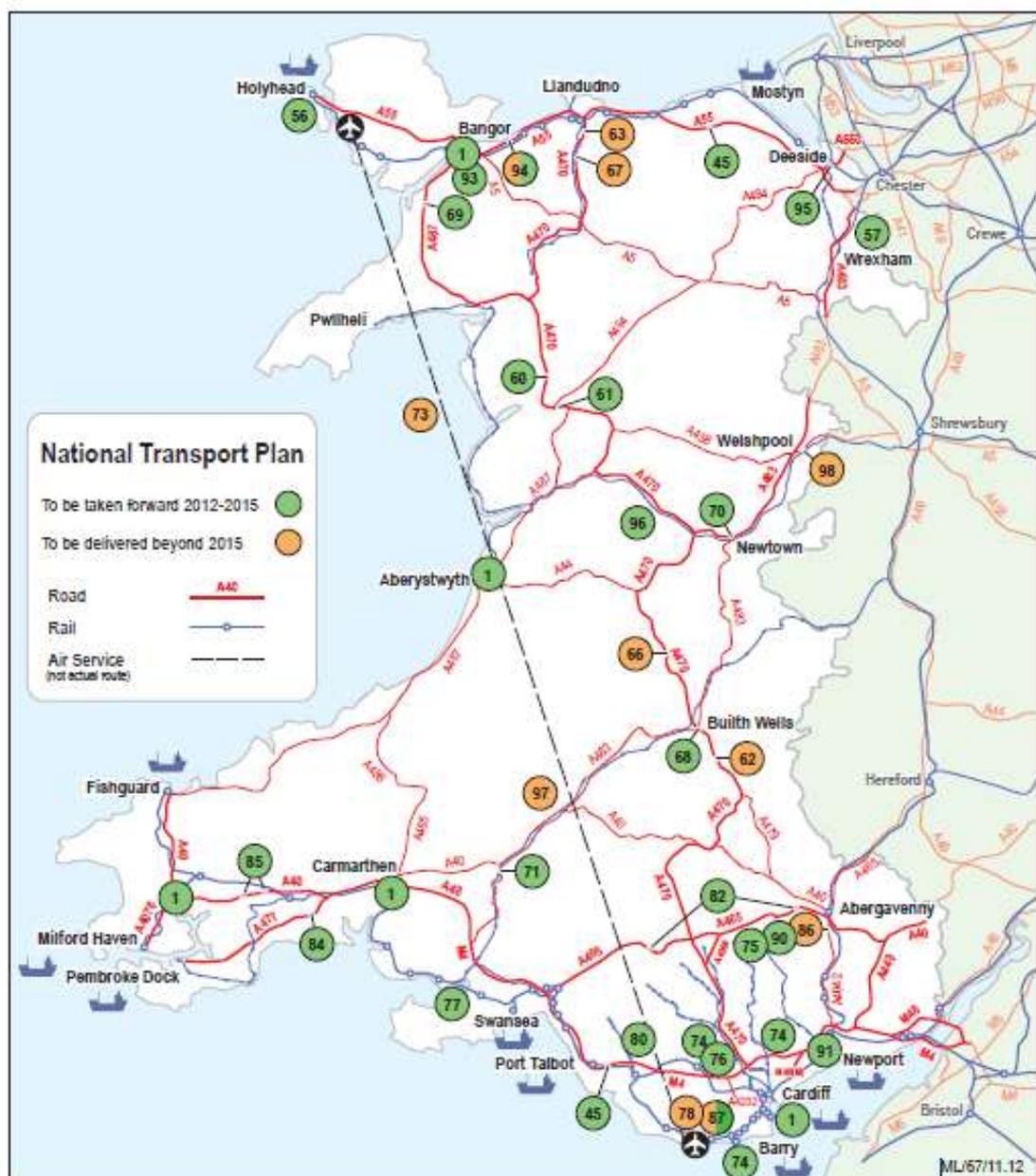
The Welsh Government released a Prioritised National Transport Plan in December 2011, outlining the ongoing commitments and reiterated the priorities of the 2010 plan. Since March

2010 the A470 Cwmbach to Newbridge (NTP reference 59) and the A483 Four Crosses (NTP reference 65) schemes have been implemented.

Figure 2.2 shows the prioritised schemes to be taken forward between 2012 and 2015 and those to be delivered beyond 2015. Two schemes within the TraCC region are prioritised for 2011-2012, namely the A470 Gelligemlyn (NTP reference 60) and the A470 from Maes yr Helmau to Cross Foxes (NTP reference 61). The prioritised plan seeks to appoint contractors for the A483 in Newtown (NTP reference 70) in 2012-2013 and the scheme is planned to start construction within the 2012-2015 timeframe. During 2012-2013 it is proposed to take forward the integrated transport measures to deal with the A470 and A483 through Builth Wells (NTP reference 68) and begin to plan the longer term intervention (beyond 2015).

The plan reiterates that the A470 Alltmawr (NTP reference 62), the A470 Rhayader (NTP reference 66) and delivering interventions identified for the A489 from Buttington Cross to Wollaston Cross (NTP reference 98) are all prioritised beyond 2015.

Figure 2.2: Prioritised National Transport Plan Map



Active Travel (Wales) Bill (consultation 2012)

The Active Travel (Wales) Bill seeks to enable more people to walk and cycle and generally travel by more active methods, making walking and cycling the most natural and normal way of getting about. It seeks to achieve benefits for health, the environment and address poverty and disadvantage, while promoting sustainable economic growth. The Bill proposes that local authorities in Wales have a duty to:

- identify and map the network of routes within their areas that are safe and appropriate for walking and cycling;
- identify and map the enhancements that would be required to create a fully integrated network for walking and cycling and develop a prioritised list of schemes to deliver the network;
- deliver an enhanced network subject to budget availability and following due process;
- consider the potential for enhancing walking and cycling provision in the development of new road schemes.

The Bill considers the barriers to walking and cycling to be safety, practicality and culture. The Bill proposes consideration for the potential for enhancing walking and cycling provision in the development of new road schemes stating that local authorities would have a duty to identify the routes within their areas that are safe and appropriate for walking and cycling. These routes would consist of a combination of traffic-free routes, on-road provision and access through public spaces such as parks. Where pedestrians or cyclists would be in proximity with motorised traffic, there should be provisions in place to make these routes safe for pedestrians and cyclists, for example through traffic calming, 20mph zones or through segregated routes. Local authorities would also have a duty to identify the facilities that are publically available to enable active journeys by foot or bike, such as cycle storage, toucan crossings and wash facilities.

Local authorities would also be required to identify where routes do not join up within their areas and across their boundaries, and where there is a lack of facilities along those routes to support walking and cycling. Local authorities would also be required to identify where significant numbers of shorter journeys are being made and there is no safe route for pedestrians or cyclists. They would then need to identify what enhancements, upgrades and new infrastructure would be required to enable people to make continuous and safe journeys by foot or by bike.

It states that when new road schemes are planned, local authorities will have a duty to consider the potential these schemes could have for enhancing walking and cycling infrastructure. It is expected that this duty will also extend to the Welsh Government. It is more efficient and cost effective to incorporate walking and cycling provision into a design than to retro-fit this provision into a completed scheme. Incorporating walking and cycling provision into new road schemes could help local authorities to deliver the maps, or could present new opportunities for connecting existing infrastructure.

Wales Infrastructure Investment Plan for Growth and Jobs (2012)

The Welsh Government has published the Wales Infrastructure Investment Plan for Growth and Jobs to ensure that its future capital investment is used to deliver the maximum benefits to Wales. The plan seeks to be:

- Clear about our priorities for infrastructure investment to stimulate the economy and support jobs, increasing transparency to delivery partners through a detailed project pipeline for the next three years and providing a 'direction of travel' for the longer-term
- Clear about how Welsh Government will pay for infrastructure investment through more efficient use of existing resources and exploring and implementing innovative finance approaches; and

- Clear about the policy and approach to developing and delivering proposals that optimise public value through the use of best practice.

The Welsh Government aims to secure the most out of the existing road network through well planned maintenance and upgrades to ensure that the road network operates more efficiently by:

- Prioritising investments which contribute to economic growth – addressing urban congestion and improving access to key areas, and by improving the capacity and reliability of our key east-west routes.
- Being more agile in approach to developing solutions to underlying problems to address the problems that people face every day, such as the innovative design of the Coldra junction on the M4 to ease congestion and traffic flow.

With the objectives of boosting the Welsh economy and improving the local highway asset, Welsh Ministers have made a commitment to assist local authorities meet mounting revenue pressures, allowing them to free up resources for prudential borrowing through the Local Government Borrowing Initiative (LGBI). This funding, up to an expected aggregate total of £172m, will be used exclusively for capital highway improvement investment throughout Wales during the 3-year period 2012-2015. Revenue funding will be made available to local authorities over a twenty-two year period.

2.3 Regional Policies and Plans

TraCC Regional Transport Plan (2009)

The Regional Transport Plan has undertaken an analysis of the movement problems with the region and has identified a vision for the region, developed transport policies to address identified problems and to build on opportunities. The vision and priorities of the RTP are set out in the introduction to this document.

The RTP highlights that the nature of the region induces the need to travel relatively long distances to access jobs, services and facilities, with trips predominantly made by private car. Similarly, road transport dominates the movement of freight in Mid Wales. This has a significant impact as the road network is predominately made up of single carriageways with poor road alignments of substandard widths and limited overtaking opportunities, providing implications for journey times, journey reliability and road safety.

