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Consultation Document

National Transport Plan 2015 – Draft

Date of issue: **10 December 2014**
Action required: Responses by **11 March 2015**

Overview

This consultation document seeks your views on the new National Transport Plan.

The Welsh Government is developing a new National Transport Plan (NTP).

This new NTP will demonstrate how the Welsh Government will continue to implement the Wales Transport Strategy and support the delivery of the Programme for Government outcomes.

Transport has a critical role to play in improving Wales' economic competitiveness and provides enhanced access to jobs and services. When planning our investment in transport it is important to focus on how it can serve the needs of businesses, people and communities.

The NTP aims to provide a fresh approach to transport planning which will allow greater flexibility and ensure that Welsh Government funding is directed to secure maximum value for money and impact. The Plan identifies National and Regional improvements, at the same time Local Authorities are developing Local Transport Plans to identify priorities for transport investment at a local level to support the outcomes in the Wales Transport Strategy and in line with guidance provided by Welsh Government.

How to respond

Responses to this consultation should be e-mailed/posted to the address below to arrive by **11 March 2015** at the latest.

Further information and related documents

Large print, Braille and alternative language versions of this document are available on request.

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Data protection

How the views and information you give us will be used

Any response you send us will be seen in full by Welsh Government staff dealing with the issues which this consultation is about. It may also be seen by other Welsh Government staff to help them plan future consultations.

The Welsh Government intends to publish a summary of the responses to this document. We may also publish responses in full. Normally, the name and address (or part of the address) of the person or organisation who sent the response are published with the response. This helps to show that the consultation was carried out properly. If you do not want your name or address published, please tell us this in writing when you send your response. We will then blank them out.

Names or addresses we blank out might still get published later, though we do not think this would happen very often. The Freedom of Information Act 2000 and the Environmental Information Regulations 2004 allow the public to ask to see information held by many public bodies, including the Welsh Government. This includes information which has not been published. However, the law also allows us to withhold information in some circumstances. If anyone asks to see information we have withheld, we will have to decide whether to release it or not. If someone has asked for their

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1 Policy Context and Transport Planning Framework

1.1 Introduction

1.1.1 Transport has a critical role to play in improving Wales' economic competitiveness and provides enhanced access to jobs and services. When planning our investment in transport it is important to focus on how it can serve the needs of businesses, people and communities. The maximum benefits from transport will only be experienced if we have excellent national and international connections, enabling access to markets, to employment, education and services. Providing an affordable, effective and efficient transport system is also key in helping to tackle poverty.

1.1.2 Transport also has a key enabling role to play in the delivery of the outcomes across the Programme for Government themes as set out in Figure 1.1.

Figure 1.1: Transport Links to Programme for Government Priority Areas
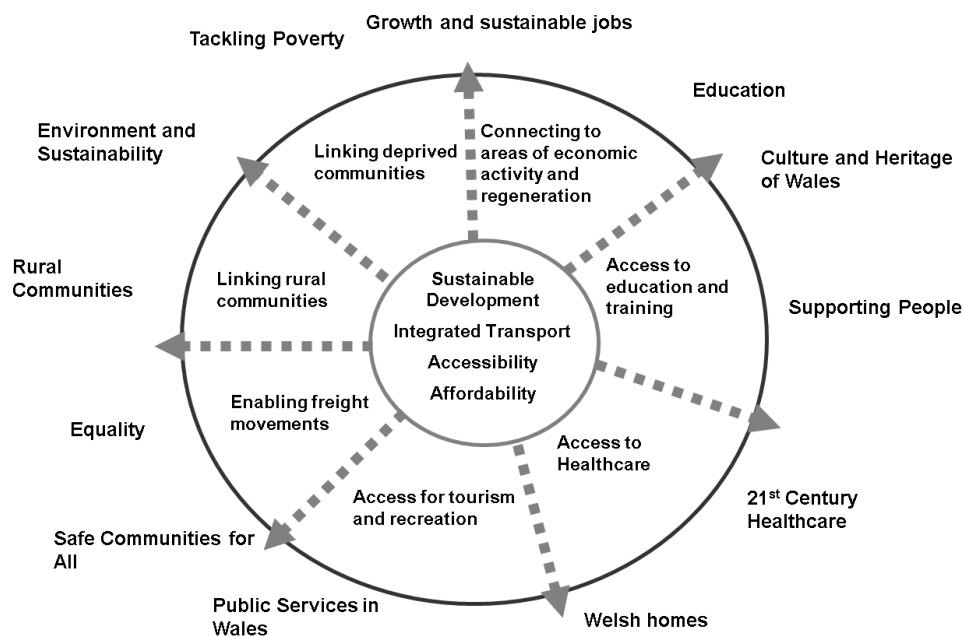
1.1.3   The Wales Transport Strategy provides the overarching framework within which transport interventions are identified, assessed, planned, delivered and evaluated.

1.1.4   The new National Transport Plan has been developed in line with the Welsh Government's policies and objectives for transport as set out in the Wales Transport Strategy[1].

1.1.5   The Welsh Government's legal duty to sustainable development under the Government of Wales Act 2006 and our establishment of sustainable development as our core organising principle is embedded in the Strategy, The Strategy supports the Welsh Government's commitment to developing a sustainable future for Wales and securing positive changes which ensures the cohesive interaction of social, economic and environmental improvements and which follow shared principles of:

- promoting good governance

- using sound science responsibly

- ensuring a strong, healthy and just society

- working to achieve a sustainable economy

- living within environmental limits

1.1.6   The Well-being of Future Generations Bill will ensure that communities and the people who live in them are protected from pressures that threaten their viability and survival. The Bill provides for a set of long-term well-being goals for Wales. These are for a prosperous; resilient; healthier; more equal wales; with cohesive communities; and a vibrant culture and thriving Welsh language. Transport has an important role to play in contributing to these, for example, by improving access to jobs and ensuring sustainable access to housing.

1.1.7   The Wales Transport Strategy sets out the 17 outcomes that the transport system, and our investment in it, is intended to contribute to (see Figure 1.2).

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1 Connecting the Nation - The Wales Transport Strategy 2008-
http://wales.gov.uk/topics/transport/publications/transportstrategy/?lang=en

Figure 1.2: Wales Transport Strategy: Long Term Outcomes

Wales Transport Strategy: Long Term Outcomes		
Social	**Economic**	**Environmental**
• improve access to healthcare • improve access to education, training and lifelong learning • improve access to shopping and leisure facilities • encourage healthy lifestyles • improve actual and perceived safety of travel	• improve access to employment opportunities • improve connectivity within Wales and internationally • improve efficient, reliable and sustainable movement of people • improve efficient, reliable and sustainable movement of freight • improve access to visitor attractions	• increase the use of more sustainable materials • reduce the contribution of transport to greenhouse gas emissions • adapt to the impacts of climate change • reduce the contribution of transport to air pollution and other harmful emissions • improve the impact of transport on the local environment • improve the impact of transport on our heritage • improve the impact of transport on biodiversity

1.1.8   The National Transport Plan aims to provide a fresh approach to transport planning which will allow greater flexibility and ensure that Welsh Government funding is directed to secure maximum value for money and impact. The National Transport Plan has been informed by Professor Preston's report on Approaches to Strategic Transport Planning commissioned via the Public Policy Institute Wales. This report highlighted the need to coordinate transport planning with other aspects of planning such as land use, environment, health, education and so on. This is reflected in the range of evidence we have drawn together to inform the Plan and the further plans outlined in the interventions, for example to develop a regional transport model for the Cardiff Capital Region.

1.1.9   At the same time, local authorities are developing Local Transport Plans which will be closely aligned with adopted and emerging Local Development Plans. The Local Transport Plans will identify the priorities for transport investment at the local level to support the outcomes in the Wales Transport Strategy and be developed in line with guidance provided by Welsh Government[2].

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2 Guidance for Local Transport Plans 2014 – http://wales.gov.uk/consultations/transport/local-transport-plan/?lang=en

1.1.10   The purpose of this Plan is to:

- set the context and evidence to inform decisions on all transport investment (capital and revenue); an evidence base that will be regularly updated and, where appropriate, will enable plans to be updated

- use the evidence base, identify the type of transport interventions required, which may differ by place

- specify interventions to be progressed and confirm priorities for future investment by others, given that not all transport services or infrastructure is devolved

- reflect a short term delivery plan (next 5 years), as well as priorities for the medium term (up to next 10 years) and longer term (next 20 to 30 years)

1.2   The Transport Planning Framework

1.2.1   Two tiers of transport plans will be developed: the National Transport Plan and Local Transport Plans. These plans will demonstrate how we will implement the Wales Transport Strategy and support the delivery of the Programme for Government outcomes. Figure 1.3 details the Transport Planning Framework.

1.2.2   The transport planning framework requires an integrated approach between national, regional and local priorities but which recognises where responsibility for different parts of the transport system lies.

Figure 1.3: Transport Planning Framework
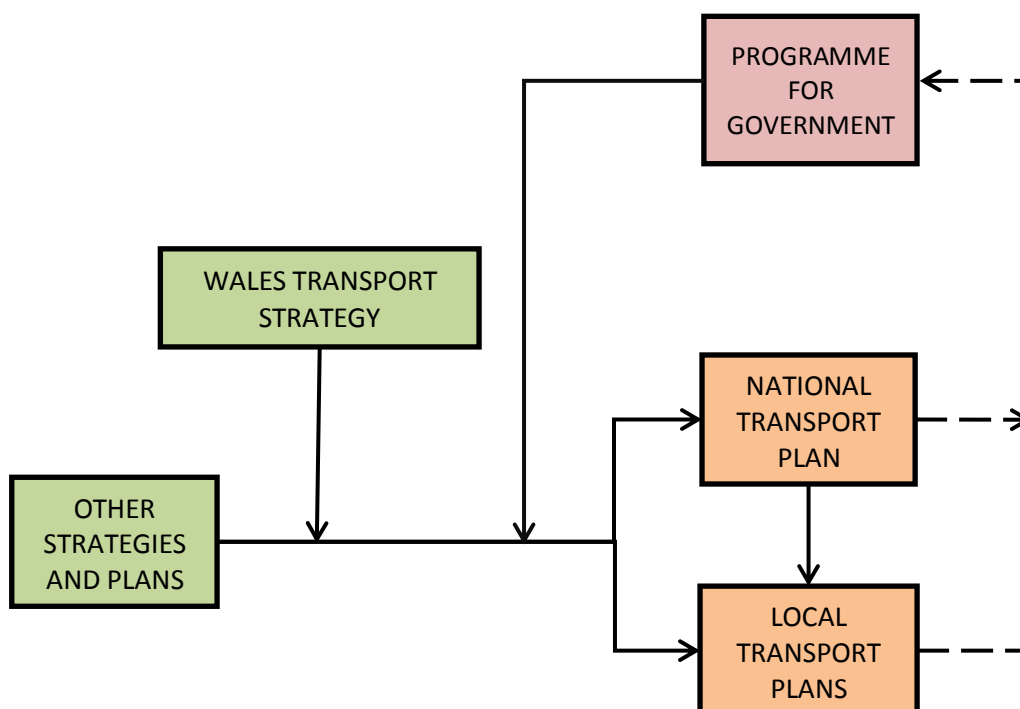
1.3 What we are trying to achieve

1.3.1 As mentioned in paragraph 1.1.7, the Wales Transport Strategy sets out the 17 outcomes that the transport system, and our investment in it, is intended to contribute to and which this Plan will support the achievement of.

1.3.2 We want to enable an efficient and effective transport system where good connections for national and international markets allow businesses to prosper and where everyone can access the opportunities they need to live healthy, sustainable and fulfilling lives.

1.3.3 Transport projects often represent high or very high value for money when the value of the benefits, usually travel time and cost savings, are compared to the whole life cost of the project. In addition, transport schemes can boost the economy by improving access to jobs and assist in the realisation of the agglomeration benefits that arise from the close proximity of businesses. Transport projects can also deliver significant community benefits.

1.3.4 Within the framework of the Wales Transport Strategy, we have identified five key priorities for this Plan:

- **Economic growth:** Support economic growth and safeguard jobs with a particular focus on the City Regions, Enterprise Zones and local growth zones

- **Access to employment:** Reduce economic inactivity by delivering safe and affordable access to employment

- **Tackling poverty:** Maximise the contribution that effective and affordable transport services can make to tackling poverty and target investment to support improvements in accessibility for the most disadvantaged communities

- **Sustainable travel and safety:** Encourage safer, healthier and sustainable travel

- **Access to services:** Connect communities and enable access to key services

1.3.5 Similar investment priorities, tailored to local authorities' specific transport responsibilities are set out in the Local Transport Plan Guidance.

1.4 Impact Assessments

1.4.1 The National Transport Plan has been developed and appraised to ensure that it adequately considers its impact on people, the environment, and the economy, and is inclusive of all types of transport users.

1.4.2   A Strategic Environmental Assessment and Habitats Regulations Assessment have been undertaken and these are available in separate documents.

1.4.3   In addition, the following assessments have been undertaken and have also been published as part of this consultation.

1.4.4   **Equality Impact Assessment** - An Equality Impact Assessment has been produced alongside the development of the National Transport Plan. It will be further developed through engagement with equality groups during the consultation.

1.4.5   The assessment so far concludes that some groups of people with protected characteristics are more likely to rely on public transport and active travel to access jobs and services than those without protected characteristics because of poverty, age, health or disability. Actions in the National Transport Plan that will improve public transport and active travel availability, quality, safety and access will assist in reducing any disadvantage to protected groups. In addition some protected groups may be or perceive that they are at greater risk of hate crime. Plans to improve personal safety whilst using public transport could mitigate against this.

1.4.6   The National Transport Plan contains a commitment to fund socially necessary bus and community transport services. However, for some groups including disabled and older people, the accessibility of those services is also an issue – including getting on or off buses, lack of audio and visual destination or next stop announcements and attitudes or lack of training of drivers. To address this issue the National Transport Plan also contains plans to improve the quality and ease of use of bus and community transport services.

1.4.7   Further engagement is planned with equalities groups during the consultation period.

1.4.8   A **Health Impact Assessment Screening** has been carried out. This has concluded that transport can impact on health in a number of ways.

1.4.9   It can have a positive impact through enabling access to jobs and services including healthcare, education and training, leisure services and shopping. It can encourage increased physical activity by providing for active travel – walking and cycling. However, transport can also have a negative impact on health due to road traffic casualties and severance, noise and air pollution from traffic. The National Transport Plan sets out plans to address these issues.

1.4.10   The screening has identified that more detailed analysis of the impact of relevant National Transport Plan interventions (as the intervention is developed) will be required to appraise the impacts on target groups. Further assessment

will take place as part of more detailed scheme Welsh Transport Appraisal Guidance (WelTAG) appraisals.

1.4.11   A **Welsh Language Impact Assessment Planning Stage** has been undertaken. This has concluded that there are indirect positive effects. The National Transport Plan contains plans to improve public transport, including the provision of accessible, bi-lingual information, and maintain funding for socially necessary bus services. This will assist communities to continue to thrive providing the necessary access to employment, health, education and other services. Traveline Cymru provides bi-lingual information on public transport in Wales. Bi-lingual road and information signs are provided on the existing trunk road network and as part of new trunk road schemes.