Reducing the environmental impacts of transport is a key goal for the region. TraCC aims to reduce the environmental impacts by ensuring a high quality of design in relation to new or improved highway works. Further to this, TraCC will seek to identify schemes that reduce community severance, noise issues and improve the pedestrian environment.

Improving safety and security is a pertinent issue for TraCC as concern is heightened in Mid Wales, with casualty rates in the region being higher than Wales as a whole. TraCC seeks to achieve improvements by considering the following in relation to the highway network:

- Continue to identify the accident hotspots and where they are related to the highway network, develop and implement remedial measures e.g. A487 south of Aberystwyth;
- Continue the programme of 'Safe Routes in Communities';
- Develop home zones and other 20 mph schemes;
- Support local authority and police road safety training and education initiatives; and
- Develop a Regional Road Safety Strategy.

Improving strategic connections is seen to be important in terms of providing linkages between areas within and outside the TraCC region. The RTP seeks to achieve improvements to north-south road links through Mid Wales and on the west coast. Furthermore, it aims to improvement east-west links to the West Midlands and A5/M54 corridor. Improving links from South Ceredigion to the A40/M4 corridor is also outlined as a key objective in improving strategic connections. It also suggests the consideration of a freight distribution/ consolidation centre and to investigate opportunities to use rail for the transportation of freight in order to minimise the disruption of the highway network.

The RTP outlines the following aims to be considered regarding roads in the TraCC region:

- Work with the UK Government to deliver the intervention identified for the A458 from Buttington Cross to Wollaston Cross (discussions with the Department for Transport on funding are on-going);
- Start the programme of works by 2014, to the A470 & A483 through Builth Wells and the A483 through Newtown (as part of the north-south corridor proposals).
- Start work on the programme of proposals, by 2011, to the north-south road corridor to address sub-standard alignment, journey reliability, safety and local environmental issues at the following locations:
 - A470 from Cwmbach to Newbridge
 - A470 at Gelligemlyn
 - A470 from Maes yr Helmau to Cross Foxes
 - A470 at Alltmawr
 - A483 at Four Crosses.
- Start work on the programme of proposals, by 2014, to the north-south road corridor to address sub-standard alignment, journey reliability, safety and local environmental issues at the following locations:
 - A470 at Rhayader
 - A470 and A483 through Builth Wells
 - A483 in Newtown
- Assist the local authority to progress the Ceredigion Link Road improvement, to reduce journey times between Aberystwyth and Carmarthen.

The RTP outlines the opportunity to upgrade the road network, including trunk roads, to a basic standard, improving the reliability, efficiency and safety of roads in Mid Wales. Opportunities also exist to provide local relief roads/by-passes to improve overall movement and reduce

environmental externalities. The road network requires continuous maintenance, for which funding is available, to evade the risk of serious deterioration.

The RTP seeks to influence land use planning to ensure that transport is given significant attention. This would require a close working relationship between TraCC and Local Authorities in the LDP process. A key aspect to consider is the need to strengthen the approach to Section 106 agreements and consider the opportunities of the Community Infrastructure Levy.

TraCC submission to Welsh Government on Regional Priorities

In July 2011, TraCC along with the other three Welsh Regional Transport Consortia (RTCs) was asked to identify the National Transport Plan (NTP) priorities that they wish to be taken forward in the proposed three year NTP delivery programme. Further to this, the RTCs were invited to identify regional priorities currently not in the NTP that they wish to be considered alongside the existing NTP priorities when deciding on the three year programme. This was seen to provide an opportunity for replacing NTP priorities with regional priorities if they demonstrate better value for money. This required the RTCs including TraCC to submit a proforma to support the inclusion of such schemes. **Table 2.3** outlines the regional priorities identified by TraCC.

Table 2.3: TraCC Regional Priorities

Scheme name	Description	Comment/Note	Intervention	
			NTP	RTP
'Top Five' as presented to the Welsh Government (22 August 2011)				
A486 Post Bach to Synod Inn	Road improvement/ completion of Ceredigion Southern Link Road project	Proposed to incorporate the proposed Synod Inn Interchange		Yes
A487 Llanrhystud to Aberystwyth	On line improvement to Trunk Road	Proposed new Trunk Road scheme. Support TrawsCymru service network and local bus services. Support Aberystwyth Regeneration Area.	Yes	
A483/A489 Newtown Bypass	Construction of new road/bypass	Supports the TrawsCymru service network and local bus services. Supports Severn Valley Regeneration Area. Supports proposed Newtown Sustainable Travel Centre Initiative.	Yes	
A487 Pont Dyfi	Bridge replacement scheme (new river crossing and associated road realignment).	Supports the TrawsCymru service network, together with other public transport services and links the Strategic Regeneration Area of Aberystwyth.	Yes	
<i>Hourly Passenger Service on Cambrian Main Line between Aberystwyth and Shrewsbury</i>	<i>Revenue funding to support hourly service operation.</i>	<i>Currently an NTP scheme with a commitment to deliver. This supports the Strategic Regeneration areas of Aberystwyth and Severn Valley and maximises opportunities to utilise the Capital investment in the ERTMS signalling system and improvements to track, crossings and passing loops.</i>	Yes	
Trunk Roads				
A458 from Buttington	Delivery		Yes	

Scheme name	Description	Comment/Note	Intervention	
			NTP	RTP
Cross to Wollaston	interventions identified for the A458 from Buttington Cross to Wollaston Cross (working with DfT)			
A470 Erwood to Glanwye		Formerly three schemes namely Christmas Pitch, Alltmawr and Ysgiog Improvements		Yes
A494 Bala to Llanuwchllyn Improvements				Yes
A483 Llanymynech-Pant bypass			Yes	
De-trunking of A487, Aberystwyth Town Centre			Yes	
A470/A483 Builth Wells Bypass Relief Road			Yes	
A470 Rhayader Bypass/Relief Road			Yes	
A44/A4120 Llanbadarn Bypass		Including associated level crossing elimination	Yes	
Programme/package A44 and A470		Specific locations to be identified and agreed	Yes	
County Roads				
A44 (Powys)	On-line safety and capacity improvements	Specific locations to be identified and agreed		Yes
A496 Dolgellau to Barmouth	On-line safety and capacity improvements	Specific locations to be identified and agreed		Yes
A493 Dolgellau to Dyfi Bridge	On-line safety and capacity improvements	Specific locations to be identified and agreed		Yes

The Consortia were asked to identify their top five priorities for transport investment (as shown in the table) and these included four highway schemes, namely:

- A486 Post Bach to Synod Inn;
- A487 Llanrhystud to Aberystwyth;
- A483/A489 Newtown By-pass; and
- A487 Pont Dyfi.

The prioritised NTP when released did not include any schemes not already in the NTP and of the top priorities for TraCC, only the Newtown By-pass scheme is within the programme. **Table 2.4** shows the status in the prioritised NTP of the schemes put forward by TraCC.

Table 2.4: Status in the Prioritised NTP of TraCC Schemes

Scheme name	Status in NTP
A486 Post Bach to Synod Inn	Not included
A487 Llanrhystud to Aberystwyth	Not included

Scheme name	Status in NTP
A483/A489 Newtown Bypass	Contractor to be commissioned 2012/13 with construction estimated 2014 to 2016
A487 Pont Dyfi	Not included
A458 from Buttington Cross to Wollaston	To be delivered beyond 2015
A470 Erwood to Glanwye	A470 Alltmawr scheme to be delivered beyond 2015
A494 Bala to Llanuwchllyn Improvements	Not included
A483 Llanymynech-Pant bypass	Not included
De-trunking of A487, Aberystwyth Town Centre	Not included
A470/A483 Builth Wells Bypass Relief Road	The integrated transport measures to deal with the A470 and A483 through Builth Wells are included in 2012-2013 with longer term interventions beyond 2015.
A470 Rhayader Bypass/Relief Road	To be delivered beyond 2015.
A44/A4120 Llanbadarn Bypass	Not included
Programme/package A44 and A470	Not included
A44 (Powys)	Not included
A496 Dolgellau to Barmouth	Not included
A493 Dolgellau to Dyfi Bridge	Not included

2.4 Local Policies and Plans

Ceredigion Local Development Plan (LDP) Deposit Draft, 2007-2022

The LDP is a statutory plan which sets out policies and specific proposals for the development and use of land in Ceredigion for approximately 15 years; up to 2022. Once adopted the Ceredigion LDP will replace the adopted Dyfed Structure Plan (alteration 1991) and also the un-adopted Ceredigion Unitary Development Plan (UDP) Proposed Modifications Version (2006).

Key objectives of the plan include improving the potential for sustainable travel; equality of access; and the connectivity of the county for the sake of its economy, its communities and their health and well-being.

The plan accounts for transport infrastructure needs in accordance with the Regional Transport Plan and any development proposals should be considered in the context of this wider plan. The proposal map supporting the plan identifies or safeguards priority transport infrastructure projects for which funding is committed and sufficient detail has been worked up for the sites.

Policy DM03 outlines the sustainable travel, emphasising that development should reduce the need to travel, provide opportunity for and promote sustainable modes of transport in Ceredigion. This policy focuses on walking, cycling and the use of public transport as alternatives to private vehicle use.

Policy DM04 relates to sustainable travel infrastructure to being a material consideration. It states that the protection, enhancement or complementary development of former or existing transport infrastructure with potential to provide for more sustainable travel will be a material consideration in all development.

Powys Unitary Development Plan (UDP) Adopted, 2010

Powys County Council is currently progressing with their Local Development Plan, however it is at an early stage. The UDP was adopted in 2010 and remains the most relevant and up to date Development Plan for the area.

Policy T1 states the Council's commitment to protect highway improvement schemes, indicated in the plan's proposals mapping. Support will be given to other improvement schemes that comply with the policies and proposals in the Plan that ensure the safety of all road users, especially pedestrians and cyclists, facilitate public transport operation, protect and enhance the local environment and maintain or increase employment opportunities.

With regards to specifically traffic management, **Policy T2** highlights the approval of schemes which utilise the existing road network and improve opportunities to promote public transport, walking, cycling and horse riding, improve road safety, reduce traffic congestion and improve the local environment. The Council seeks to improve facilities and conditions for pedestrians and cyclists in terms of both the existing transport and in relation to new development through **Policy T6**.

Policy T11 presents the option for enhancing road and rail freight interchanges by supporting new road-rail freight interchanges facilities on appropriate sites providing they do not have an unacceptable impact on the local environment or on existing or proposed passenger services.

Gwynedd Unitary Development Plan (2001-2016) Adopted, 2009

Gwynedd Council is preparing a Joint Local Development Plan with the Isle of Anglesey County Council. This plan is in early stages of preparation and thus the UDP for Gwynedd has been reviewed for this report.

Strategy Policy 11 stipulates the need to account for 'accessibility' by ensuring appropriate infrastructure, including highways, provided they do not significantly harm the environment or amenities. **Strategic Policy 12** highlights the need to consider transport schemes as part of the strategic and integrated transport network, demonstrating benefits for network safety and efficiency.

Policy CH25 directly references new road and road improvement proposals. It requires sufficient justification for the development on economic and public safety grounds, with no unacceptable environmental effects. The policy references a list of key criteria to be met:

- That the improvement/new road scheme reflects the road's status in the defined road hierarchy;
- that the design reduces the danger of accidents for road users;
- that the design incorporates measures that encourages journeys by public transport and reflects the needs of cyclists and pedestrians;
- that the scheme is acceptable in terms of its impact on the community;
- that the scale and design of the proposed development is suitable for the location;
- that every practical effort is made to ensure that the development will not cause significant harm to the landscape, the coast, biodiversity, or historic areas/ features, particularly within or near designated areas;
- that appropriate measures are included to reduce the risk of injury or death as a result of collisions between vehicles and wildlife;

- that the development will not cause significant harm to the amenities of neighbouring residents or sensitive uses; and
- that the proposal incorporates adequate measures to mitigate the effects of the scheme.

The following proposed routes are safeguarded from other development in **Policy CH26**:

- The A487 Porthmadog, Minffordd and Tremadog Bypass (now implemented);
- upgrading the A470 from Blaenau Ffestiniog to Cancoed;
- upgrading the A499 between Aberdesach and Llanaelhaearn; and
- the Penygroes southern route.

Brecon Beacons National Park Local Development Plan (Draft Deposit), 2010

The Local Development Plan for the Brecon Beacons National Park was published as a Draft Deposit in September 2010. The plan identifies where highways capacity is an issue and confirms that for traffic management issues within the area, the National Park Authority will work with the Highways Authority to address known concerns and ensure that the traffic system is operational to strengthen the viability and vitality of settlement centres and to enhance the existing historic fabric of buildings.

For allocated sites, the plan identifies if highways capacity is an issue and for unallocated sites, developers are advised to contact the Highway Authority to determine the extent of the issue and the required mitigation.

Policy 39 focuses on the need to consider the impacts of traffic, permitting development where appropriate access can be achieved and the avoidance of adverse impacts on road safety, inappropriate traffic times or where traffic will exacerbate existing areas or peak times of congestion.

Snowdonia National Park Authority Local Development Plan, Adopted 2011

The LDP for the National Park was adopted in July 2011, setting out the vision for future development until 2022. The plan advocates the need to conserve and enhance the qualities of the National Park. This translates into the consideration for appropriate access to development meeting highway standards without harming the character of the locality or neighbouring amenity as detailed in **Development Policy 1: General Development Principles (1)**. Other principles identified within this policy include the need to avoid traffic generation that will not result in volumes or vehicle types that harm the landscape or amenities.

Strategic Policy L: Accessibility and Transport (L) states a commitment to improving access to local facilities and reducing the need to travel especially by private car. Changes to the highway network must therefore not damage or cause detrimental effects to Public Rights of Way, listed building or historic monuments or cause adverse effects to environmental designations. Where possible, improvements to the network will feature provision for segregated pedestrian and cycling uses.

2.5 Other Good Practice and Guidance

Strategic Framework for Road Safety (DfT, 2011)

This document, whilst it is produced by the DfT rather than the Welsh Government, is a recent document providing a framework for road safety initiatives. The document outlines that issues involving road safety stem beyond personal injury, grief and fatalities, with road safety having implications for the economy and health services. The economic welfare costs are estimated to be around £16 billion a year, with insurance payouts for motoring claiming around £12 billion a year. Incidents have can have an impact on congestion, the reliability and resilience of the road network. The document emphasises that the harm and cost associated with incidents is not an inevitable consequence of road transport and can be avoided through a range of measures.

The document sets out the strategic framework for road safety and a package of policies which the UK government believes will have the greatest impact on reducing deaths and injuries on the roads. The government's approach to road safety is focused around the following themes:

- Making it easier for road users to do the right thing and going with the grain of human behaviour;
- Better education and training for children and learner and experienced drivers;
- Remedial education for those who make mistakes and for low level offences where this is more effective than financial penalties and penalty points;
- Extending this approach to cover all dangerous and careless offences, not just focusing on speeding;
- Taking action based upon cost benefits analysis, including assessing the impacts on business;
- More local and community decision making from decentralisation and providing local information to citizens to enable them to challenge priorities; and
- Supporting and building capability by working with the road safety community on better tools to support road safety professionals.

While not setting targets the document does provide an indication of forecasts – fatalities falling by between 37% and 57% by 2020 and a reduction of 70% by 2030. The document includes a Road Safety Action Plan and a Road Safety Outcomes Framework that will be reported on in subsequent monitoring reports.

The DfT pledges to monitor six national indicators:

- The number or road deaths (and rate per billion vehicles miles);
- Rate of motorcyclist deaths;
- Car occupant deaths per billion vehicles miles;
- Pedal cyclist deaths per billion vehicles miles;
- Rate of pedestrian deaths per billion miles walked; and
- The number of deaths resulting from collisions involving drivers under 25.

Three key indicators will be collected for Local Authorities; the number of killed or seriously injured casualties; rate of killed or seriously injured casualties per million people; and rate of killed or seriously injured casualties per billion vehicle miles.

Safe Routes in Communities

The Welsh Government established the Safe Routes in Communities grant programme, replacing their Safe Routes to School. The programme aims to “improve accessibility and safety, and encourage walking and cycling within communities”, changing how people travel. Local Authorities bid for funding on an annual basis for capital works such as:

- Crossings
- Traffic calming measures
- Cycle paths
- Footpaths
- Secure cycle facilities (including stands and CCTV), lockers and changing facilities.

Bids were most recently invited in October 2011 from Local Authorities under the programme.

3 Highways Context

3.1 Road Network and Traffic Flow

Network Overview

The trunk road and principal road network in the TraCC region is shown in **Figure 1.1** in the introductory section. The road network in the TraCC region is predominantly single carriageways outside of built up areas. **Table 3.1** shows there are a total of 10,650 kilometres of roads in the three counties, with just 11.2% in built-up areas. Of the total just over 7% are trunk roads and managed by the Mid and North Wales Trunk Road Agencies. The largest proportion of roads in the region are B and C roads accounting for 46% of all roads, and minor surfaced roads accounting for 40%. More than half of the regional road network in the county of Powys.