1.4.12   It has also identified that there are major future opportunities, for example the specification for the next rail franchise, to enhance provision for the Welsh Language. The Standards relating to the Welsh Language are currently out to consultation. In delivering the National Transport Plan we will ensure we comply with the Standards agreed. For example, where grants are awarded to local authorities or other bodies for transport schemes we will require the grantees to also comply with the Standards.

1.4.13   The National Transport Plan has only indirect impacts on the Welsh language and Welsh speakers and learners; therefore an impact assessment has not been completed. Welsh Language Impact Assessments of individual interventions will be undertaken where appropriate.

1.4.14   A **Rural Proofing Impact Assessment Checklist** has been undertaken. This has concluded that overall there are positive effects. Background data informing the National Transport Plan contains information on a number of issues of relevance to rural areas including:

- access to basic health services

- the availability of a car

- access to employment opportunities

- access to further and higher education

- access to key services by public transport

1.4.15   The National Transport Plan contains interventions aimed at improving rural connectivity and access to key centres and services, such as employment, health, education and other services.

1.4.16   A **Competition Assessment Filter Test** has been undertaken and has concluded there is no risk of the National Transport Plan having a detrimental effect on competition.

1.4.17   The National Transport Plan has key priorities to support economic growth in Wales and to deliver enhanced access to employment and services across Wales and as such will be seeking to promote business competition in Wales.

1.4.18   The interventions in the National Transport Plan are aimed at enhancing the competiveness of businesses in Wales.

1.4.19   Welsh Government procurement processes are also tailored to maximise community benefits to support jobs and growth in Wales.

1.4.20   A **Children's Rights Impact Assessment** has been undertaken.

1.4.21   Some of key Articles of the Convention on the Rights of the Child with relevance to transport:

- Article 6 Right to life – the National Transport Plan should seek to reduce the number of young people killed or seriously injured in road traffic collisions and to promote safer and more active travel journeys

- Article 12 Right to have a say – National Transport Plan seeks to ensure young people have say in the provision transport services

- Article 23 Children with disabilities – National Transport Plan seeks to ensure that disabled children and young people should enjoy the same opportunities, in particular in the provision of public transport services

- Article 24 Environment – National Transport Plan acknowledges the impact of transport on the environment and seeks to address that through air quality and noise management, road safety improvements and promoting more active travel journeys

- Article 31 Right to play – National Transport Plan seeks to promote more active travel journeys for leisure and recreation and address road safety concerns

1.4.22   Overall it is expected the National Transport Plan will have a positive impact on children's rights as it seeks to improve access to services and facilities across Wales, to promote safer and more active travel journeys and encourage more healthy lifestyles and to contribute to the tackling poverty agenda.

1.4.23   All aspects of children's rights that involve travel are potentially affected and the National Transport Plan seeks to improve those situations. Some interventions will affect particular groups of children, e.g.

- connectivity to key sites, including schools

- social services journeys

- targeting particular areas to address poverty issues

- safer, healthier and more active travel journeys

- reducing the number of people killed or seriously injured in road traffic collisions

- road safety improvements outside schools on the trunk road network

- leisure and recreational journeys

1.4.24   In considering **Communities First** areas no distinctive issues were identified. The National Transport Plan has the tackling poverty agenda as one of its key priorities and consultation will include engagement with Communities First clusters to encourage wider community engagement.

1.4.25   The **Climate Change Strategy for Wales** commits every sector including transport (where devolved) to contributing to the Welsh Government's 3% emissions reduction target in devolved areas.

1.4.26   Evidence about the impact of transport on greenhouse gas emissions was considered in developing the Wales Transport Strategy and the original National Transport Plan.

1.4.27   A number of interventions are aimed at mitigating the impact of climate change and reducing emissions in the transport sector including:

- promoting healthier and more active travel journeys

- supporting public transport through significant investment in bus, rail and the Metro

- enhancing network resilience

1.4.28   Climate change impacts are also considered at a scheme or intervention level through the use of the Welsh Transport Appraisal Guidance (WelTAG).

2   Current Position and Future Trends

2.1   Overview

2.1.1   This section sets out the transport context and evidence base, which has been used to inform our decisions on all transport investment (capital and revenue).

2.1.2   Recognising the role that transport plays as an enabling service for access to employment opportunities, health services, education establishments, shopping and leisure facilities, we have obtained and analysed a range of data that has implications for transport and which correspond to this Plan's five key priorities.

2.1.3   Firstly, we have looked at demographics, including population size and projected growth, disability and age. We have also looked at distances travelled and transport trends by mode, congestion and casualty rates to give a broad overview of the transport issues and challenges.

2.1.4   Accessibility to workplaces, hospitals, enterprise zones and education has also been analysed to enable us to identify the different type of interventions that may be required in order to meet specific spatial issues and to address the plan's five key priorities.

2.1.5   As the National Transport Plan is a dynamic document, the accessibility evidence collated will be updated quarterly to give a greater understanding of the impact of the interventions and changes that may have been brought about by other factors. This will enable us to respond to changes in an informed way.

2.1.6   As well as supporting economic growth, our integrated transport network also needs to sustain the health and wellbeing of our communities and the environment. Information on environmental issues has therefore been examined, including climate change resilience, noise management and air quality.

2.2   The Transport System

2.2.1   We need a transport system that can move freight as well as connect people with services, employment and recreation facilities. Figure 2.1 shows the key national road and rail networks, together with significant ports and airports and key routes on the national cycle network.

Figure 2.1: Key national road and rail networks, significant ports and airports and key routes on the national cycle network

2.2.2   Geography has had a significant influence on settlement patterns and the way in which transport networks have developed. The range of mountains and hills that extend from Snowdonia to the Brecon Beacons, and the location of the coal fields, have exerted a dominant influence on the growth of Wales, with principal settlements tending to lie near the coast, primarily in the north and south. The population density of Wales is just over half of that for the UK.

2.2.3   Our key strategic transport routes and hubs are now reflected in the new Trans-European Transport Network (TEN-T[3]) - the EU policy designed to promote cohesion, interconnection and interoperability of national transport systems through the application of common standards (see Figure 2.2).

Figure 2.2: Trans-European Transport Network (TEN-T)

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3 http://ec.europa.eu/transport/themes/infrastructure/index_en.htm

2.2.4   An associated EU initiative is the development of Sustainable Urban Mobility Plans[4]. This looks at how they can promote efficient and integrated transport systems for city regions, where TEN-T routes and hubs are often located, whilst also promoting national and international connectivity.

2.3   Demographics

2.3.1   Information examined includes population size and projected growth and protected characteristics. Key findings include:

- The total population of Wales in mid-2013 was 3,082,400 of which 1,926,600 are of a working age (16 to 64). There are 1,470,000 people living in Wales that are considered to be 'economically active'[5] over the year up to mid-June 2014. The largest centres of population are Cardiff and Swansea.

- Wales is experiencing net inflows to all of its major regions from the rest of the UK. Population change since 2001 shows a high level of growth in Cardiff (see Figure 2.3).

- The population of Wales is projected to increase by 4 per cent to 3.19 million by 2022 and 8 per cent to 3.32 million by 2037.

- The number of older people is predicted to rise significantly (by 292,000 or 50 per cent between 2012 and 2037)[6].

- The number of children is predicted to rise in the medium term (to around 582,000 by 2026) before falling slightly in the longer term. Overall, the number of children is projected to increase by 2 per cent between 2012 and 2037[7].

- In Wales, 27.5 per cent of people aged 16 and over reported they were 'not in good health' the second highest of any region or country in the UK (the North East was the highest)[8].

- Wales has a higher percentage of residents with long term health problems or disability at 23 per cent (696,000), higher than any English region[9].

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4 http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52013DC0913
5 Population Estimates, Office for National Statistics; Annual Population Survey for economic active population
6 Statistics Wales (2013) 2012-Based National Population Projections for Wales, Statistical Bulletin 108/2013, Available at: http://wales.gov.uk/statistics-and-research/national-population-projections/?lang=en
7 Statistics Wales (2013) 2012-Based National Population Projections for Wales, Statistical Bulletin 108/2013, Available at: http://wales.gov.uk/statistics-and-research/national-population-projections/?lang=en
8 Integrated household survey
9 Census (2011), Office for National Statistics

- In Wales, 93.5 per cent of people identified as heterosexual/straight, 1.4 per cent as gay/lesbian or bisexual and 0.4 per cent as other. 4.7 per cent did not respond to this question (1.8 per cent didn't respond and 2.9 per cent didn't know or refused to answer the question). The results are broadly similar to the results for the UK as a whole[10]

- In Wales, 96.2 per cent of people identified as White, 1.6 per cent identified as Asian or Asian British and 2.2 per cent of people identified themselves in another ethnic group[11]

- In Wales, 66.1 per cent per cent of people stated they were Christian, 30.6 per cent stated that they had no religion, 1.2 per cent of people stated they were Muslim whilst other religions accounted for 2.2 per cent of people.

Figure 2.3: 2011 Census – Population change between 2001 and 2011
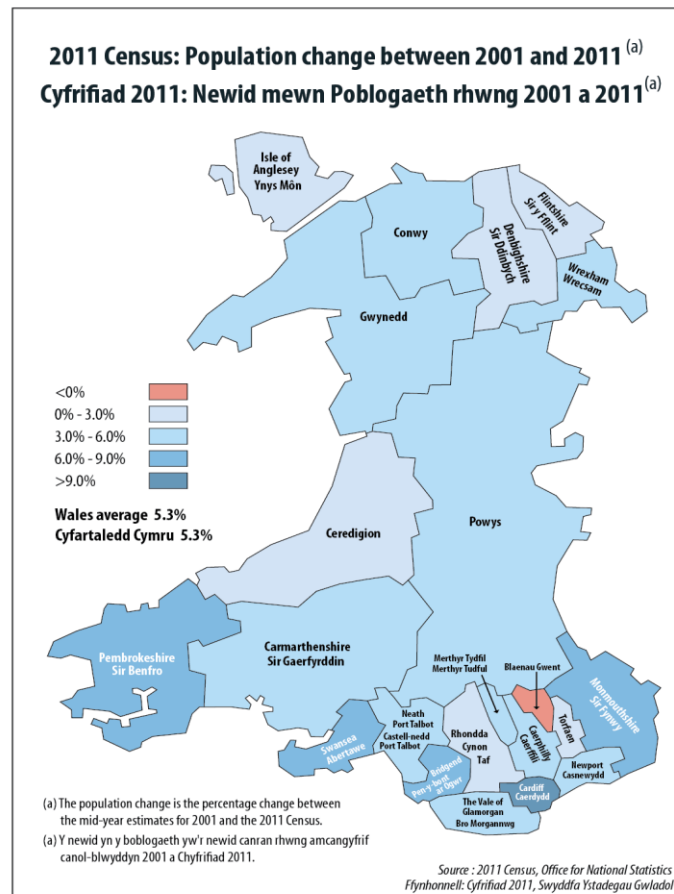
2.4.2   Figure 2.4 shows how the population by broad age group is projected to change during the 25 year projection period, relative to the base year. This shows the

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10 Integrated Household Survey (2013)
11 Integrated Household Survey (April 2010 to March 2011)

relatively steep rise in the number of people 65 and over throughout the projection period whilst the under 16 and 16 to 64 age groups do not increase in the same way.

Figure 2.4: Population Projections for key groups (indexed)[12]
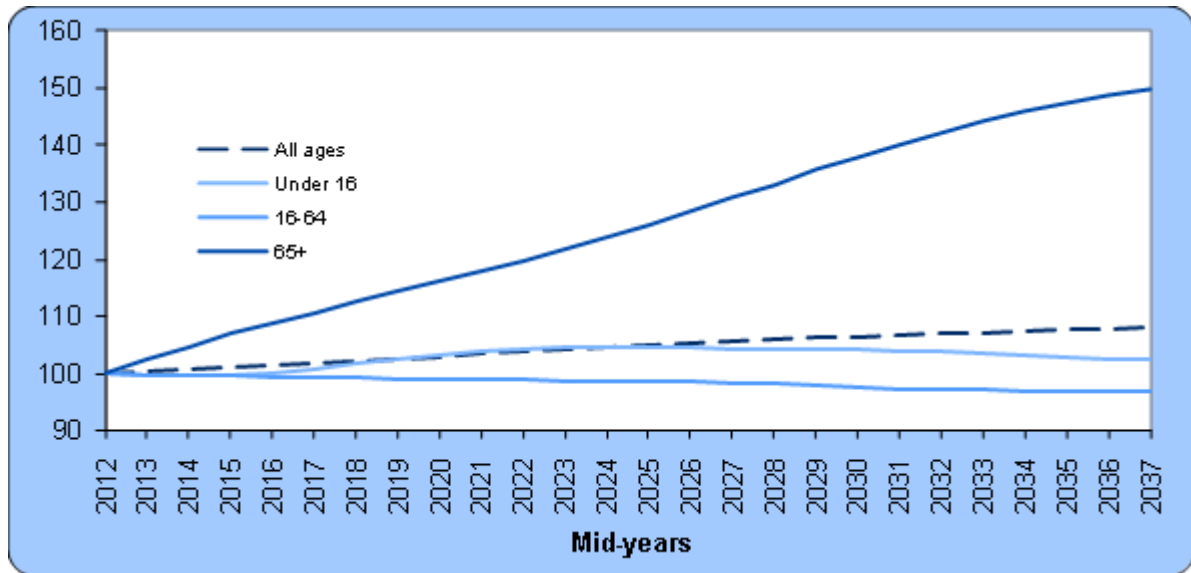
2.4 Travel to Work

2.4.1 Travel to work (Figure A1, Annex A) has been examined by looking at travel by mode and also by local authority, to give an overview of spatial differences. Data has been obtained from the 2011 Census. It is important to note that the question on travel to work asked for 'main mode of travel' and therefore it is possible that the dataset underestimates use of active travel modes. Key findings are as follows:

- Travel is dominated by private car (74.2 per cent), followed by walking (10.6 per cent) and bus (4.6 per cent). Car travel varies regionally, and is at its lowest in Mid Wales, where there is a higher percentage of home workers (12.9 per cent) and people walking to work (14.4 per cent) than average. 1.4 per cent of people cycle as their main mode of transport.

- Bus travel to work is highest in the Cardiff (10.2 per cent) and lowest in Powys (1.1 per cent) and Carmarthenshire (2.1 per cent).

- Travel to work by rail is undertaken by 2.1 per cent of people, and at its highest in the Vale of Glamorgan (6.1 per cent).

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12 2012-based National Population Projections, ONS

- Across Wales 12.1 per cent of people travel actively to work. Mid Wales has the highest proportion of people that travel actively to work (15.8 per cent). In Cardiff, 19.2 per cent of people travel actively to work (highest level), in Caerphilly (8.3 per cent) of people actively travel to work (lowest).

2.4.2 The average distance travelled to work[13] is 16.7km (14.8km in 2001, an increase of 12.6 per cent). The average distance travelled is lowest in Cardiff (12.7km) and Wrexham (13.4km) and highest in Isle of Anglesey (22.5km), Powys (22.2km) and Monmouthshire (21.9km).