Table 3.1: Kilometres of Roads by Type

	A Trunk		A County		B and C		Minor surfaced		Total	
	Total Km	of which built-up	Total Km	of which built-up	Total Km	of which built-up	Total Km	of which built-up	Total Km	of which built-up
Gwynedd	217	19	325	66	1,063	103	1,310	334	2,916	523
Powys	430	40	238	30	2,701	112	2,113	207	5,482	389
Ceredigion	114	30	158	34	1,166	100	814	120	2,252	285
TraCC	762	11.8%	722	18.1%	4,930	6.4%	4,237	15.6%	10,650	11.2%

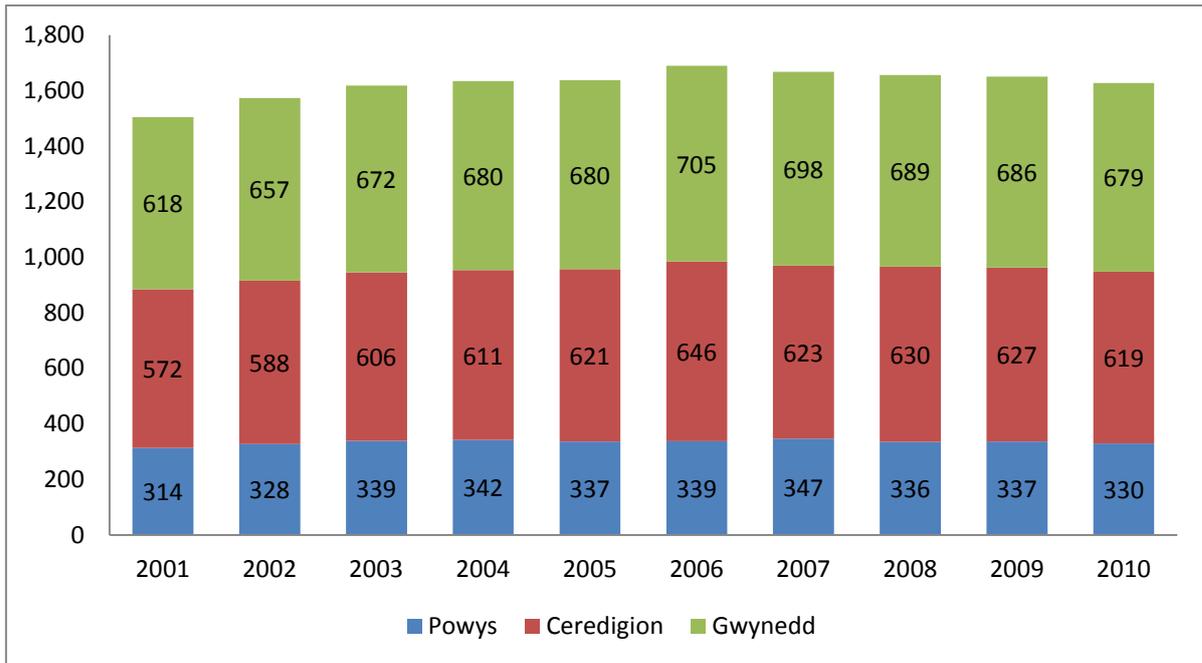
Source: Welsh Transport Statistics, Road Lengths by Class 2010

Annual Highway Usage

Annual highway usage data has been gathered from the Department for Transport, with the results for the last ten years shown in **Figure 3.1**. The details are not available for the Meirionnydd region, and thus the figure for Gwynedd Council as a whole is used.

Since traffic flows peaked in 2006, the volume of traffic has decreased for all three of the Local Authorities in the TraCC region with Powys, Ceredigion and Gwynedd observing declines of 2.7%, 4.2% and 3.7% respectively. Overall however, there has been an 8.2% increase in traffic flows since 2001 and the reduction in recent years has been less than for Wales as a whole.

Figure 3.1 Annual Highway Usage 2001-2010 (million vehicle miles)



Source: Department for Transport

Regional Traffic Flows

In order to establish a detailed indication of highway usage in the Region, traffic data on main links has been obtained from the DfT Traffic Counts, Traffic Wales and Local Authorities, as available. **Figure 3.2** shows the Annual Average Daily Traffic (AADT) flows on links in 2010 from the DfT source, with links banded and colour coded according to overall traffic levels.

The most heavily trafficked routes in the region are the A483 and A458 from the Shropshire border to Welshpool, the A483-A489-A470 corridor from Welshpool to Llanidloes, various sections of the A470, parts of the A40 near Brecon and Abergavenny and the A487 coast road. The importance of the east-west links into the region from Shropshire and Herefordshire are demonstrated, as well north-south routes on parts of the A470 and the A487 coast road.

Traffic levels are noticeably higher around the key settlements of Aberystwyth, Newtown, Welshpool, Builth Wells and Brecon. This shows the importance of local traffic movements as well as regional /longer distance movements.

Condition of Highways

The three Local Authorities within the TraCC region undertake annual surveys to determine the condition on all highways as part of County Surveyors' Society benchmarking. The key performance indicators relevant to the condition of the highway includes KPI THS010a (Principal Roads) and KPI THS010b (Non-Principal Roads). **Table 3.2** presents the data on the percentage of roads in poor condition which require maintenance for each of the authorities. The details are not available for the Meirionnydd region, and thus the figure for Gwynedd Council is used.

It can be seen that there was a significant deterioration in the condition of roads, particularly of non-principal roads in Ceredigion and Powys between the 2009/10 and 2010/11 financial years. Relating the percentages to overall road network length demonstrates the scale of the problem with for example, more than 1,500 kilometres of non-principal roads considered to be in poor

overall condition in 2010/11. *Further information provided in the submissions for Local Government Borrowing Initiative will be inserted in the final report.*

Table 3.2: Percentage of Roads in Poor Condition (2009/10 – 2010/11)

Local Authority	Highway Maintenance (2009/10)		Highway Maintenance (2010/11)	
	% of Principal (A) Roads in overall poor condition	% of Non Principal Roads in overall poor condition	% of Principal (A) Roads in overall poor condition	% of Non Principal Roads in overall poor condition
Ceredigion	4.5%	10.5%	5.6%	14.5%
Powys	4.1%*	9.9%*	5.4%	19.5%
Gwynedd	3.8%	8.1%	7.9%	5.1%

*Data for 2008/9 used

Source: Table 4.4, NTP Monitoring Report

3.2 Network Resilience

The extensive road network in the region is subject to risks of closure and damage due to impacts of climate change and flooding and emergency situations from road traffic incidents and collisions. There are also special events such as the Royal Welsh Show which can result in significant bottlenecks of traffic and the need for diversions.

The nature of the road network is such that alternative routes often involve a considerable detour for traffic, with for example a collision on the A487 south of Aberystwyth meaning traffic has to re-route via the B-roads around Cross Inn. Other events can lead to isolation for residents with for example, the closure of the Dyfi Bridge due to flooding meaning the residents of Meirionnydd are cut-off from essential hospital services in Aberystwyth.

TraCC has assessed the proportion of the road network susceptible to flooding, in accordance with guidance in the National Transport Plan requiring Consortia to *“review the resilience of the motorway and trunk road infrastructure to the effects of climate change, and develop a climate change adaptation strategy for transport, by 2011.”*

Table 3.3 shows that for the trunk roads within the TraCC region, a higher percentage of the total length is susceptible to flooding. The areas deemed at risk to flooding are within Flood Zone 3 which is defined to be “land assessed, ignoring the presence of flood defences, as having a 1% or greater annual probability of fluvial flooding or a 0.5% or greater annual probability of tidal flooding”. The all-Wales figure is not known for Principal A-roads.

Table 3.3: Transport Assets at Risk of Flooding

Asset		Total Length (kms)	Within Flood Zone 3	%
Trunk Road	Wales	1710.0	159.6	9.3%
	TraCC	627.0	68.0	10.8%
Principal A-Roads	TraCC	543.1	44.8	8.2%

To 1 decimal place.

3.3 Freight Movements

Regional HGV Traffic Levels

The movement of freight in the TraCC region is a key issue, with nearly all freight within, to and from Mid Wales travelling by road. Furthermore, many of the roads are single carriageways with poor alignments and with limited or no opportunities for passing slow-moving freight vehicles.

Traffic data from the DfT (2010) for road links across Mid Wales has been analysed and routes mapped according to the volume of Heavy Goods Vehicles (HGVs) carried as part of AADT flows (Annual Average Daily Traffic).

Figure 3.3 shows the road network coded according to the volume of HGV movements. It can be observed that whilst freight movements are dispersed across the Mid Wales road network, the highest flows in the region are experienced on the A483 from the border to Newtown (more than 1,000 HGV movements per day) followed by the A458 from Shropshire to the A483 and a section of the A470 between Brecon and Llyswen, both carrying more than 600 HGVs per day. Other heavy utilised routes are a number of sections of the A470, the A438 to Hay-on-Wye, the A487 from Aberystwyth south to Cardigan and the A489 between Newtown and Caersws.

Whilst the volume of freight movements broadly reflects the overall traffic level, the highest percentages of HGV movements are on the:

- A40 east and west of Brecon (11%);
- A470 (up to 15% in some sections (north of Rhayader) and generally around 10%);
- A483 north of Newtown (between 10% and 13%);
- A44 from Herefordshire (9%); and
- A495 north of Welshpool (11%).

Trends in Volumes and Types of Goods Carried

As part of the annual monitoring, TraCC has undertaken HGV surveys at five locations on the strategic network – A40, A487, A470, A483 and A44. The results of these surveys indicate whether HGV movements are increasing or decreasing, and shows the proportion of traffic in various commodities.

The total traffic at the five sites increased by approximately 4% between 2010 and 2012. A negligible decrease in the total number of HGVs was observed. **Table 3.4** provides the data for the five sites. New data will be available to compare flows and commodities in 2012.

Table 3.4: HGV / Traffic Flows

Location	Traffic Flow 2010		Traffic Flow 2011		Traffic Flow 2012		% Change 2010-2012	
	All	HGV's	All	HGV's	All	HGV's	All	HGV's
Brecon	3,369	386	3,392	403	3,331	380	-0.01%	-1.55%
Rhydyfelin	4,996	257	5,209	266	5,488	267	9.85%	3.89%
Builth Wells	3,893	389	3,967	387	3,735	325	-4.06%	-16.45%
Refail	4,079	550	4,076	583	4,656	596	14.15%	8.36%
Gore	1,497	263	1,529	293	1,419	264	-5.21%	0.38%
TOTAL	17,834	1,845	18,173	1,932	18,629	1,832	4.46%	-0.07%

With regard to the commodities carried, it is of course difficult to ascertain many cargos, but where possible the HGV movements were broken down into a number of categories (Table 3.5).

Table 3.5: Category of HGV

	2011		2012	
	Count	%	Count	%
Building/Construction related	334	17%	254	14%
Minerals / Quarry Material	308	16%	273	15%
Tankers	136	7%	127	7%
Agriculture/Livestock	108	6%	150	8%
Food/Supermarket	102	5%	155	8%
Forestry	77	4%	56	3%
General	867	45%	817	45%
	1,932	100%	1,832	100%

It can be seen that the categories identified above (excluding general) accounted for 55% of the total number of HGV's. The importance of the primary activities of agriculture, forestry and minerals/ quarrying can be observed, representing 26% of total lorry movements in both 2011 and 2012.

Key Generators

The generators of freight traffic are largely dispersed, but those of particular note are the timber processing plants at Sennybridge, to the south of Rhyader and north of the region at Chirk. Each of the Local Authorities imports large quantities of salt, mainly from Cheshire, and this comes by road to various depots, predominately using the A483. Construction activities take place throughout the region, but coastal defence works lead to the importation/ movement within the region of aggregates and onshore wind farm construction generate abnormal load movements and potentially large volumes of HGVs. The agriculture industry involves dispersed movements of feed-stuffs, dairy containers and cattle trucks. The tourism industry in particular generates the movement of mobile homes during the winter months, which are often abnormal loads.

3.4 Road Safety

Casualty Numbers

Improving road safety is a key priority of the National Transport Plan and the RTP. **Table 3.6** shows that overall in Wales the past 15 years has seen a significant reduction in casualties, with the number in 2010 being 46% lower than the average from 1994 to 1998. Significant reductions have also been experienced in the TraCC region, although to a lesser extent than for Wales as a whole.

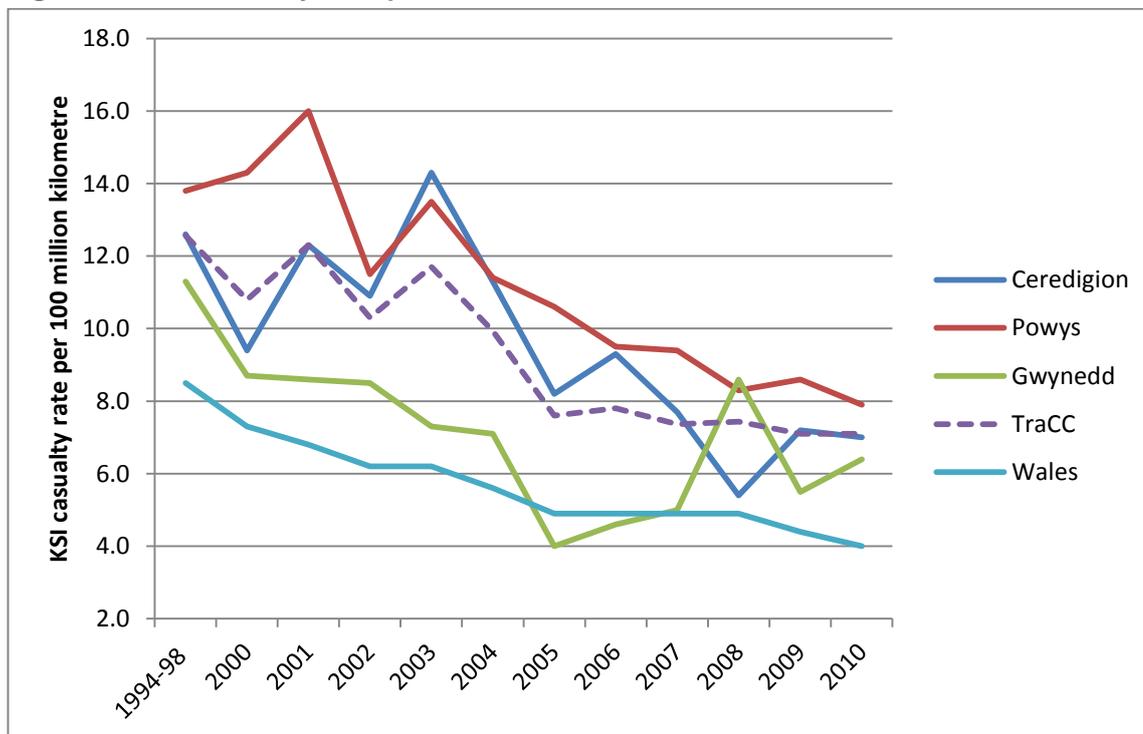
Table 3.6: Killed or Seriously Injured Casualties by Local Authority Area

	Average 1994-98	2006	2007	2008	2009	2010	Change in 2010 over the 1994- 98 average
Gwynedd	126	60	65	112	70	81	-35.7
Powys	177	143	142	125	129	118	-33.2
Ceredigion	81	67	57	39	52	50	-38.1
Wales	2,008	1,372	1,399	1,396	1,221	1,087	-45.9

Source: Welsh Transport Statistics, Table 4.5

Figure 3.4 shows the trend in the killed or seriously injured casualty rate per 100 million kilometres by Local Authority. The graph shows that the KSI rate has been declining, but overall the rate in the TraCC area is considerably higher than that for Wales as a whole.

Figure 3.4: KSI Casualty Rate per 100 million kilometres



Source: Welsh Government Road Accident Statistics database (Table 5.4a in NTP Monitoring)

Table 3.7 and **Table 3.8** indicate the number of people killed or seriously injured in the TraCC region over the last three years by four categories – Young Drivers (17-25), Motorcyclists, Mature Drivers (55+) and Young Passengers (17-30). **Table 3.9** shows the number of children

killed or seriously injured in road accidents. The number of fatalities has reduced slightly over the 2008 to 2010 period. Serious injuries have increased for motorcyclists and road safety for motorcyclists is a particular concern as the road network of Mid Wales attracts motorcycle tourists. The number of children killed or seriously injured has remained broadly the same.

Table 3.7: Accident Analysis – Fatalities 2008-2010

	Young Drivers			Motorcyclists			Mature Drivers			Passengers			Total		
	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010
Ceredigion	0	0	0	2	1	1	2	3	2	0	1	2	4	5	5
Powys	0	0	0	4	4	3	2	2	3	2	3	0	8	9	6
Meirionnydd	0	0	1	2	0	1	0	0	0	1	0	0	3	0	2
TOTAL	0	0	1	8	5	5	4	5	5	3	4	2	15	14	13

Table 3.8: Accident Analysis - Seriously Injured 2008-2010

	Young Drivers			Motorcyclists			Mature Drivers			Passengers			Total		
	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010
Ceredigion	9	10	12	8	14	12	4	3	4	3	1	2	24	28	30
Powys	15	5	9	25	30	35	15	20	7	6	13	9	61	68	60
Meirionnydd	6	5	7	3	2	3	5	7	7	3	2	1	17	16	18
TOTAL	30	20	28	36	46	50	24	30	18	12	16	12	102	112	108

Table 3.9: Accident Analysis – Children 2008-2010

	Killed	Seriously Injured	Killed	Seriously Injured	Killed	Seriously Injured	Total
	2008		2009		2010		
	Ceredigion	0	1	0	1	0	
Powys	0	6	0	7	1	6	20
Meirionnydd	0	3	0	2	0	1	6
TOTAL	0	10	0	10	1	8	29

Figure 3.5 shows the number of killed or seriously injured by type of road user in 2008 to 2010. It can be seen that the number involving cars has decreased substantially, whereas those for pedestrians and cyclists have remained similar. The number of collisions involving motorcycles continues to increase.

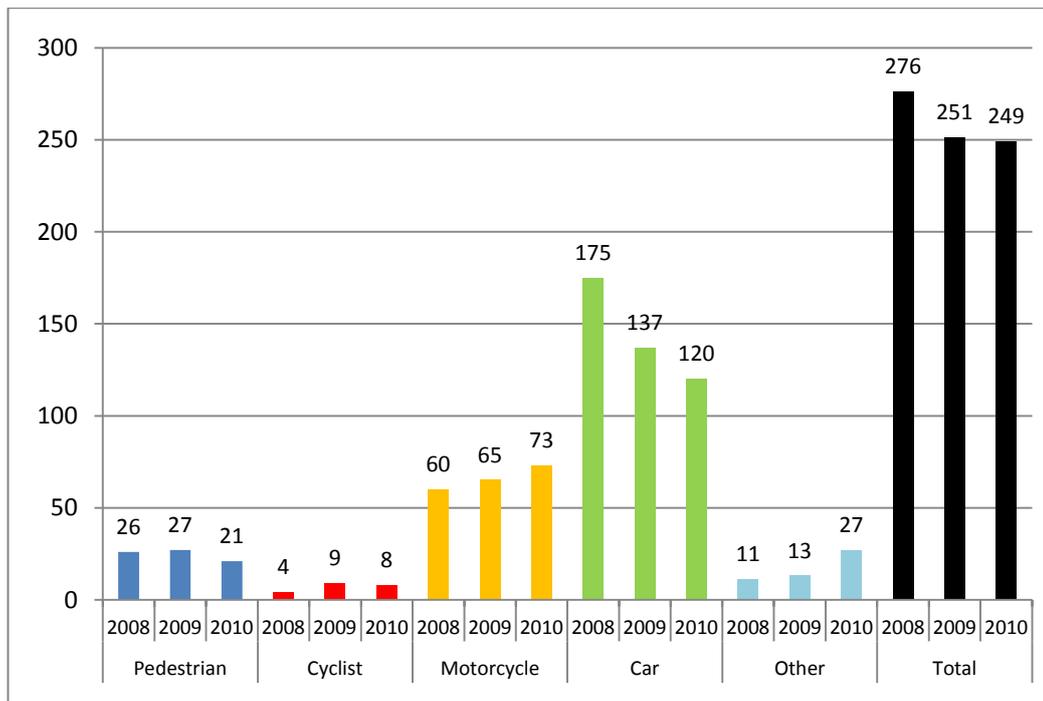


Figure 3.5: Killed or Seriously Injured in Mid Wales by Road User

Regional Risk of Road Traffic Death or Serious Injury

The European Roads Assessment Programme (EuroRAP) has produced a UK map which shows the statistical risk of death or serious injury occurring on Britain's motorways and 'A' roads for 2006-2008. The risk is calculated by comparing the frequency of death and serious injury on every stretch of road with how much traffic each road is carrying. The map notes explain that some of the roads shown may have had improvements made to them recently, but during the survey period the risk of a fatal or serious injury collision on the black road sections was more than 10 times higher than on the safest (green) roads. The map is extracted for Mid Wales in Figure 3.6.