2.4.3 35 per cent of people accessing workplace zones[14] in Wales are travelling distances of 5km or less. This figure is higher in Blaenau Gwent (47 per cent) and Merthyr (44 per cent) and lower in Monmouthshire (26 per cent), Powys (28 per cent), Gwynedd (28 per cent) and Isle of Anglesey (29 per cent). Longer distances of over 20km are spent travelling by those employed in workplace zones in Gwynedd (20 per cent), Bridgend (17 per cent), Carmarthenshire (17 per cent), Ceredigion (17 per cent), Powys (17 per cent), Monmouthshire (17 per cent) and Denbighshire (16 per cent).

2.4.4 Figure A.2, Annex A gives details of commuting patterns in Wales, which in particular shows a high level of in-commuting into larger urban areas such as Cardiff, Swansea and Newport.

2.5 Travel to School[15]

2.5.1 Mode of transport used to get to school is shown in Figures 2.5, 2.6 and 2.7. For primary schools:

- Over half of children aged 4 - 11 (53 per cent) will walk to school, at least for part of the week. Most will be accompanied by an adult. Cycling accounts for 2 per cent of trips.

- The mode of transport for primary schools varies with distance travelled to school. Walking to school is the most important mode for distances under a mile; but is sharply lower for distances over a mile. Even for journeys of less than half a mile, around a quarter of children will be regularly taken by car.

- For secondary schools a third of children (33 per cent) will walk to school, at least for part of the week. Almost all will walk on their own or with other children. Cycling is relatively unimportant accounting for 1 per cent of trips. The school bus account for 40 per cent of trips, again for at least part of the week.

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13 Census (2011), Office for National Statistics
14 Census (2011), Office for National Statistics
15 This information was collected through the National Survey for Wales. Source: SB 70/2014, Active Travel: Walking and Cycling 2014, 27th August 2014

- Again, walking to school is the dominant mode of transport for distances under a mile. It decreases for distances over a mile.

Figure 2.5: Mode of transport used by children to get to school
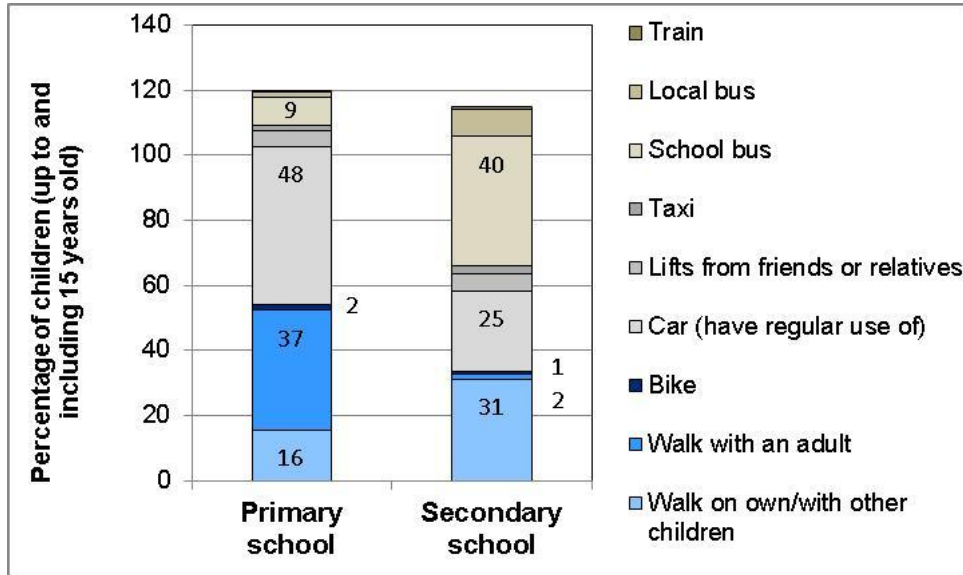
Figure 2.6: Mode of transport to get to primary school, by distance
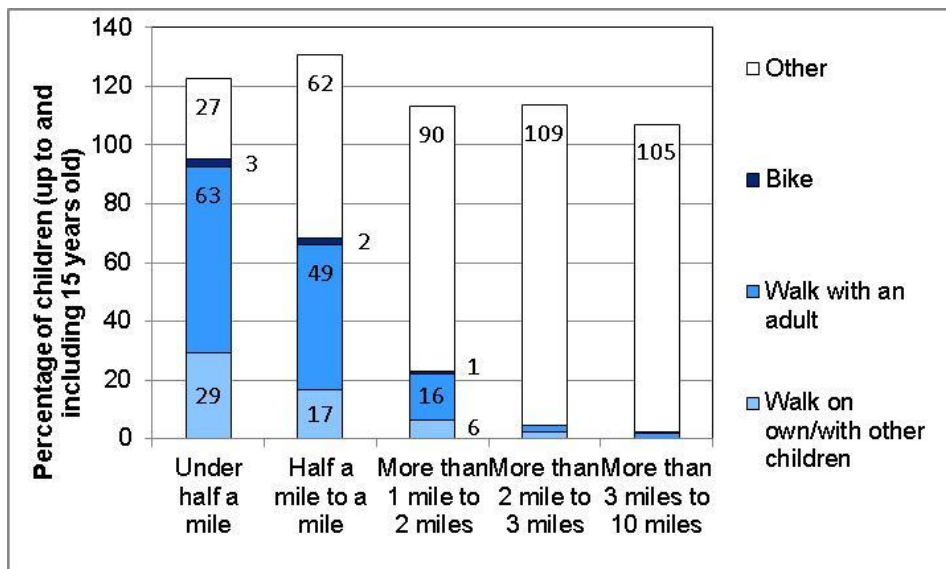
Figure 2.7: Mode of transport to get to secondary school, by distance
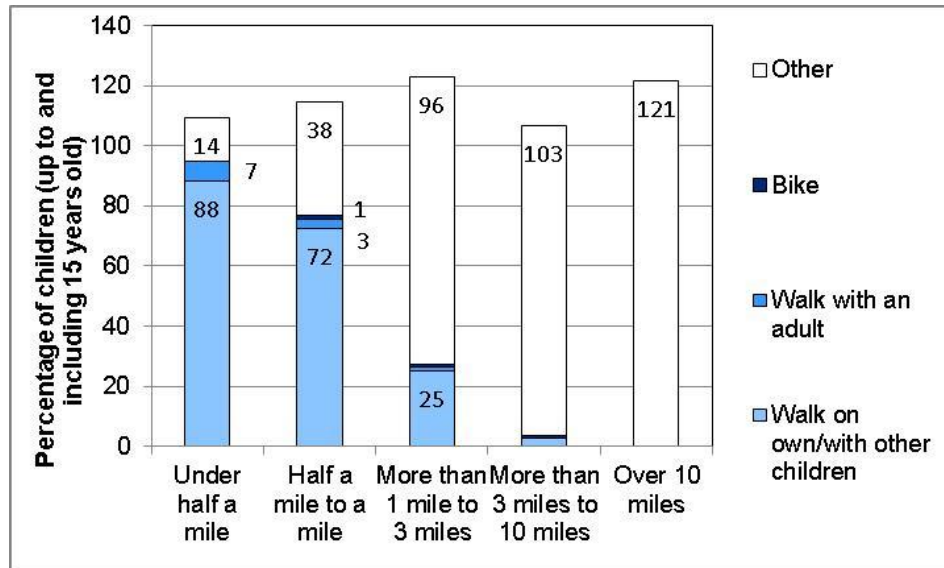
2.6   Transport Trends

2.6.1   Key transport trends have been examined to give an overview of changes in use of key modes over time.

Highways

2.6.2   In 2013, the total volume of motorised traffic in Wales was 27.0 billion vehicle kilometres, which is equivalent to 8,800 vehicles kilometres, or 5,500 miles, per head of population over the year.

2.6.3   Within this total volume of traffic, cars accounted for 80 per cent of the total, light vans for 15 per cent, and goods vehicles for 4 per cent; motorcycles, and buses and coaches accounted for 1 per cent each; and in comparison, pedal cycles represented a further 1 per cent of the motorised traffic total.

2.6.4   These vehicles travelled mostly on the major roads, with 65 per cent of motor traffic in Wales either on motorways or A roads. The remaining 35 per cent travelled on minor roads, that is B and C and unclassified roads. In more detail for traffic on major roads, 13 per cent of the total volume of traffic in Wales was on motorways, 40 per cent on rural A roads, and 12 per cent on urban A roads.

2.6.5   Figure 2.8 shows that there was a peak in the volume of traffic in 2007, with traffic volumes then falling each year until 2010, stabilising in 2011 and 2012, and then rising in 2013.

2.6.6   Growth forecasts from TEMPro (Trip End Model Presentation Program), data provides both national and regional growth estimates. Car traffic growth estimates are provided in Figure 2.9 and demonstrate highest projected growth in south east and south west Wales.

Figure 2.8: Volume of traffic in Wales, 1993-2013[16]
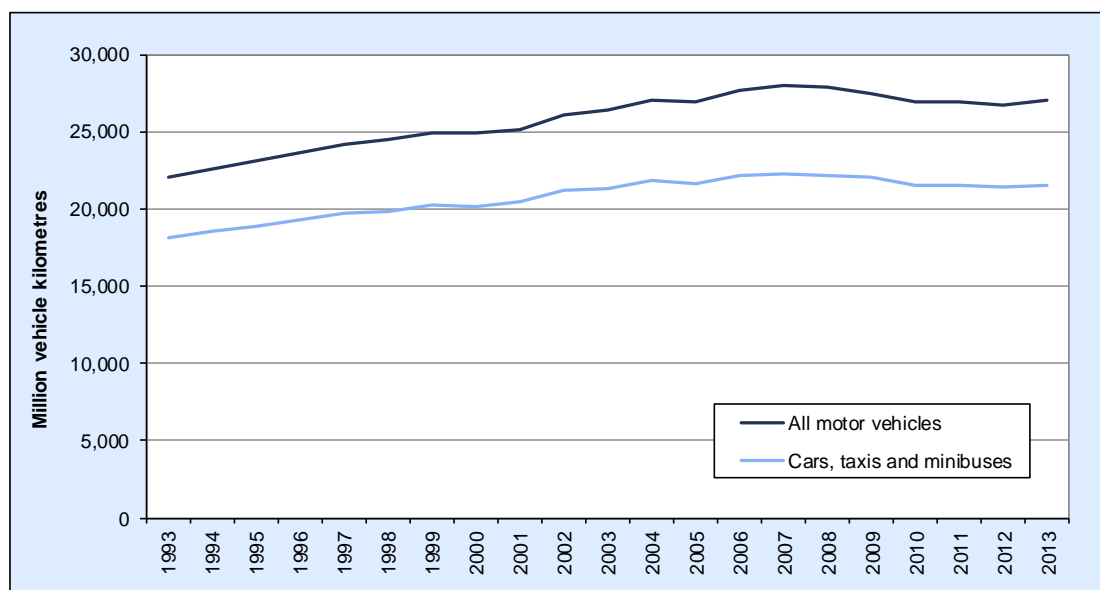
Figure 2.9: TEMPro Growth Forecasts – Car Traffic Growth (2015 to 2030)

Area	All Trip Purposes (2015 to 2030)	
	Production[17]	Attraction[18]
Mid Wales	1.0866	1.0794
North Wales	1.0924	1.0934
South East Wales	1.1479	1.1479
South West Wales	1.1393	1.1409
Wales	1.1284	1.1284

2.6.7   The Programme for Government sets out indicators measuring the percentage of trunk roads that require close monitoring of structural condition. At present

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16 Source: DfT, taken from SB 67/2014, Road Traffic, 2014, 13th August 2014.
17 Trip Production is defined as the home end of a Home Based trip or as the origin of a Non Home Based trip.
18 Trip Attraction is defined as the non home end of a Home Based trip or the destination end of a Non Home Based trip.

12.8 per cent of the trunk road and motorway network requires maintenance against a target of 8 per cent[19].

2.6.8   The Programme for Government also sets out indicators which monitor the incidence and repair of category 1 defects on Welsh trunk roads. Category 1 defects are those which represent an immediate or imminent regard and have implications for road safety, and therefore require immediate attention. The overall number of Category 1 defects varies seasonally and there was a notable increase in the profile of category 1 defects in 2013/14[20].

2.6.9   Over the 2013/14 financial year, there were 50 occurrences of roads closed or partially closed due to flooding, and 58 instances of either full or partial road closures due to high winds wind recorded on the Welsh Government network.

Freight

2.6.10   Figure 2.10 shows that over the past 60 years the movement of freight in Great Britain has grown considerably and there has been a shift away from rail to road. The overall growth in freight billion tonne kilometres over this time period was from 91 billion tonnes km in 1954 to 222 billion tonnes km in 2010. It also shows the levelling of the rate of growth in freight transport in the last decade and the increasing dominance of road transport at the expense of rail.

Figure 2.10: GB domestic freight transport by mode, 1954 – 2010, billion tonne km[21]

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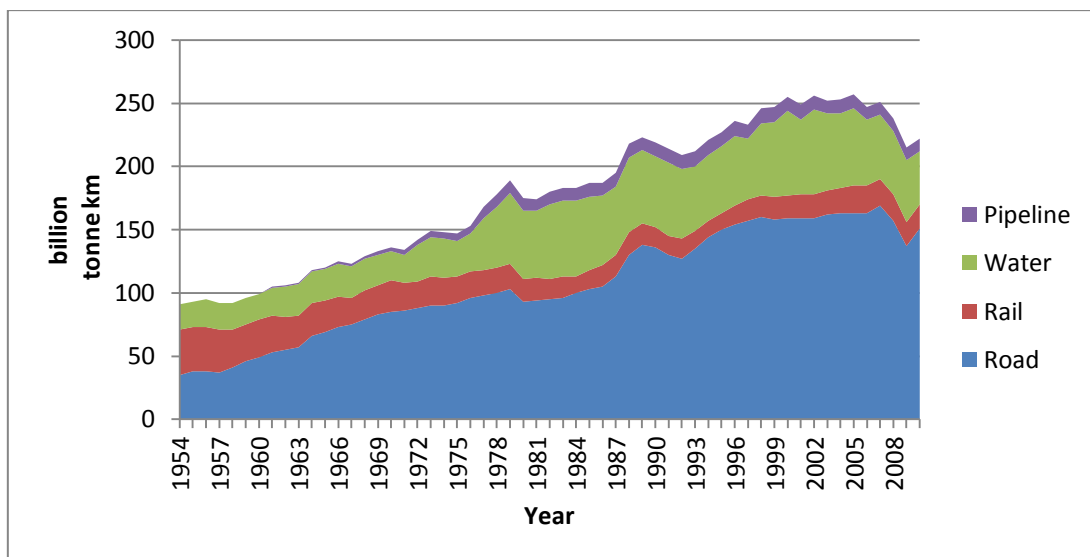
19 http://wales.gov.uk/about/programmeforgov/data?code=TR018&lang=en
20 http://wales.gov.uk/about/programmeforgov/data?code=TR018&lang=en
21 Source: DfT Transport Statistics, table TSGB0401

- Figure 2.11 below which shows the relative market share of road and rail between 1954 and 2010. In 1954 rail had 54 per cent of the market which was greater than roads' 46 per cent based on the total billion tonne km transported by road and rail modes. By 2010 the rail share had fallen to 11 per cent. The rail mode share declined until the mid 1990s and has recovered slightly since.

Figure 2.11: Road and rail freight, billion tonne km, 1954 - 2010[22]
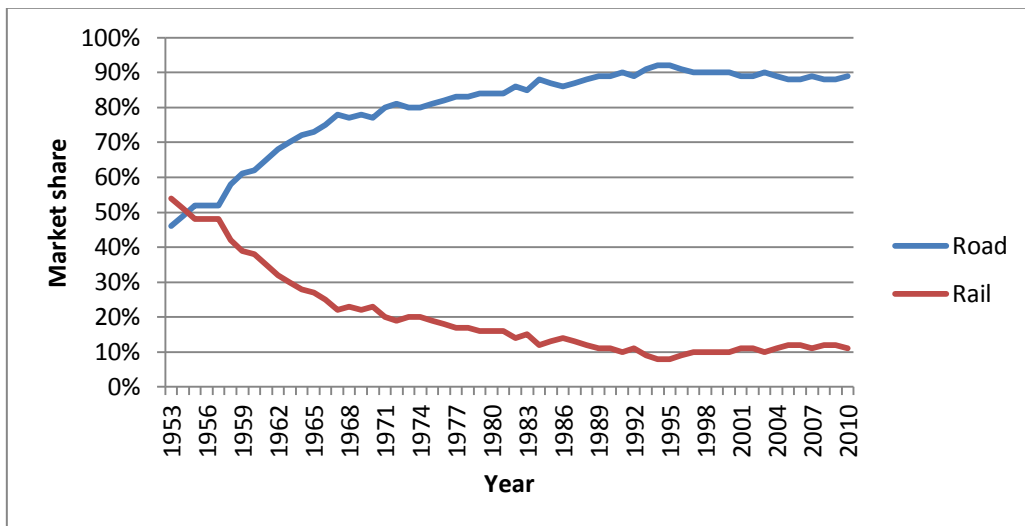
- The average daily HGV and LGV flows in Wales are given in Figure 2.12. The latest forecasts for growth in road freight traffic produced by the Department for Transport in 2013 are given in Figures A.3 to A.5, Annex A.

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22 Source: DfT Transport Statistics, table TSGB0401

Figure 2.12: Average Daily HGV & LGV Flows
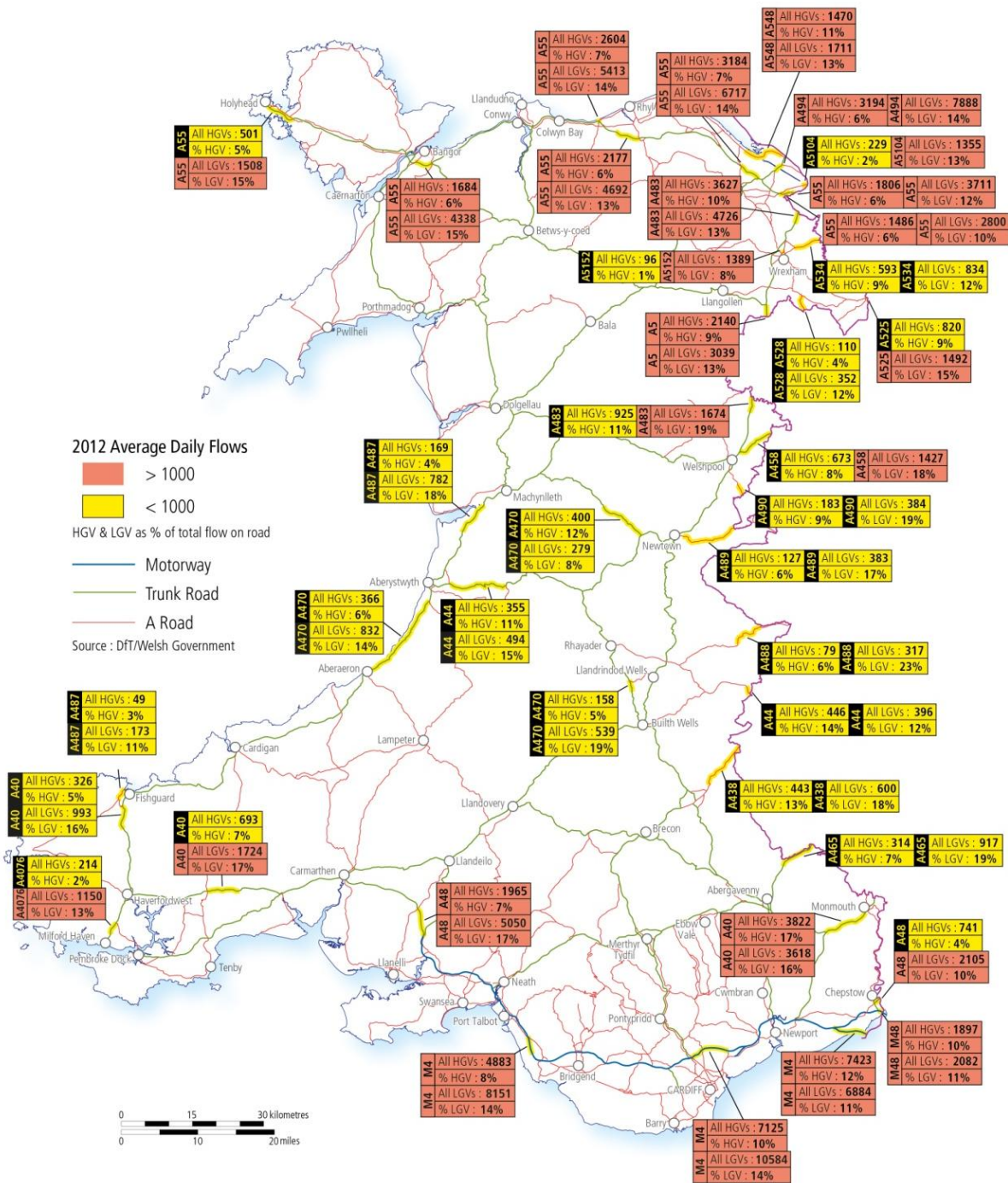
Road Safety[23]

2.6.11   Casualty reduction targets up to 2010 were achieved and exceeded. A new set of targets were developed from 2012 onwards, for achievement by 2020.

2.6.12   The Welsh Government uses Stats 19 data from the police to produce the annual 'Police Recorded Road Casualties' report. Four bulletins supplement that report on our two high risk groups of motorcyclists and young people and for pedestrians and cyclists. The Welsh Government, as the highway authority for the motorway and trunk road network in Wales, plots the location of road traffic collisions to identify clusters of collisions which may be addressed by local safety schemes, and identifies routes with high collision rates where route based local safety schemes are required (see Figure 2.13).

Figure 2.13: Wales Trunk Road Network 2011-2013 Road Traffic Collision Rates

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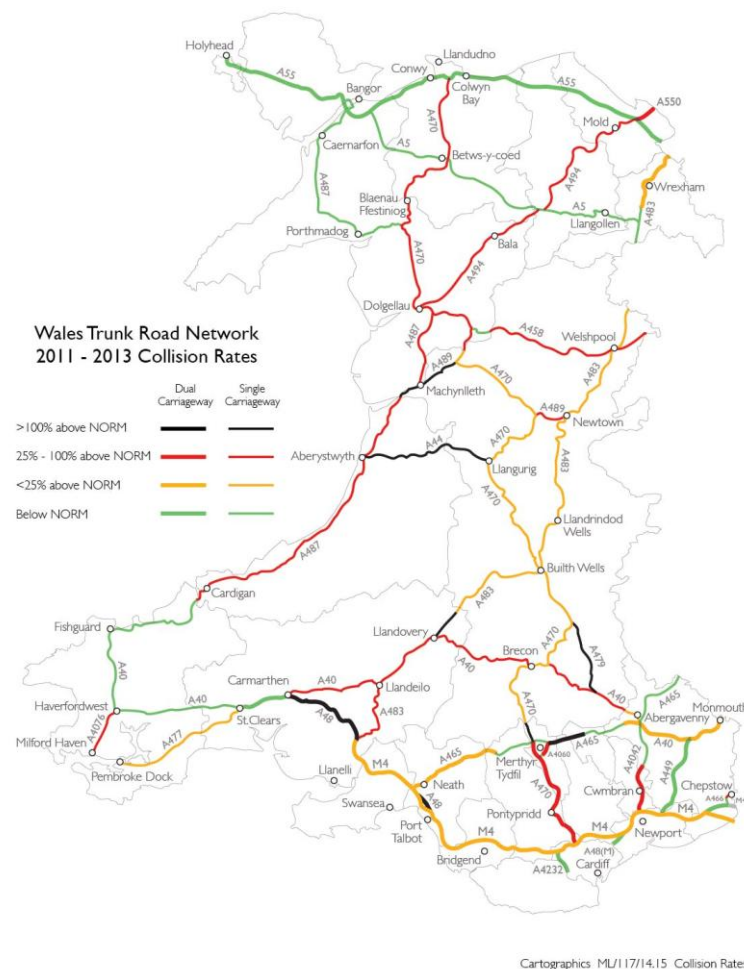
23 Welsh Government Transport Statistics

2.6.13   We are working with local authorities to ensure they undertake a similar level of analysis on roads they are responsible for.

2.6.14   Over the last three decades, killed or seriously injured (KSI) casualties have declined at a rate of between 3-4 per cent a year. Achievements of the 2020 targets will require all responsible authorities/stakeholders to maintain that rate of decline.

2.6.15   The trends in collisions and KSI casualties are different. Between 1979 and 2004 KSI casualties fell more rapidly than collisions, so the improvement in road safety came about because the consequence of the collisions that occurred became less severe. This was because of improvements in road engineering and the safety of motor vehicles which meant that car occupants became less likely to be killed or seriously hurt if involved in a collision.

2.6.16   In contrast, from 2005 onwards, collisions have been falling more rapidly than KSI casualties. This means that when collisions occur, the consequences are more severe. This is because a greater proportion of casualties involve vulnerable road users; in turn this is because casualties amongst car occupants are falling at a faster rate rather than those amongst vulnerable road users. As a result, in 2013, the number of KSI casualties amongst pedestrians, pedal cyclists and motorcyclists (taken together) exceeded KSI casualties amongst car occupants. This is the first time this has happened. Figure 2.14 below shows the trend in casualties in Wales since 1968.

Figure 2.14: Road traffic casualties on Welsh roads by severity, 1968-2013
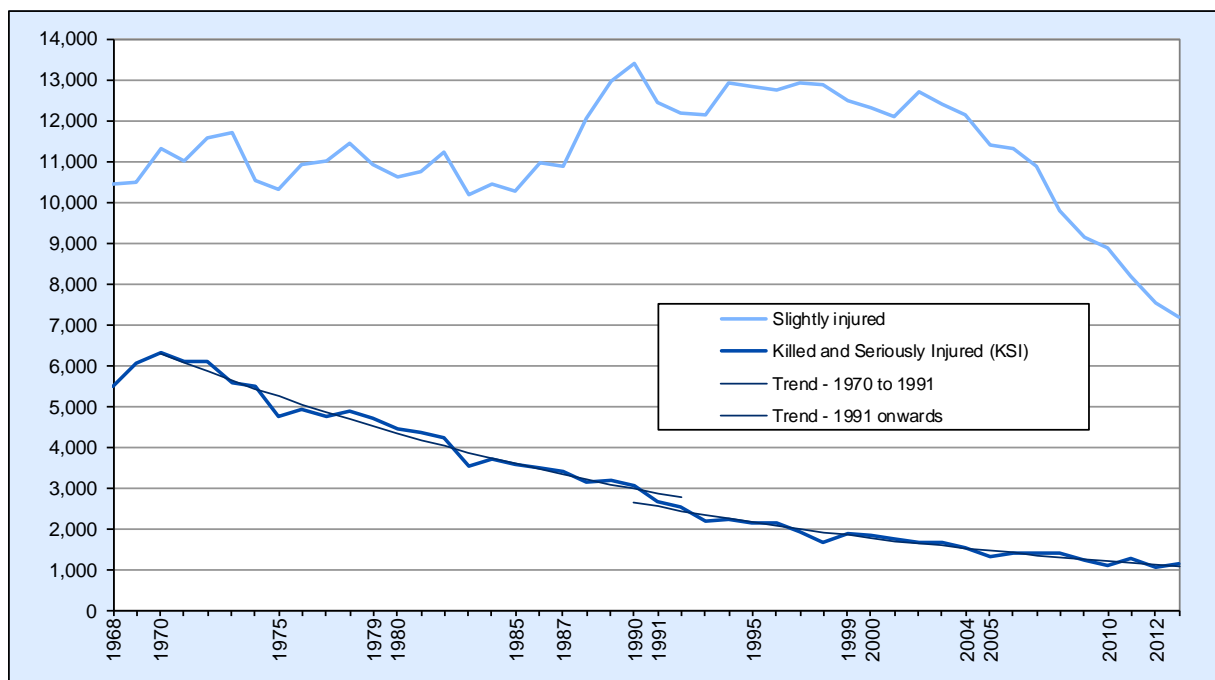
2.6.17   The increase in the KSI rates for vulnerable road users is a particular concern. Whilst measures such as improvements in road engineering and child pedestrian training would appear to have contributed to the decline in KSIs, continued reductions will require us to achieve improvements in other areas such as seatbelt use and preventing use of mobile phones when driving and improve safety for cyclists.

2.6.18   16-24 year olds continue to be at higher risk of becoming a road casualty compared to children or other adults. They represent 12 per cent of the population but 25 per cent of fatal and serious casualties (see Figure 2.15).

Figure 2.15: Share of 2012 population, by 2013 KSI and slight casualties, by broad age group
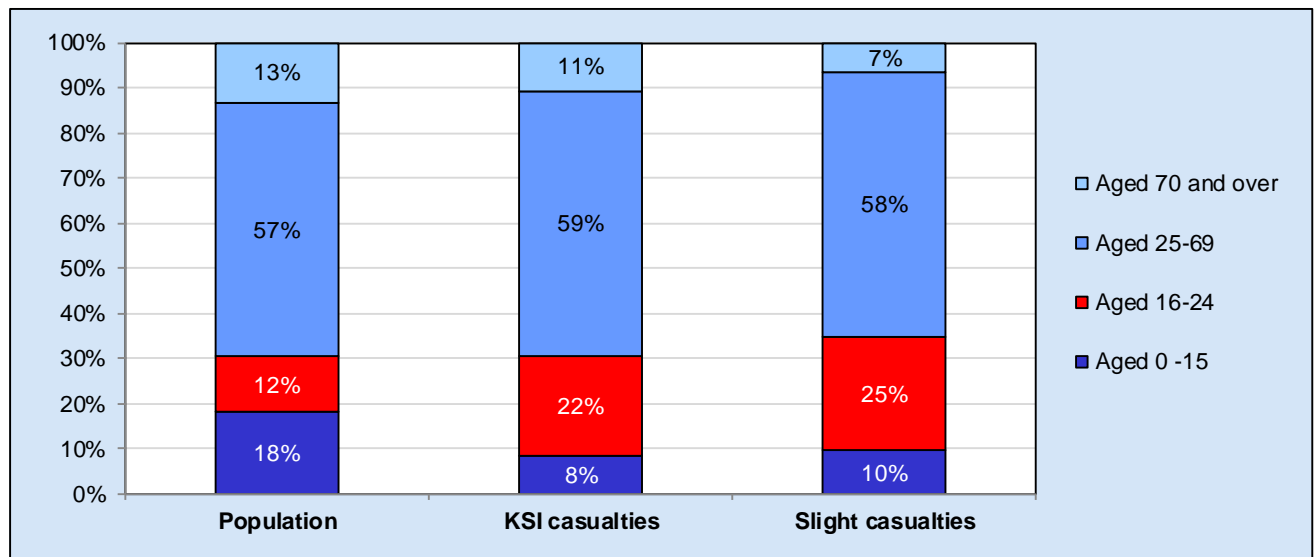
2.6.19   Despite this overrepresentation, KSI and total casualties for this age group have been falling in recent years. Since 2008, the rate of decline in casualties amongst the 16-19 year old group has declined at a faster rate than the rest of the population. This could be linked to the decline in the number of young male drivers, exacerbated by the downturn in the economy since 2008. The relative risk of becoming a casualty for young people is much higher as a passenger than as a pedestrian or driver. 48 per cent of passenger casualties were in vehicles driven by drivers aged between 17 and 19, with a further 20 per cent driven by drivers aged between 20-24 (see Figure A.6, Annex A). This has led to some local authorities taking an approach of trying to target passengers in their training and publicity with the aim of them influencing driver behaviour.