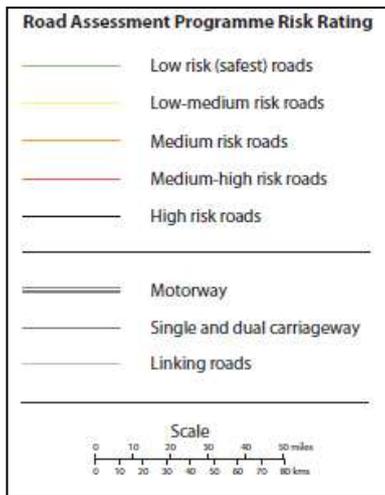


Figure 3-6 Road Assessment Programme Risk Rating of Mid Wales Roads

Source: www.eurorap.org

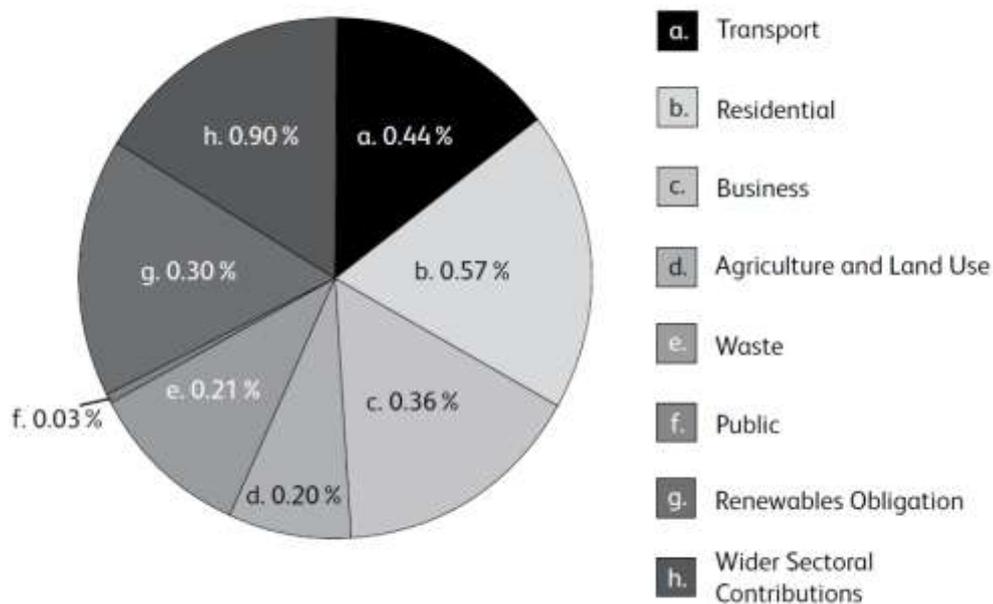
Whilst there are some questions over the validity of the assessment, the plan does show that routes in Mid Wales are highlighted as having a relatively high risk of death or serious injury.

There are a number of routes highlighted as particularly subject to serious collisions, with part of the A496 south of Blaenau Ffestiniog, the A4159 between the A487 and A44 and the A481 between Builth Wells and the A44 to the east all placed in the worst category.

3.5 Carbon Emissions

The Climate Change Strategy for Wales is accompanied by a 'Delivery Plan for Emission Reduction' setting out how emission reductions will be delivered in Wales. **Figure 3.7** illustrates the anticipated contribution from transport to be 0.44% of the 3% target for emissions reductions.

Figure 3.7: Delivery of Emissions Reductions



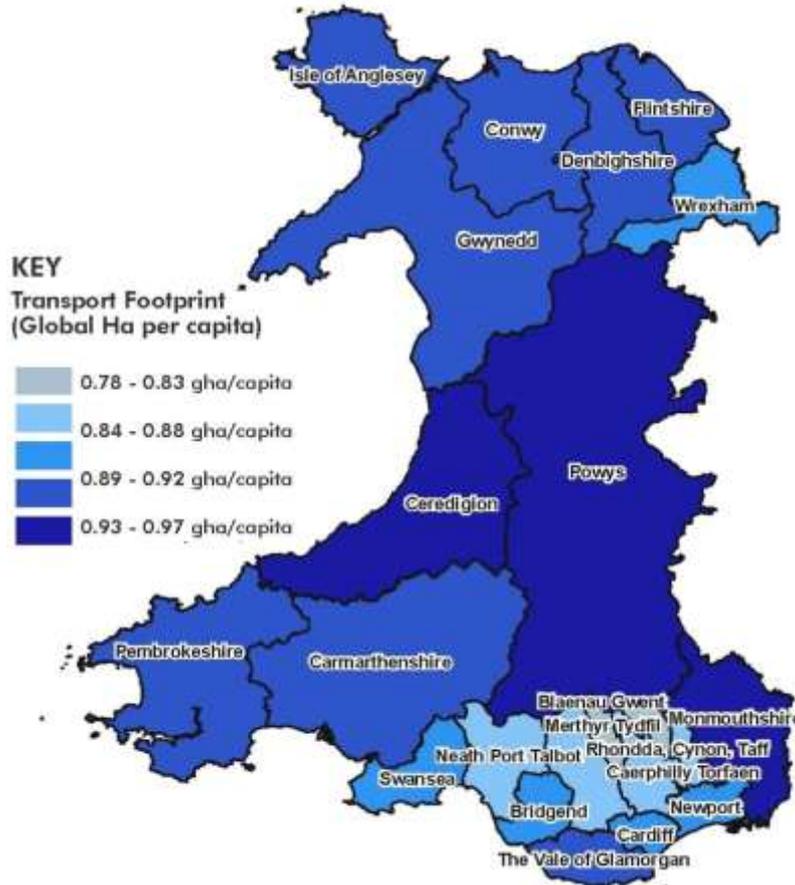
The delivery plans estimates that the Welsh Government's action in the transport sector will deliver 0.29 MtCO₂ savings in 2020 with UK action delivering 1.07 MtCO₂ savings. TraCC appreciates the issue of climate change and the potential impacts it may present to the region in the future. Research found that in 2001 the average person in Wales travelled a total 12,500km, 57% of which was travelled by car. This is projected to rise to 17,000km by 2020.

Figure 3.8 shows the Local Authorities within TraCC to have 'Transport Footprints' amongst the highest in Wales. A paradox is presented as TraCC has a large contribution to emissions due to low levels of accessibility in the region while it is also one of the most susceptible areas to the impacts of climate change such as flooding. Notable factors influencing the Transport Ecological Footprint of Wales include:

- Distance travelled per year;
- Modal choice;
- Occupancy rate of vehicles;

- Efficiency of cars; and
- Efficiency of other modes (buses and trains).

Figure 3.8: Transport Footprint for Wales



Source: Wales' Ecological Footprint Scenarios to 2020

Road Transport Carbon Dioxide Emissions

Table 3.10 presents the level of carbon dioxide emissions generated by road transport within the TraCC region up to 2009 (the latest available). This data is obtained from the Department for Energy and Climate Change, which provides data at Local Authority level.

Table 3.10 Carbon Dioxide Emissions by Local Authority Area

	CO ₂ Emissions from Road Transport (kt CO ₂)						
	2005	2006	2007	2008	2009	% change since base year	% change between 2008 and 2009
Ceredigion	167	164	168	161	158	-5.7	-1.9
Gwynedd	292	296	294	285	272	-7.4	-4.8
Powys	351	354	357	346	336	-4.5	-3.0
TraCC	810	814	818	792	766	-5.7	-3.4
Wales	6652	6642	6738	6503	6243	-6.6	-4.2

Source: Department for Energy and Climate Change

It is apparent when looking at the combined figures for the three Local Authorities, carbon dioxide emissions generated from road transport has decreased from 2007 and 2009. This may reflect the overall reduction in vehicle kilometres travelled in the region.

4 Problems and Opportunities

4.1 Introduction

This section summarises the problems and opportunities faced by the TraCC region relating to highways as identified in the Regional Transport Plan (RTP), together where relevant with issues raised by the local authorities and the context review for the development of this Highways Strategy.

4.2 Problems

Social

- Dispersed settlement patterns characteristic of the TraCC region have implications for accessibility and access to key services, consequently there is a greater dependence on the private car in such areas;
- An ageing population, coupled with out-migration of younger people from the Mid Wales region and in-migration of working adults has socio-economic issues that may have implications for traffic levels in the region. This is due to a greater proportion of the population travelling longer distances to work, to visit friends and family and to access services;
- Generally, the TraCC region has a high level of car ownership, however some areas have relatively low car ownership, notably the larger settlements such as Welshpool, Newtown and Aberystwyth;
- Very poor levels of accessibility to jobs and services are demonstrated by the Welsh Index of Multiple Deprivation, the Accession™ Modelling of the region, and the Needs Assessments published by the Health, Social Care and Wellbeing Partnerships to which the constituent Local Authorities of TraCC belong;
- The number of casualties on the road network has reduced in the past 15 years but not to the same extent as for Wales as a whole. Significant problems include the large number of serious and fatal motorcyclist accidents in Powys, which are continuing to rise.

Economic

- Employment is mainly in small businesses with significant numbers in the agricultural, forestry and tourism industries. Such businesses tend to be highly dispersed and are difficult to access by public transport. As a result a higher proportion of trips to work are made by car and average travelling distances are longer than elsewhere within Wales.
- The average income of residents in the TraCC region is low. This means that with the necessity of car ownership and longer travelling distances, residents spend a larger proportion of their income on car ownership and transport;
- A large proportion of tourist trips in Mid Wales are made by private car;
- Nearly all freight within, to and from Mid Wales travels by road, with the east-west routes being of strategic importance;
- Road freight has a disproportionate impact on the road network and on the communities through which it passes, given that much of the network is substandard with limited overtaking opportunities and passes through the centre of many towns and villages;
- Limited resources for road maintenance and improvements in the past have meant that the principal routes have been prioritised. The agricultural and forestry industries in

particular are highly dependent on the minor road network, as are local residents. The condition of, in particular, non-principal roads is categorised as poor.

Environment

- Carbon emissions are low overall, but disproportionate for the size of the population because of the heavy reliance on cars and the longer distances travelled;
- In the TraCC region, the average age of cars is high and car engines are typically larger, so emissions are disproportionately higher;
- A large proportion of Sites of Special Scientific Interest (SSSIs) and other habitats are in unfavourable condition. A number of habitats are fragmented as a result of infrastructure development, including roads. Habitats are also affected by polluting run off from roads. The poor condition of habitats is affecting a variety of species;
- Acidification of soils and water bodies is an ongoing concern. This problem is partly a result of emissions of air pollutants containing nitrogen and/or sulphur and is prevalent in the upland areas;
- There are real risks of flooding along areas of the Mid Wales coastline, and also inland along estuaries and river floodplains, mainly due to climate change. A higher proportion of the trunk road network in Mid Wales is susceptible to flooding. This has implications for existing and future transport infrastructure;
- There is localised noise disturbance along some routes, which affects communities living near these routes;
- The development of transport infrastructure has significant effects on landscapes, and the countryside continues to be under pressure from such development; and
- The region's cultural heritage assets are affected directly and indirectly by traffic and the development of transport infrastructure.

Movement

- Whilst there has been some recent investment in the trunk road network, and some schemes have not been to a sufficient standard necessary to improve reliability, efficiency and safety for the type of traffic using it;
- While traffic volumes are low in comparison to other more urban areas of Wales, the road network capacity is limited by alignment (including horizontal alignment with 'hidden dips' and width, which combined with limited overtaking opportunities, means that journey times are long and unreliable and collision levels high;
- The poor highway alignment has a negative impact on public transport services, giving a poor ride quality for long wheel-based buses;
- There are significant wind farm proposals in the region which lead to concerns over the movement of abnormal loads of turbine components on an inadequate and inappropriate network.

Funding and Implementation

- There have been very limited resources available in recent years to upgrade the highway network and an emphasis in policy to support schemes for integrated transport and sustainable travel. It is important to invest in the Mid Wales road network as it provides the accessibility and connectivity and also provides for the majority of public transport, walking and cycling trips;
- The rurality and low population density of the TraCC region has meant that the region has previously lost out in transport investment. There are few schemes which are priorities

for TraCC included within the prioritised NTP. There is a need for recognition of the severity of issues facing the TraCC region – notably accessibility and the absence of a transport network that provides even a basic level of service;

- The extensive road network of nearly 11,000 km means that maintenance and winter management is a considerable strain on highway authority resources
- The priorities of Mid Wales with regard to cross-border infrastructure improvements, often do not match those of the adjacent, more populous regions;
- In the past the level of contributions from developers towards the provision of transport infrastructure has been very limited across the region.

4.3 Opportunities

- The region is not generally faced with air quality problems that need to be addressed;
- Carbon emissions could be cut by reducing the need to travel, increasing the use of public transport, improving the fuel efficiency of vehicles and finding alternative fuels;
- There is an opportunity to upgrade the road network, including trunk roads, to a basic standard and thus improving the reliability, efficiency and safety of roads in Mid Wales;
- There are opportunities for local relief roads/by-passes to bring overall movement and environmental benefits to town centres;
- A significant increase in funding availability for maintenance of the road network could sustain the important resource for the future, which is otherwise at risk of serious deterioration;
- There is a change in emphasis from the Welsh Government of supporting Regional Transport Consortia Grant spending on highway schemes;
- There is the potential for prudential borrowing from Welsh Government for highways could assist Local Authorities in delivering highway schemes which reduce future costs; and
- The development of a Regional Highways Strategy should give clarity to future investment in the road network, and clear regional priorities, which will assist the Local Authorities, TraCC and the Welsh Government in prioritising spending.

5 Highways Strategy

5.1 Strategy Priorities and Objectives

The RTP sets out ten priorities and a range of transport planning objectives. Those that are relevant to the have been identified and from these, a set of twelve Transport Planning Objectives (or TPOs) for the Highways Strategy have been derived.

Table 5.1: Highways Strategy Objectives

TPO1	Reduce single occupancy vehicle trips and the length of journeys made by a car.
TPO2	Reduce the level of CO ₂ and other emissions from transport.
TPO3	Reduce the impact of traffic movement on town and village centres and residential areas.
TPO4	Minimise the impact improvements and maintenance of the transport infrastructure has on the landscape, biodiversity, water resources and heritage.
TPO5	Raise awareness and promote issues of road safety.
TPO6	Reduce the number and severity of accidents and casualties on the region's roads.
TPO7	Provide new infrastructure or improve existing infrastructure to support accessibility to services, jobs and facilities.
TPO8	Achieve minimum standards with regard to the core, regional and county road network for width, alignment, overtaking opportunities and roadside facilities.
TPO9	Maintain and upgrade the TraCC region's road networks.
TPO10	Develop route management to make most efficient use of the most appropriate routes.
TPO11	Develop the strategic networks within the TraCC region and links to and within other regions.
TPO12	Improve the efficiency of freight movements.

5.2 Strategy Elements

In delivering the objectives of the strategy, the strategy involves delivering a combination of the following elements:

- 1. Improving and managing highway network infrastructure;**
- 2. Promoting road safety;**
- 3. Reducing and managing freight movements; and**
- 4. Monitoring and Evaluation.**

It is recognised that the delivery of the strategy elements will require a combination of capital investment and revenue support, with provision of infrastructure requiring capital funding and

management initiatives, road safety promotion and training and monitoring and evaluation requiring a combination of capital and revenue funding.

1. Improving and Managing Highway Network Infrastructure

Improvements to the highway network infrastructure are essential in order to ensure there is connectivity for the region to the rest of Wales and the UK, as well as within the region, to support a vibrant rural economy and the social fabric of Mid Wales.

The types of improvements appropriate within Mid Wales reflect the nature of the road network (almost all single carriageway roads, many of substandard width and alignment), the environmental quality of the region and the dispersed pattern of population and employment. Improvements may include:

- **Corridor improvements**, involving a series of measures along a route corridor to improve road safety, provide overtaking opportunities, improve conditions for vulnerable road users, improve the alignment or junctions, or improve resistance to surface water or ice;
- **Alignment improvements**: an upgrade to improve the horizontal or vertical alignment of the highway or minor widening, for example to improve safety, journey comfort, time reliability or accommodate freight movements;
- **By-pass or relief road**: whilst there is likely to be limited funding for investment in major schemes such as by-passes or relief roads, there are certain locations where such options are necessitated by the volume and nature of traffic flows through settlements;
- **Junction improvements**: reconfiguration of a junction, such as signalisation or lane widening on approach to a roundabout or visibility improvements, with aims to reduce accident rates, improve bus journey times, improve pedestrian/ cyclist facilities, reduce junction queuing or provide access to a development site;
- **Access route improvement**: upgrade of the alignment, width, junctions, visibility of an access road serving one or more employment/ industrial/ tourist/ energy/ waste locations;
- **Network resilience and carbon impacts**: schemes which aim to improve the resilience of the network to weather or road traffic incidents: for example drainage or surfacing improvements, alternative routeing arrangements for emergency events, or a reduction in carbon impacts by removing goods vehicles from the road network;
- **Removal of a highway network constraint**: elimination of a level crossing, bridge widening or strengthening, or improvement of alternative route to avoid a low bridge or one with weight restrictions;
- **Traffic management**: implementation of traffic orders and associated environmental improvements, for example to enhance a town or village centre, address parking issues, or improve safety in the vicinity of a school;
- **Pedestrian or cyclist condition improvement**: improvement of crossing facilities or footways to improve accessibility or safety for vulnerable road users¹ as part of review of other networks and the provision of road improvements and interchanges etc.; and
- **Signing or information improvements**: signing strategy, Variable Message Signs, emergency diversion routeing strategies etc.