2.6.20   The fall in young men riding motorcycles in the 1980s meant that motorcyclist KSIs substantially decreased from 1,000 in 1979 to 250 in 1993. In contrast, over the last 20 years the number of motorcyclists KSIs has been fairly constant. This period has coincided with a growth in motorcycling as a leisure

pursuit, with riders tending to be older with more powerful machines. Behavioural changes in these riders will be key to realising further reductions.

2.6.21   The risk of a motorcycle rider being killed or seriously injured continues to be far greater than that for a car driver. Whilst motorcyclists represented 0.2 per cent per cent of traffic in Wales in 2013, they made up 31 per cent per cent of fatal and serious casualties.

2.6.22   The highest numbers of killed or seriously injured motorcyclist casualties in 2013 were in Carmarthenshire and Powys followed by Swansea and Cardiff (see Figure 2.16).

Figure 2.16: Motorcycle KSIs for 2013
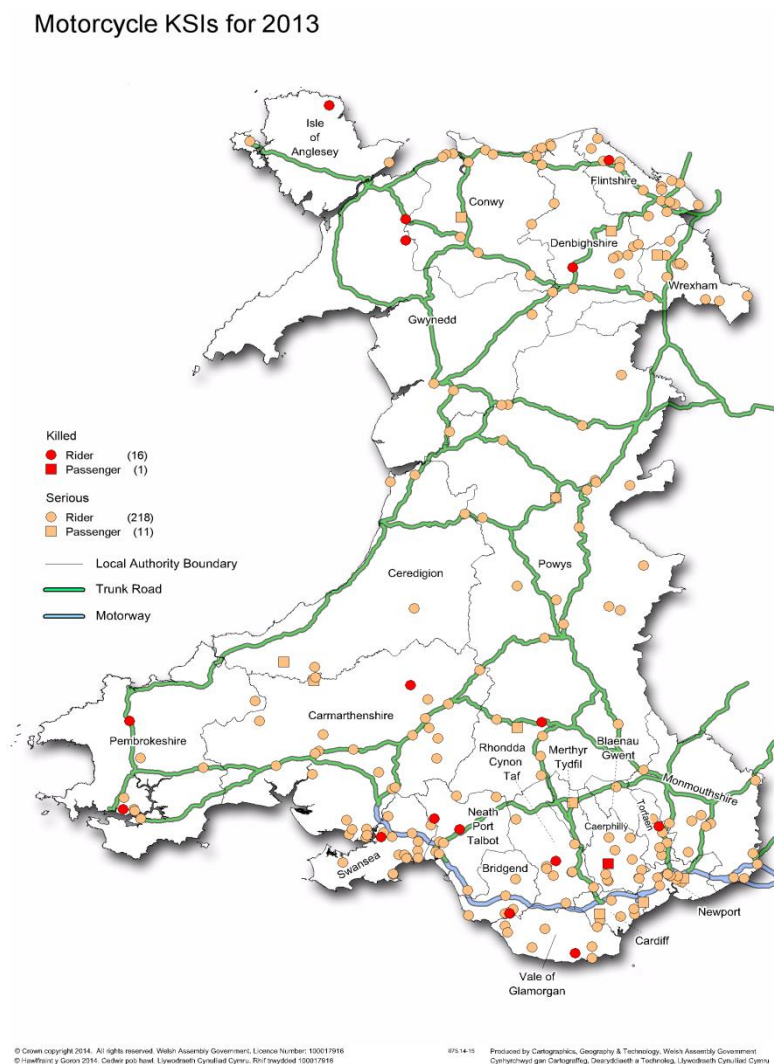
Active Travel[24]

2.6.23   Active travel as a means of transport means walking or cycling in order to get to a particular destination such as work, the shops or to visit friends. It does not cover walking and cycling done purely for pleasure, for health reasons, for training or competition, or for just walking the dog.

2.6.24   Figure 2.17 shows that for people in Wales aged 16 and over, reporting on their travel over the previous 3 months:

- 6 per cent travelled by bicycle for active travel trips at least once a week.

- 46 per cent per cent typically walked several times a week.

Figure 2.17: Frequency of active travel by walking and cycling
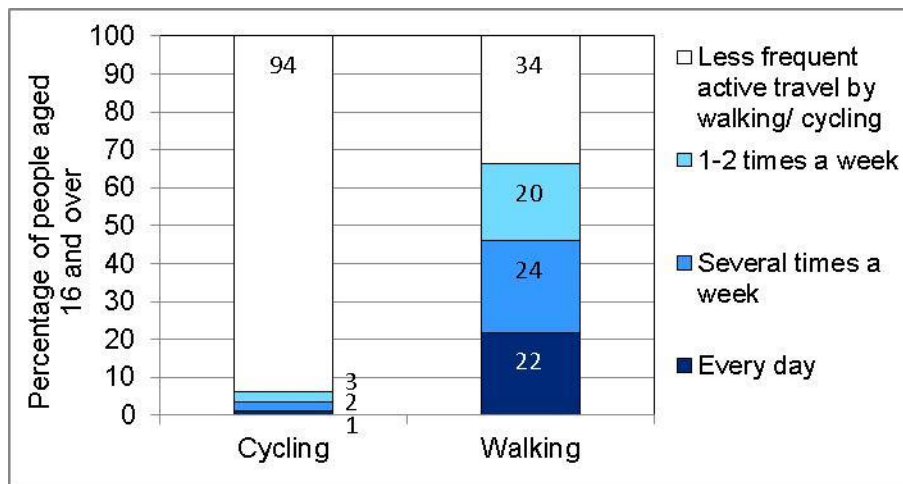
2.6.25   The main reason for walking is to go to local shops; this accounts for 40 per cent of walking trips. For cycling, there are three main purposes: going to local shops (24 per cent of trips); going to work or business (23 per cent of trips); and going to visit friends and relatives (19 per cent of cycling trips).

2.6.26   Rates of active Travel fall amongst older age groups and this is associated with self reported disability or health problems that make it difficult or impossible to walk, or to ride a bicycle. For example, for people aged 75 and over 57 per cent have a problem that affects their walking; and 69 per cent a problem that affects riding a bicycle.

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24 This information was collected through the National Survey for Wales. Source: SB 70/2014, Active Travel: Walking and Cycling 2014, 27th August 2014.

Rail

2.6.27 There has been a large increase in recent years in the number of people making rail journeys in Wales. Official data from the Office of Rail Regulation shows that passenger numbers have increased 61% over the last 10 years, which a range of measures indicate is continuing (see Figure 2.18[25]).

Figure 2.18: Wales Rail Passenger Journeys 2003-04 to 2012-13

Passenger journeys	Millions	yr-on-yr %age increase
2003-04	18.0	..
2004-05	19.9	11%
2005-06	20.2	2%
2006-07	21.8	8%
2007-08	23.9	10%
2008-09	25.6	7%
2009-10	26.4	3%
2010-11	27.6	5%
2011-12	28.4	3%
2012-13	29.0	2%
Change 03-04 to 12-13		*61%*
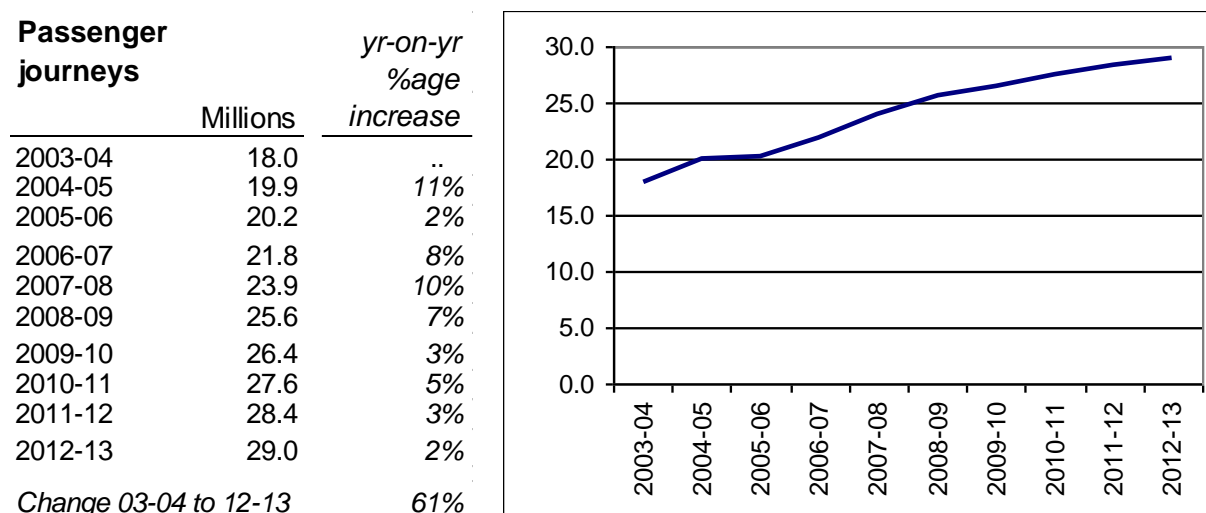
2.6.28 In the case of rail mileage, there is some evidence of a recent upward trend among men aged 30 and over, which can also be seen more strongly among women aged 60+.

2.6.29 There has been a fourfold increase in average per-person rail mileage between 1995/9 and 2008/10 among women aged 16–29, which makes them by far the highest-mileage rail users, at around 800 miles per person per year[26].

2.6.30 Passenger satisfaction with rail travel in Wales also continues to improve. In the spring 2014 wave of the National Rail Passenger Survey, overall satisfaction with Arriva Trains Wales was 86 per cent. This is 5 per cent above their franchise benchmark. Punctuality is an important measure of rail industry performance because it is the biggest determinant in overall passenger satisfaction. The information used for the indicator is the rail industry's standard measure of punctuality (PPM). This records the percentage of trains arriving

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25 Source: 2010-13: (ORR) NRT data portal, "ATW Key statisticshttp://dataportal.orr.gov.uk/displayreport/report/html/c65f7401-9128-4775-9907-7f0ae424dddd Earlier figures: "National Rail Trends Yearbook ...", Section 8.1 or 3. Link from http://www.rail-reg.gov.uk/server/show/nav.1542
26 Scott Le Vine & Peter Jones (2014), On the move: Car, rail and bus travel trends in Wales, Executive Summary, June 2014, RAC Foundation and Welsh Government.

within a specified time of their timetabled arrival time at their destination. For Arriva Trains Wales, the benchmark is 4 minutes 59 seconds, while for some long distance operators it is 9 minutes 59 seconds. The data being reported is the average for the previous year.   Arriva Trains Wales has performed above its franchise target level for a number of years (PPM of 88.8%). It is consistently one of the best performing British train companies in terms of punctuality, typically in the top five of 19 train operators.

Bus

2.6.31 Every day, 62,000[27] people rely on the bus to get to work, and about a quarter of a million people use it every day to get to hospital appointments, visit friends, go shopping or access leisure.

2.6.32 There are relatively small differences in mileage by age group among males, whereas for women the higher-usage groups are to be found among the youngest (age 16 to 29) and oldest (60+) adults[28].

2.6.33 There are no clear and consistent trends in bus use over time among either men or women.

2.6.34 Bus services in Wales face considerable challenges. The number of fare paying passengers, overall, has declined in recent years (Figure 2.19).

2.6.35 There were a little under 49 million journeys made using the Concessionary Fares Bus Pass in Wales in 2012-13.

2.6.36 The National Travel Survey[29] shows that minority ethnic adults make twice as many local bus trips as white adults. The ethnic background of bus users as compiled from the 2010 Welsh Bus Passenger Survey is that 93 per cent reported that they were white, 5 per cent were from another ethnic background, and 2 per cent declined to answer. In comparison, around 4 per cent of people in Wales are from a minority ethnic group.

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27 Census (2011), Office for National Statistics
28 Scott Le Vine & Peter Jones (2014), On the move: Car, rail and bus travel trends in Wales, Executive Summary, June 2014, RAC Foundation and Welsh Government.
29 National Travel Survey, http://data.gov.uk/dataset/national_travel_survey

Figure 2.19: Trends in passenger numbers 1998-99 to 2012-13, Wales and regions[30]
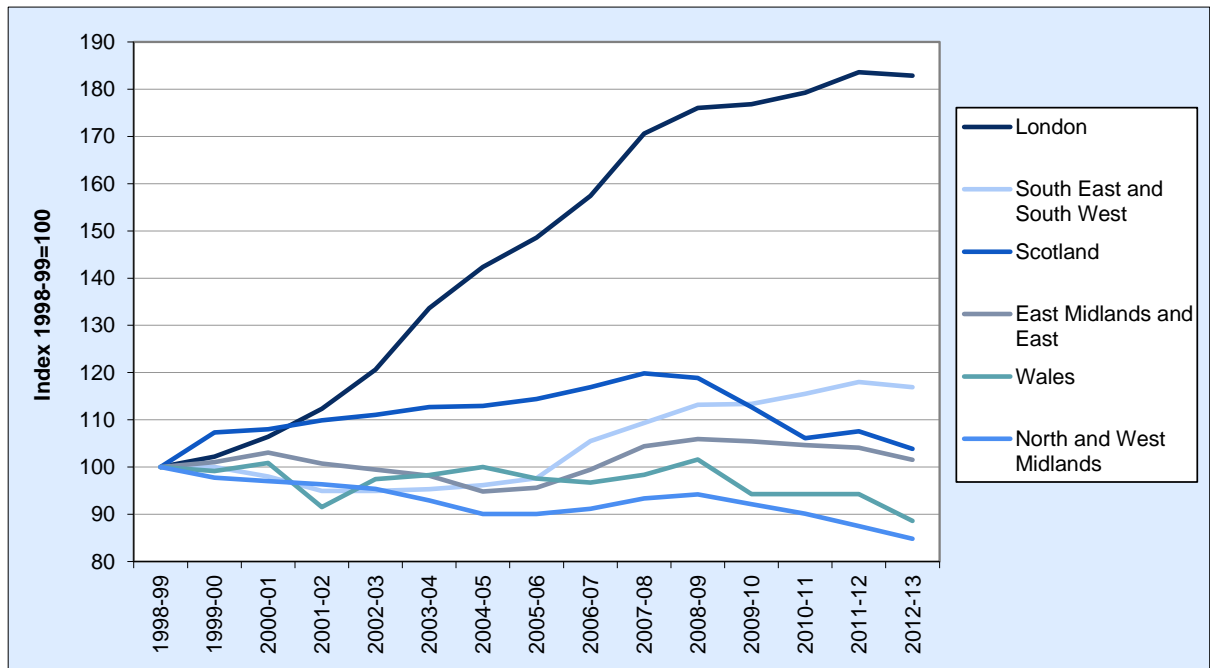
Ports

2.6.37   During 2012, Welsh ports accounted for 11 per cent of the total UK port traffic with total freight traffic through Welsh ports of 54.6 million tonnes (Mt). Of this, 36.5 Mt were goods inwards and 18.1 Mt were goods outwards.