¹ Such schemes may also form part of the TraCC Walking and Cycling Strategy and Programme.

There will be many improvements with potential benefits, but the following policy sets out TraCC's priorities to be used in determining which schemes should most appropriately be supported at the regional level.

TraCC will **prioritise** investment in highway network schemes which:

- significantly reduce the distance and time travelled compared to the existing route;
- reduce fuel consumption by allowing for improved consistency of journey speed;
- reduce the traffic impact on a key settlement (as defined in the Wales Spatial Plan);
- have a beneficial or neutral impact on landscape, biodiversity, water resources and heritage;
- include measures to raise awareness or promote road safety issues;
- aim to address highway locations with a high rate of casualties;
- improve accessibility to a significant part of the region;
- upgrade a core/ strategically important route to an appropriate standard;
- reduce an ongoing maintenance problem or address a significant infrastructure failure;
- part of a coherent approach to a route corridor;
- improve the core network; and
- improve key freight routes.

The evaluation and prioritisation of schemes will be using a matrix based on the priorities set out above.

Regional Road Network Hierarchy

In order to set a highway strategy, it is important to firstly categorise the road network into a hierarchy of routes, which assists in prioritising improvements. Developing the road hierarchy has involved:

- discussions with each of the three Local Authorities;
- a review of existing hierarchies (notably that forming part of the Mid Wales Partnership Integrated Transport Strategy);
- the current traffic usage levels; and
- taking into account cross border connections and access to and between the key settlements.

The hierarchy is illustrated in **Figure 5.1**. It does not distinguish as to whether a road is a trunk road or county road. Routes are categorised based on usage and purpose, rather than responsibilities for management. The road network has been categorised into:

- Core Routes;
- Regional Routes; and
- County Routes.

The core route network comprises mainly trunk roads and the routes of importance to Wales or the whole region. Core routes include the A470, A44, A487, A458, parts of the A483, and parts of the A489. This encompasses the main east-west routes into Wales from Shropshire and Herefordshire and the north-south links through Wales, including the link road from Ceredigion to Carmarthenshire and the M4, via the A486.

The regional route network comprises those routes providing connections to the core routes and carry long distance, inter-county and intra-county traffic between key settlements. The routes categorised as Regional Routes include the:

- A40 east and west of Brecon;
- A479 and A438 between Talgarth and Hay-on-Wye and Crickhowell;
- A483 south of Newtown;
- A489 east of Newtown;
- A495 north of Welshpool;
- A493, A494, A496 and A4212 in Meirionnydd; and
- A494, A482 and A485 in Ceredigion.

The county network comprises routes of significance at the county level. This includes a number of 'B' roads which experience relatively high usage as they provide shorter connections than the principal roads between key settlements and from key settlements to the Core or Regional network. Examples are the B4389 between Newtown and Llanfair Caereinion and the B4343 from Tregaron to the A44 in Powys.

Key Settlements

The key settlements as referred to in the context of connections are those designated in the Wales Spatial Plan. Those in the TraCC area or close to the TraCC boundary are shown on the Regional Route Hierarchy Plan. **Table 5.2** lists the key settlements in Mid Wales. While they are listed in no priority order, Aberystwyth is designated as a Key Settlement of National Importance, Newtown is a Primary Key Settlement and Dolgellau is a Primary Key Settlement to be developed.

Table 5.2: Key Settlements in Mid Wales

Brecon	Llanfair Caereinion	Aberaeron
Talgarth	Welshpool	Aberystwyth
Hay-on-Wye	Llanfyllin	Machynlleth
Builth Wells	Cardigan	Aberdyfi
Llandrindod Wells	Tywyn	Dolgellau
Rhayader	Llandysul	Barmouth
Newtown	Lampeter	Harlech
Llanidloes	Tregaron	Bala
Trawsfynydd	Blaenau Ffestiniog	Knights

Source: Wales Spatial Plan

Key Freight Routes

In determining which routes in the region are of strategic importance for freight, the levels of usage by HGVs has been taken into account, as set out in Section 3, together with discussions with the Local Authorities.

Routes have been categorised into whether they are Core Freight Routes into and out of the region or provide a regionally important route between counties. There will also be routes that are important for specific freight types or employment sites.

The Core Freight Routes include the:

- A470;
- A40;
- A487 south of Machynlleth;
- A44 from Llangurig to Aberystwyth;
- A458 from Shropshire to Welshpool;
- A483 from Shropshire to Newtown; and
- Parts of the A483.

The regionally important routes are considered to be those carrying at least 150 HGVs per day, which are not Core Freight Routes. The core and regional routes are shown on **Figure 5.2**.

2. Improving and Promoting Road Safety

Road Safety Improvements

Highways improvements, as outlined in the previous section, often have reducing collisions as a key rationale for the project. In addition to large scale schemes which bring safety benefits, capital investment in road safety includes a variety of relatively small scale projects such as the installation of interactive signing, traffic calming and road markings, re-profiling or surfacing or resources spent on the investigation and design of improvements. Funding for road safety is now provided by the Welsh Government through TraCC as the Regional Transport Consortia.

Road safety schemes are brought forward by each Local Authority and there is a need for a consistent approach to evaluating and prioritising schemes to ensure that investment is targeted effectively on addressing locations with the most serious road safety issues and where casualty reductions can best be achieved. TraCC will develop, in conjunction with the Local Authorities, a prioritisation matrix to enable schemes to be evaluated and prioritised for investment based on the priorities set out below.

TraCC will prioritise road safety schemes which aim to improve safety at locations where:

- there has been a high incidence of fatalities or serious casualties;
- collisions have involved vulnerable groups;
- there is a school, playground or other community facility in close proximity;
- traffic volumes are high;
- speed limits are less than 40 mph;
- there is a poor road layout or alignment; and
- the community has raised a high level of concern.

Road Safety Education, Training and Publicity

A reduction in casualties from road traffic collisions can be achieved through the promotion of road safety awareness for groups most at risk. Each of the Local Authorities deliver road safety initiatives, through capital grants and revenue support.

Ongoing revenue education, training and publicity initiatives to promote road safety include:

- Megadrive – an event aimed at the pre-driving age group to enable them to experience driving and have interactive sessions on driving and car ownership related issues;
- Pass Plus Cymru – a driver training initiative aimed at young, newly qualified drivers;
- Kerbcraft – a programme to train young children in pedestrian safety operated throughout the TraCC region;
- Motorcycle Rider Improvement Scheme – an initiative in Ceredigion offering training for motorcyclists based on similar principles to the Pass Plus scheme;
- Mature Drivers (55 years and over) – training and assessment in Powys to provide mature drivers with improved road safety skills and awareness; and
- Various cycle training programmes.

At present there are a wide range of initiatives operated by each of the Local Authorities and a lack of a co-ordinated approach at the regional level. Improved co-ordination and collaboration between the Local Authorities and TraCC could raise the profile of the education, training and publicity initiatives and reduce revenue costs.

TraCC will prioritise support for the provision of education, training and promotion initiatives which:

- Are a national initiative or will be operated at a regional level;
- Target one or more of the highest risk road user groups: motorcyclists, children, young drivers or mature drivers;
- Can provide evidence that the initiative is likely to have successful outcomes in reducing casualties; and
- Demonstrate good value for money by joint working.

3. Reducing and Managing Freight Movements

The efficient movement of freight within and into and out of the region is essential to support the economy of the region yet the level of service provided by the road network impedes freight movements (i.e. single carriageways, poor alignments, lack of overtaking opportunities and height and weight constraints on the network). Moreover, goods vehicles impact on the quality of the environment in communities through which they pass as well as on journey time reliability for other road users. The strategy for highway improvements places a priority on schemes which improve key freight routes.

The Highway Strategy also seeks to reduce the volume of freight movements by road, whilst maintaining/ growing the overall level of goods movements. TraCC and the Local Authorities have commissioned various studies in the past to examine the potential for the transfer of specific freight commodities to rail (for example a trial of timber by rail from Aberystwyth and an investigation into the viability of moving residual waste). There are other goods which might suit

rail transfer such as the import of salt supplies from Cheshire to various council highways depots or aggregates.

The extraction of timber is a particular issue given the remoteness of the forestry extraction locations and the distance to processing plants. The HGV surveys in 2011 and 2012 at various locations recorded up to nearly 6% depending on location of all goods vehicles were timber lorries. There is a need to develop a routeing strategy for timber vehicles to ensure the most appropriate routes are used.

TraCC will support initiatives to reduce and manage the volume of freight by road including:

- A regional freight to rail study to examine the business case for freight transfer of potential commodities; and
- The development of timber transport agreed routes, in consultation with the Timber Transport Forum.

4. Monitoring and Evaluation

There is a requirement for all schemes which achieve grant funding to be monitored by the Local Authority to assess the scheme impact. Moreover, TraCC will continue to evaluate the impact of the programme as part of the annual Monitoring Report, submitted with the Annual Progress Report. The monitoring programme will ensure that the outcomes of the schemes are measured and evaluated to demonstrate value for money and assist in guiding the future programme.