2.6.38   As well as freight, there were 2.6 million sea passengers travelling between Wales and Ireland during 2012; with 0.634 million accompanied passenger vehicles, made up of 0.621 million cars and 0.013 million coaches. Around half were from, and half to, Ireland.

2.6.39   This sea transport involved over eight thousand ship arrivals in Wales during 2012.

Airports

2.6.40   There is a network of commercial airports around Wales providing a varied range of functions, including chartered and corporate flights. The public airports are Cardiff and Anglesey:

  ● Cardiff airport ranks 21st in size amongst UK airports.

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- The Civil Aviation Authority 2013 figures for Cardiff Airport show an increase in the use of Cardiff airport after a period of sustained decline.

- The TrawsCymru T9 provides a 20 minute service throughout the day to provide improved links between Cardiff Bus Station and Cardiff Bay with Cardiff Airport.

- The total number of passengers using Cardiff International Airport increased by 44,000, 4 per cent, in 2013 compared to 2012; to 1.060 million terminal passengers (1,057,073); in addition there were just under 15,000 transit passengers (most of the comparisons below just show terminal passengers).

- International: The majority, 81 per cent, of these terminal passengers were for international flights. In 2013, there were 0.858 million international air passengers using Cardiff International Airport, up by 35,000 from 0.823 million in the previous year. There was increase in passengers to and from EU destinations, up 8 per cent, and a fall in passengers going beyond the EU, down 12 per cent.

- Most of the international traffic was by chartered airlines rather than scheduled airlines. In 2013 there were 0.438 million passengers traveling to EU destinations by charter airline and 0.296 million travelling scheduled services. Services to non-EU destinations were mostly chartered, with almost all the 0.123 million passengers using charter airlines.

- These figures do not show the role of Cardiff as a feeder airport for onwards scheduled services from Schiphol, Madrid, Dublin etc.

- Domestic: In 2013 there were 0.200 million domestic terminal passengers using Cardiff, up 9,000, or 5 per cent from 2012.

- In contrast to the international traffic, most of these passengers, some 195,000, used scheduled services.

2.6.41   Other airports around Wales include:

- Caernarfon Airfield used principally for general aviation (private light aircraft).

- Chester Hawarden Airport, which accommodates the largest freighter aircraft and transports Airbus aircraft wings.

- Haverfordwest (Withybush) Airport, which is used on a regular basis by light aircraft and helicopters and has the capacity to accommodate significantly larger aircraft.

- Swansea Airport, which is used by corporate aircraft and which is licenced to allow flights for public transport of passengers.

- Welshpool (Mid Wales) Airport, which offers a range of corporate and charter services.

- Pembrey Airport, again serving the general aviation community.

Personal Income

2.6.42   Car-driving mileage increases steadily with income. The largest drops in mileage over time are amongst those with personal incomes of £40,000 and above[31].

2.6.43   People with incomes below £20,000 exhibit much higher bus mileages.

2.6.44   Rail mileage has grown amongst most income groups - levels are similar for all income groups up to £40,000, but much higher for those with incomes of £50,000 and above[32].

2.6.45   In terms of income and disability, the level of disability in Wales in 2010 was around one fifth of the working age population, with the percentage of disabled people generally increasing with age.   Employment rates for disabled people were consistently low compared to the non-disabled population[33].

2.6.46   In 2010 three-quarters of the working age population in Wales were economically active. However this figure was significantly lower for disabled people. Around 32 per cent of disabled people with a work-limiting disability were economically active and less than half (46 per cent) of all disabled people were economically active. At a regional level the proportions of economically active DDA disabled people ranged from 51.0 per cent in Mid Wales to 42.3 per cent in south west Wales[34].

2.6.47   In terms of Personal Income and occupation, the percentage of people in routine or manual occupations, long term unemployed or never worked has been examined to give a spatial indication of variations (see Figure 2.20 and 21). This generally shows higher levels of people employed in routine or manual occupations or long term unemployed/never worked in more urban locations and in the south Wales valleys.

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31 Scott Le Vine & Peter Jones (2014), On the move: Car, rail and bus travel trends in Wales, Executive Summary, June 2014, RAC Foundation and Welsh Government.
32 Scott Le Vine & Peter Jones (2014), On the move: Car, rail and bus travel trends in Wales, Executive Summary, June 2014, RAC Foundation and Welsh Government.
33 Source: Statistics Wales: SB 115/2011, Prevalence of disability in Wales, 2007-2010, 6 December 2011
34 Source: Statistics Wales: SB 115/2011, Prevalence of disability in Wales, 2007-2010, 6 December 2011

Figure 2.20: Map showing the percentage of people in routine or manual occupations
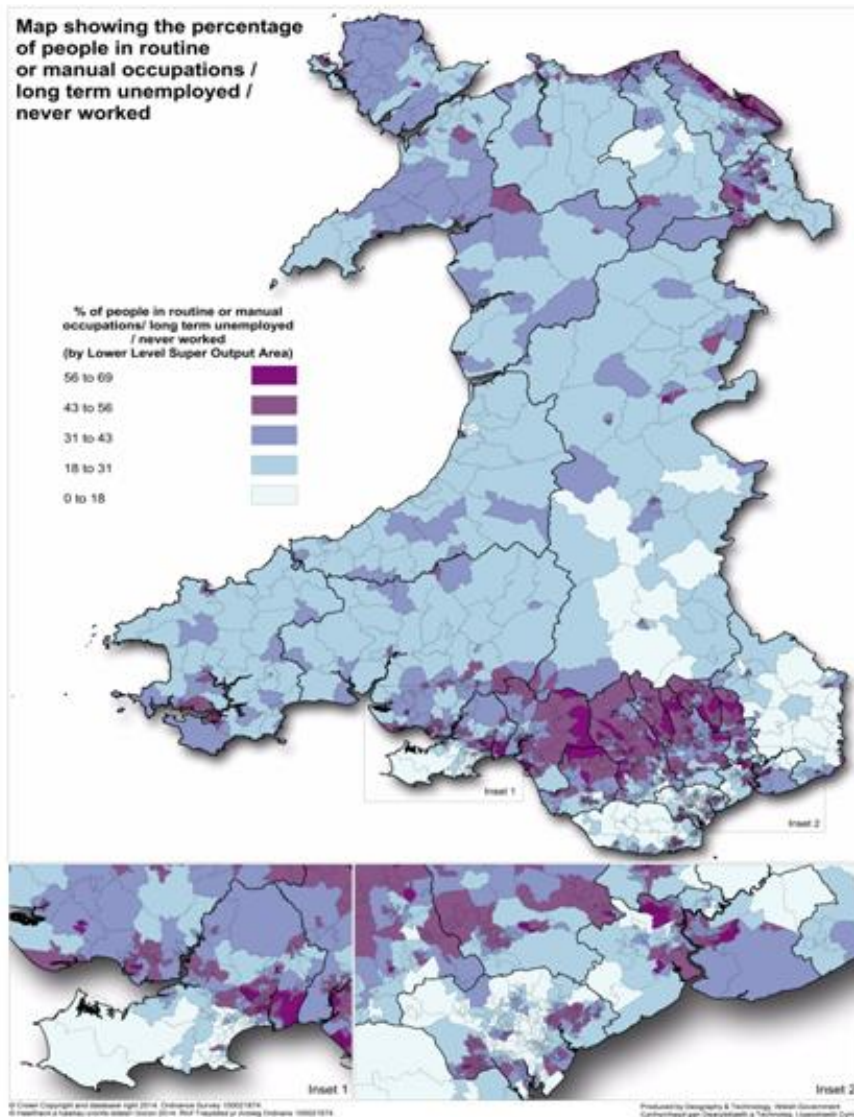
Figure 2.21: Map showing the percentage of people in long term unemployment/never worked
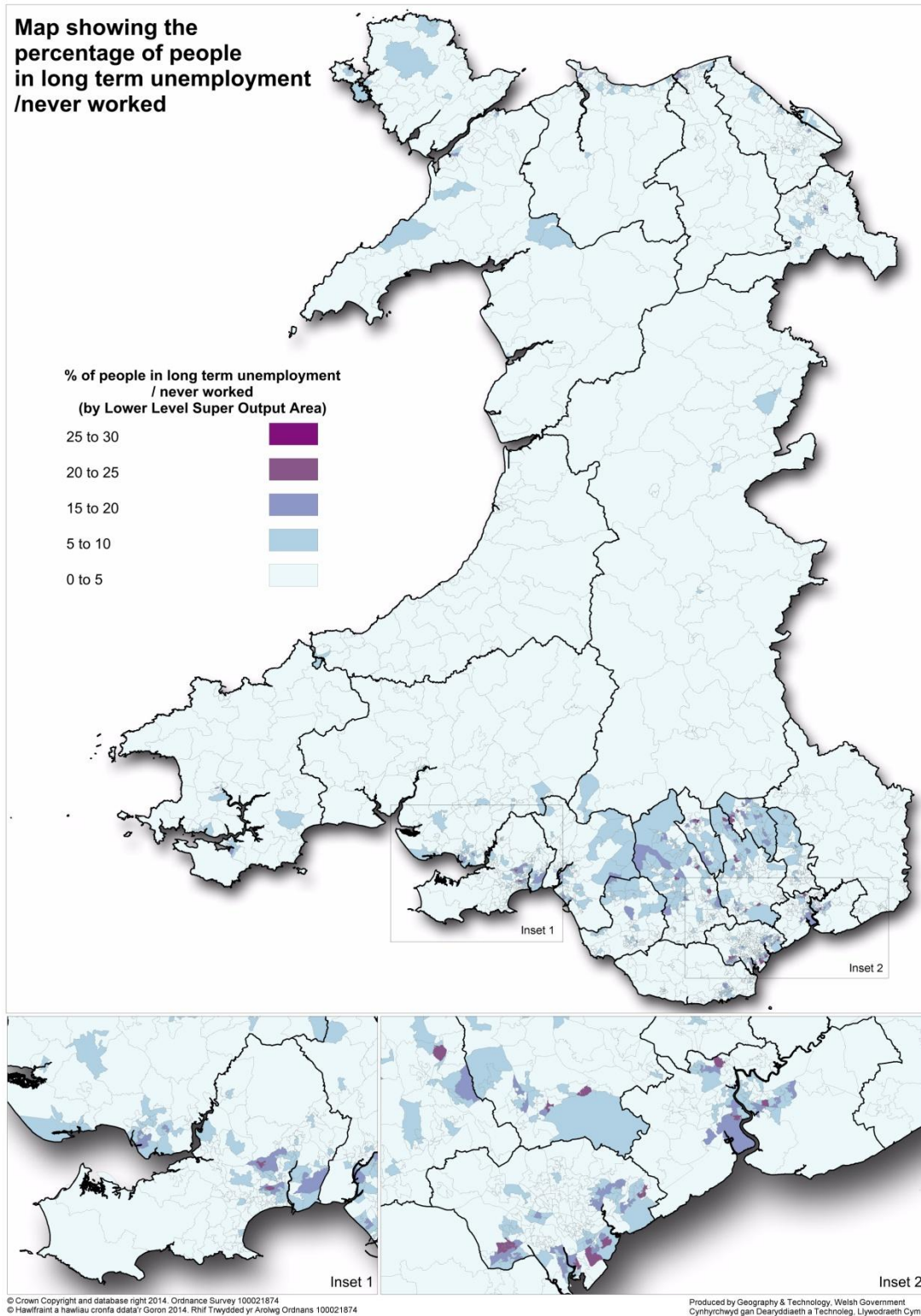
2.7 Accessibility

2.7.1 Accessibility has been examined by looking at how the public transport network provides access to workplaces, enterprise zones, built up areas, hospitals, education and key tourist sites. This has been done by undertaking an assessment of the length of time it takes people to access services by public transport, with a journey of up to 60 minutes considered as a reasonable travel time. We have also looked at access to a car to highlight those areas that are not well served by the public transport network, and where access to a car is low in order to highlight areas where access is poor.

2.7.2 We have also look at journey time speeds on the road network using traffic master data. This highlights congested parts of the network.

Journey Times and Congestion

2.7.3 Trafficmaster data has been analysed to highlight slow journey times, areas of congestion and resilience issues. Figures 2.22 to 2.24 show the journey speeds on main roads for North Wales, Mid Wales and South Wales. Annualised weekday peak (7am to 9am) data has been used to produce the maps (excluding August).

2.7.4 The key findings are:

- North Wales – There are constrictions of some sections of the A55 and A483 dual carriageways which result in lower average speeds. Key sections experiencing lower speeds include A55 Britannia Bridge, roundabouts at A55 junctions 15 and 16, the 50 MPH section of A55 at Colwyn Bay and A494 at Deeside. Away from the A55 and dual carriageway sections of the A483, traffic speeds are lower reflecting the single carriageway status and varying standards of the road network.

- Mid Wales – Average vehicle speeds in Mid Wales are quite low, generally between 40-50mph on trunk roads and between 30-40mph on county roads. Although some sections have been improved in recent years the constraints of the rural landscape and the settlements on the main routes mean the scope for further significant journey speed improvements is limited.

- South Wales – identities areas of congestion, particularly on the M4 around Newport. It also highlights areas where there are slower journey speeds, for example, on the A40 west of St Clears and in more rural areas.

Figure 2.22: Map showing journey speeds on main roads – North Wales

Map showing journey speeds on main roads - North Wales
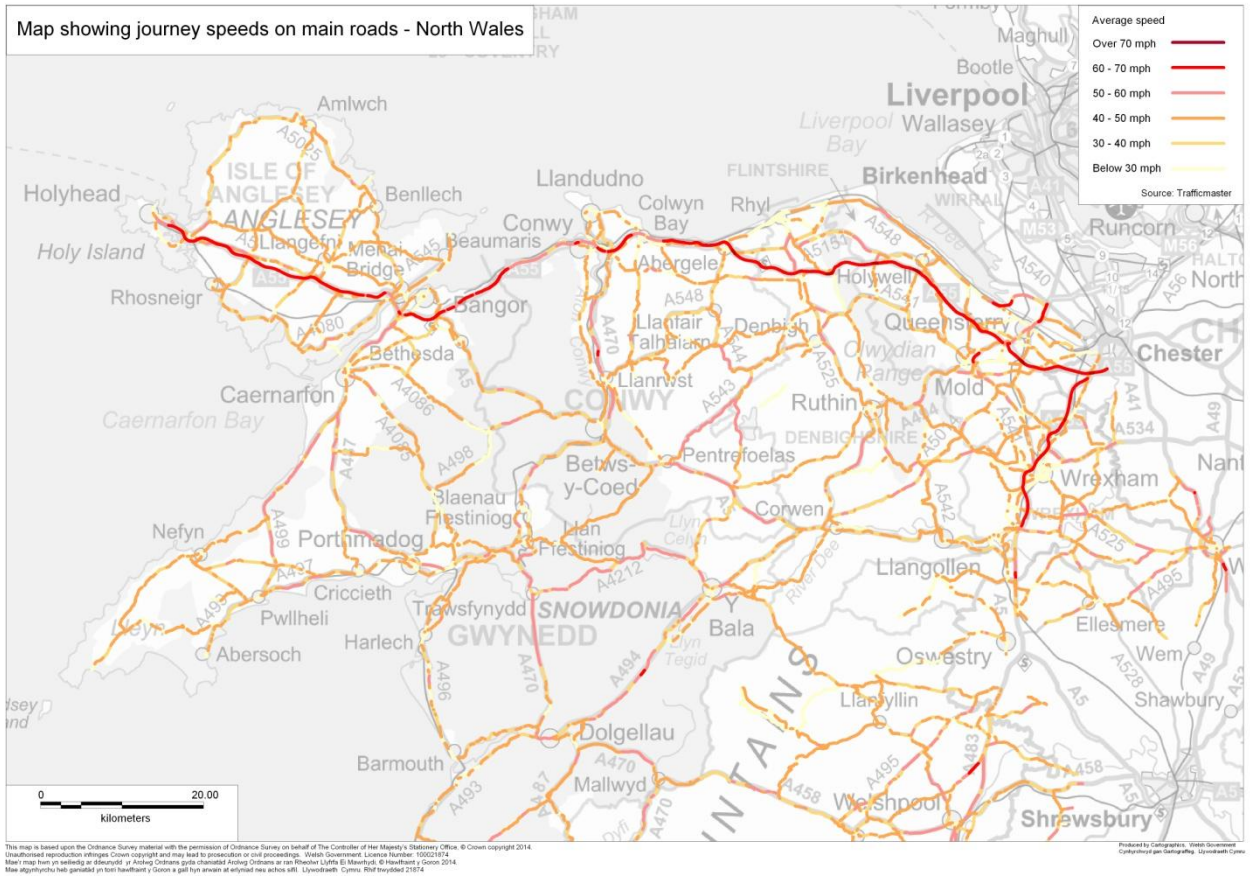
Figure 2.23: Map showing journey speeds on main roads – Mid Wales

Map showing journey speeds on main roads - Mid Wales
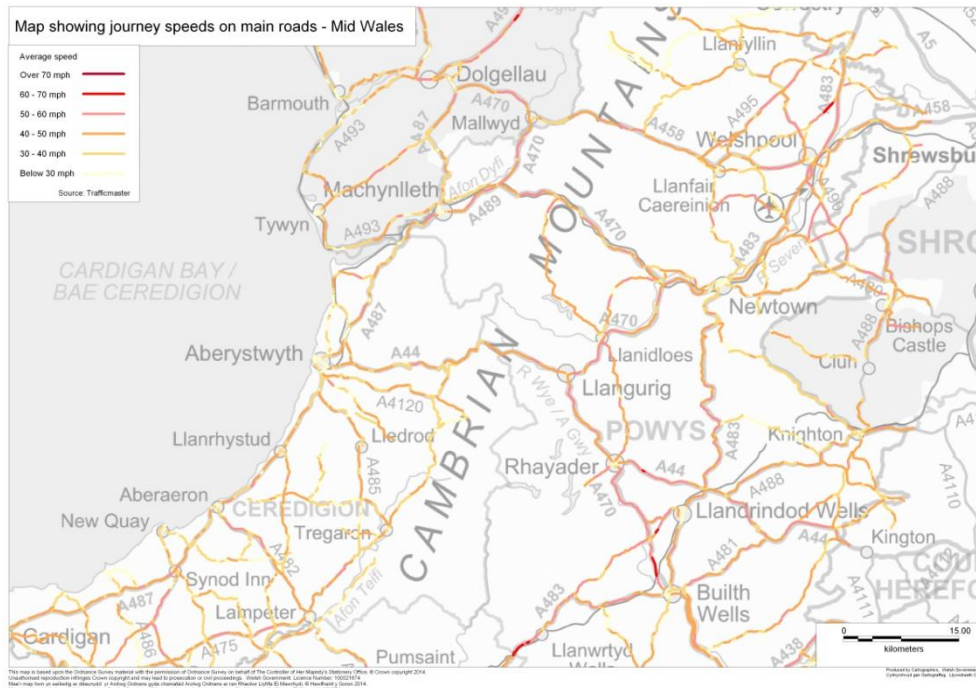
Figure 2.24: Map showing journey speeds on main roads – South Wales
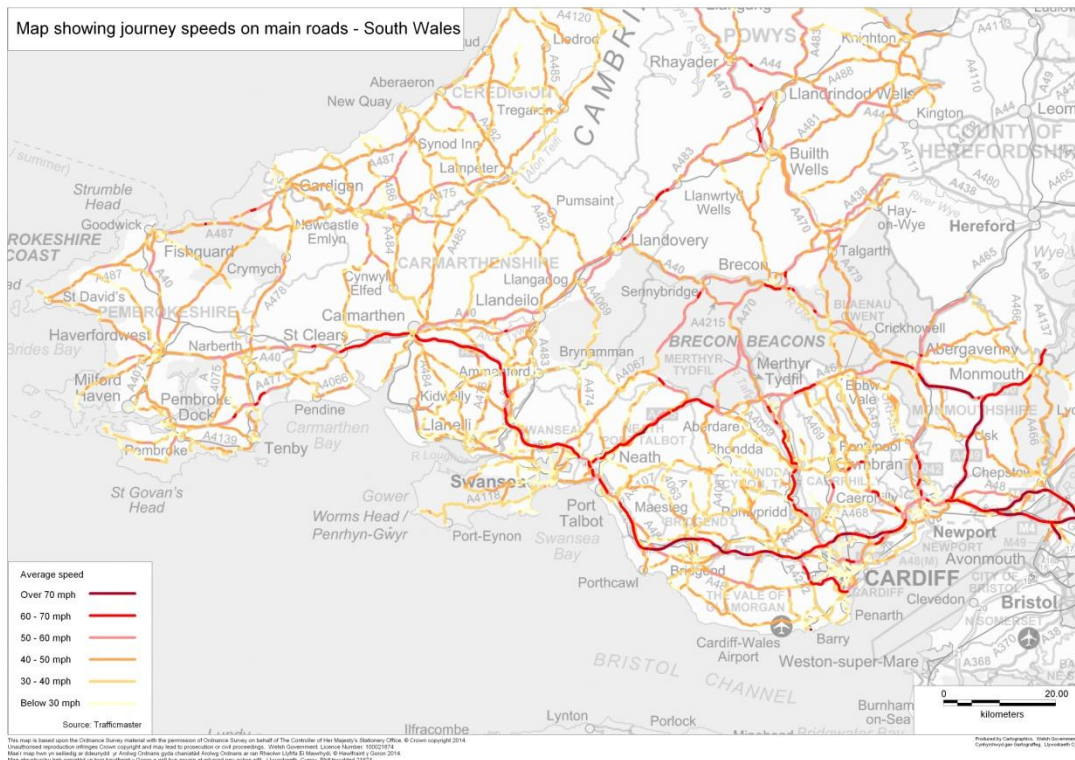
Access to a car[35]

2.7.5   22.9 per cent of households in Wales do not have access to a car (see Figure 2.25 and Figure A.7, Annex A, with 43.0 per cent of households with access to 1 car and 34.1 per cent of households with access to 2 cars plus.

2.7.6   Car availability is lowest[36] in Cardiff (29.0 per cent) and Blaenau Gwent (29.0 per cent) and highest[37] in Powys (15.0 per cent), Flintshire (17.0 per cent) and Pembrokeshire (17.9 per cent).

2.7.7   Car ownership is generally lower in more urban areas and in areas where there is a higher percentage of people employed in routine or manual occupations/long term unemployed or never worked (see Figure 2.20 and Figure 2.21).

2.7.8   The National Travel Survey[38] revealed that minority ethnic adults are more likely to live in a household without access to a car compared to a white British adult,

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35 Census (2011), Office for National Statistics
36 Highest percentage of households that do not have access to a car, Census 2011 data.
37 Lowest percentage of households that do not have access to a car, Census 2011 data.

so a greater reliance on public transport may exist in parts of Wales (south east and north east).

Figure 2.25: Map showing percentage of households that do not have access to a car

38 National Travel Survey, http://data.gov.uk/dataset/national_travel_survey
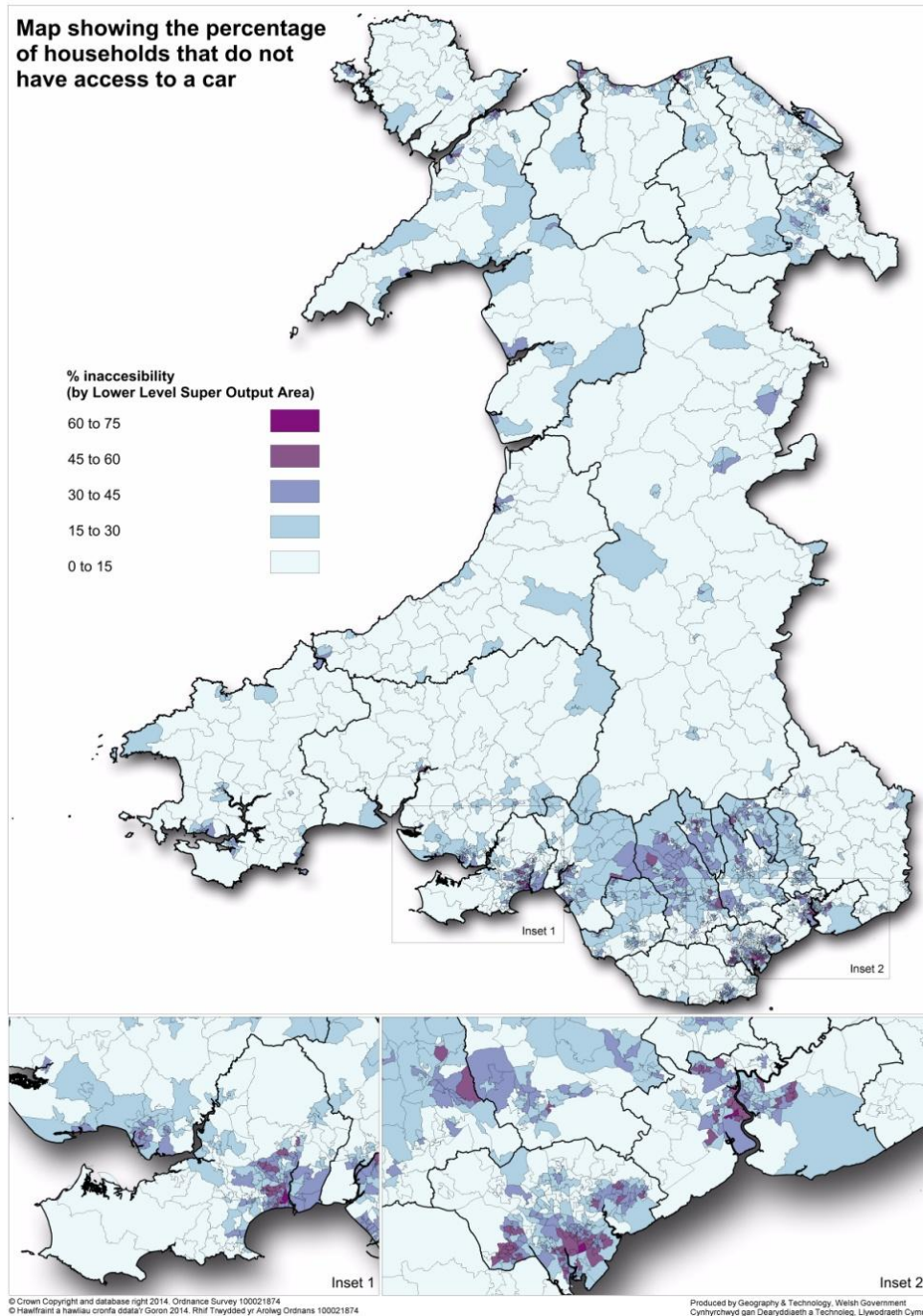
Access to Enterprise Zones[39]

2.7.9   During the week[40], 42.9 per cent of people can access an enterprise zone within 60 minutes by public transport (Figure A.8, Annex A).

2.7.10   Access is generally good in Blaenau Gwent, Cardiff, Caerphilly, Anglesey and Newport. Areas not so well served include Carmarthenshire, Ceredigion, Powys and Swansea, with 100 per cent of people unable to access an enterprise zone by public transport within 60 minutes (see Figure 2.26 and Figure A.9, Annex A).

Figure 2.26: Map showing percentage of people that cannot access an Enterprise Zone within 60 minutes by public transport[41]
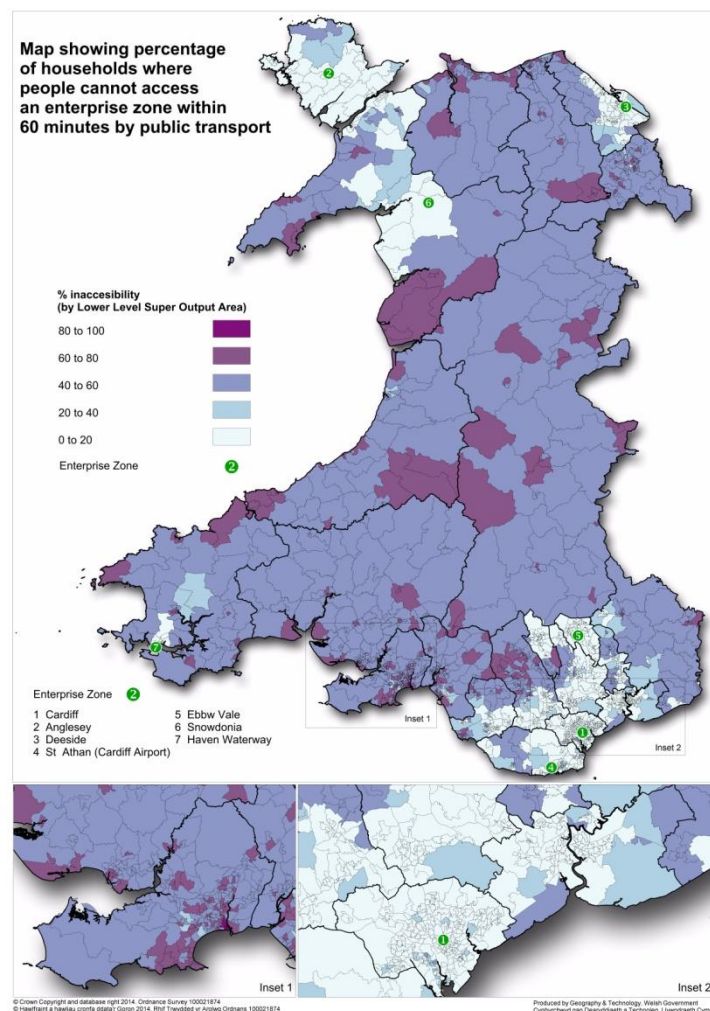
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39 https://business.wales.gov.uk/enterprisezones/zones. Enterprise Zones located in Anglesey, Central Cardiff, Deeside, Ebbw Vale, Haven Waterway, Snowdonia, St Athan – Cardiff Airport.
40 Tuesday morning, 7.00am to 9.00am
41 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

2.7.11 Combining data showing access by public transport and access to a car reveals that of those households who cannot access an Enterprise Zone by public transport within 60 minutes, 21.4 per cent do not have access to a car. Lack of access is highest in Carmarthenshire (18.8 per cent) and Ceredigion (18.4 per cent), (see Figure 2.27 and Figure A.10, Annex A).

Figure 2.27: Map showing percentage of households that do not have access to a car in areas where people have generally poor access to an Enterprise Zone[42]

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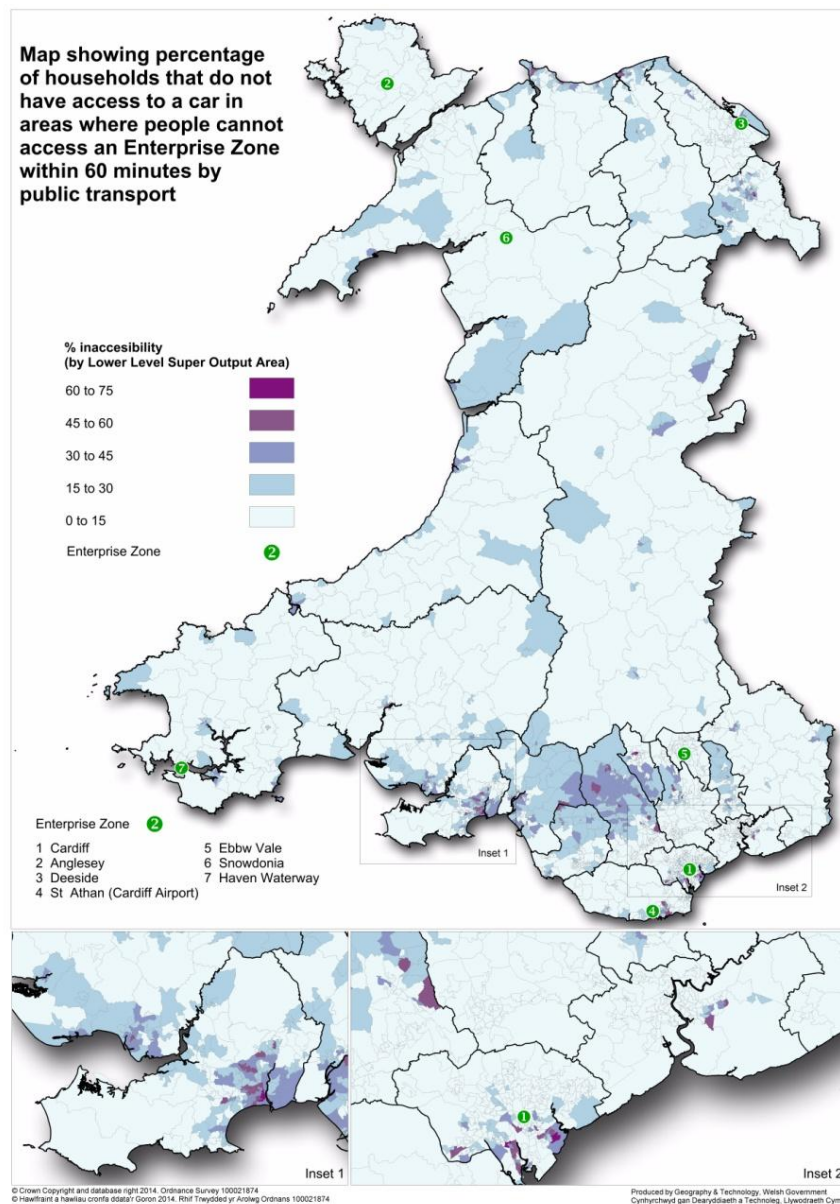
[42] Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

2.7.12   Particular transport connectivity issues have also been raised by the Enterprise Zone Boards, as follows:

- Cardiff – connectivity and travel time for businesses to financial markets in London

- Haven – improved reliability and travel time to the Haven, in particular, improvements to the A40

- St Athan – priorities include opening up the Southern access road for development and improved access to Cardiff airport

- Snowdonia - local access improvements to maximise the potential of Llanbedr Airfield and connectivity to Deeside and Anglesey Enterprise Zones

- Deeside – improved rail connectivity to Manchester and Liverpool and to Manchester and Liverpool Airports, address traffic and congestion issues on the A495/A55 in Deeside and A55/A483 junction (in England), the need to address traffic congestion on local roads serving the Enterprise Zone and better connectivity by rail, bus and active travel modes to key employment sites

- Anglesey – capacity issues on the Menai crossings, local access improvements to open up employment land in Llangefni and Gaerwen, need for faster, more frequent rail services to the rest of north Wales, north west England, London and Cardiff

Access to Hospitals

2.7.13   Figure 2.28 shows the annual volume of patient contacts with key parts of the NHS in Wales. Clearly, the scale of activity means that health-related travel, whether by patients, visitors or staff, will have a fundamental impact on the transport patterns and accessibility needs for all localities across Wales.

Figure 2.28: Annual volume of patient contacts with key parts of the NHS in Wales

Item	Annual volume	Period	Source
First out-patient appointments	More than 900,000	2011-12	StatsWales
Total out-patient attendances	3.1 million	2011-12	StatsWales

Item	Annual volume	Period	Source
In-patient and day case admissions	787,855	2012-13	PEDW
A&E attendances	Around 1,000,000	Sum of latest 12 months	StatsWales
Patient contacts with GPs	16 million	Contacts in the last year (includes telephone consultations	Welsh Health Survey
Patients treated by NHS dentists	Around 840,000	24 months to 31st December 2012, divided by 2	Health stats Wales 2013
Community dental contacts	171,000	2011-12	Health stats Wales 2013

2.7.14   During the weekday peak[43], 71.4 per cent people can access a NHS Major Acute Hospital by public transport within 60 minutes (Figure A.11, Annex A).

2.7.15   Access is generally good in Cardiff and Newport. Areas not so well served include Powys and Flintshire, with 90 per cent and 61 per cent of people unable to access a NHS Major Acute Hospital by public transport within 60 minutes (see Figure 2.29 and Figure A.12, Annex A).

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43 Tuesday morning, 7.00am to 9.00am

Figure 2.29: Map showing percentage of people that cannot access a NHS Major Acute Hospital within 60 minutes by public transport[44]

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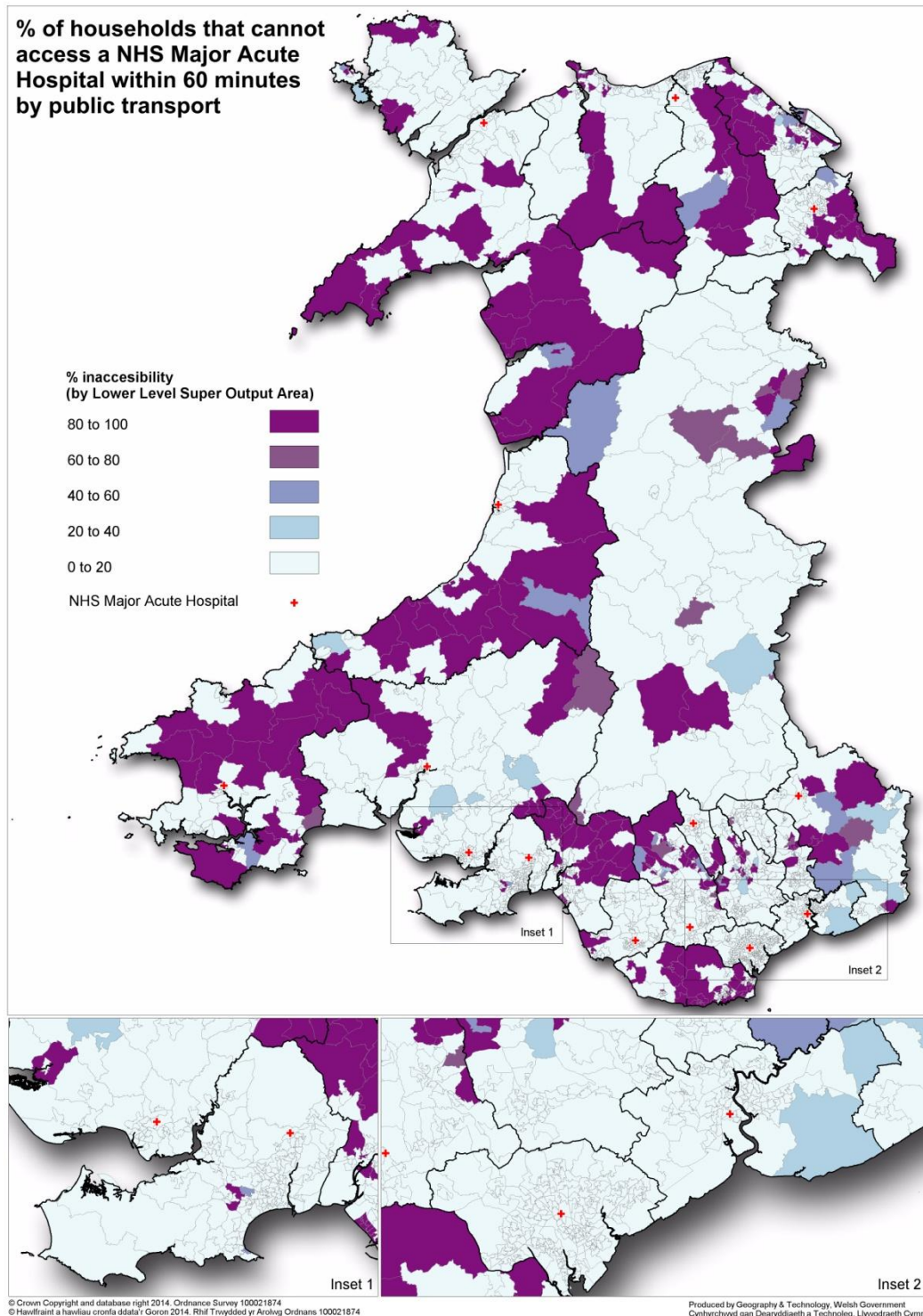
44 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

2.7.16   Combining data showing access by public transport and access to a car reveals that, of those households who cannot access a NHS Major Acute Hospital by public transport within 60 minutes, 18.5 per cent do not have access to a car. Lack of access is highest in Rhondda Cynon Taff, Blaenau Gwent, Neath Port Talbot and Torfaen (see Figure 2.30 and Figure A.13, Annex A).

Figure 2.30: Map showing percentage of households that do not have access to a car in areas where people have generally poor access to an NHS Major Acute Hospital[45]

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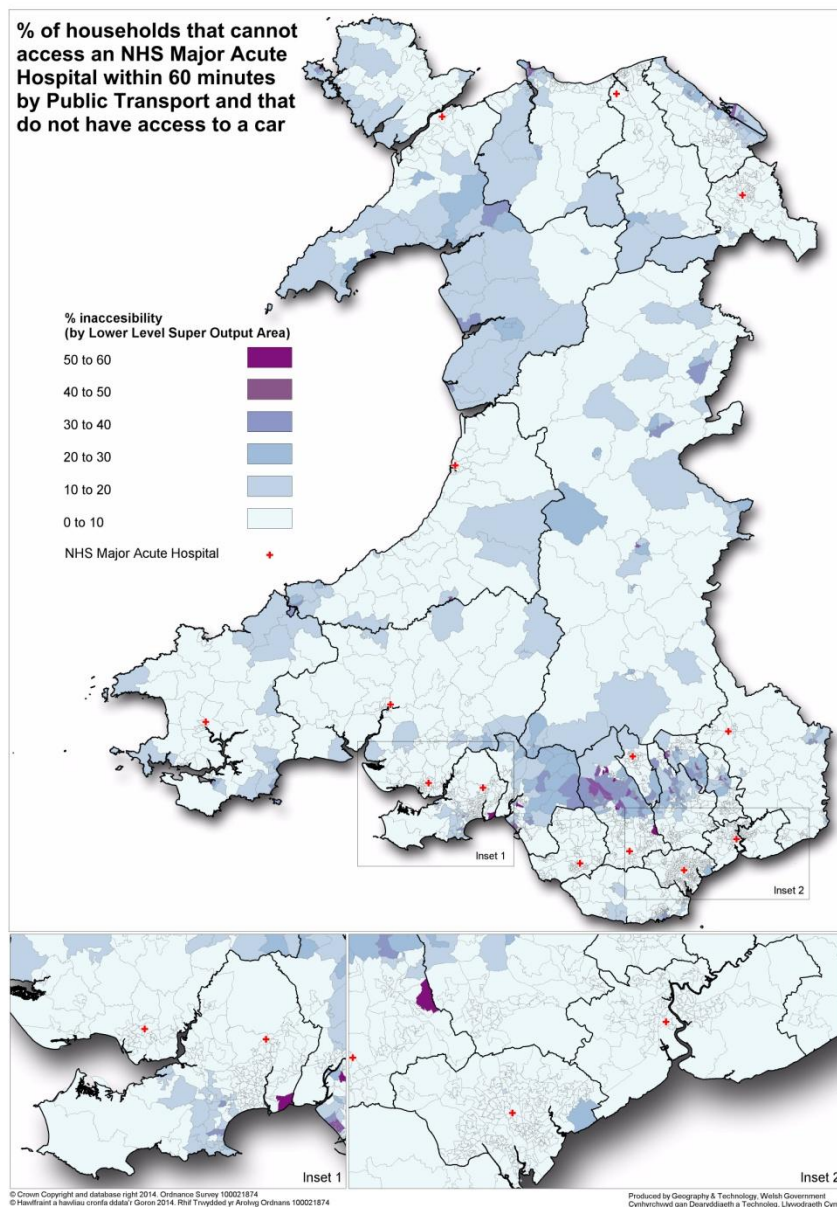
45 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

Access to Built Up Areas[46]

2.7.17   Most people can get to a reasonable range of shopping, leisure and employment facilities at key centres. During the week[47], 96.4 per cent of people can access a built up area within 60 minutes by public transport (Figure A.14, Annex A).

2.7.18   Areas not so well served include Ceredigion and Powys with 23.7 per cent and 19.3 per cent of people unable to access a built up area by public transport within 60 minutes (see Figure 2.31 and Figure A.15, Annex A).

Figure 2.31: Map showing percentage of people that cannot access a built up area by within 60 minutes by public transport[48]

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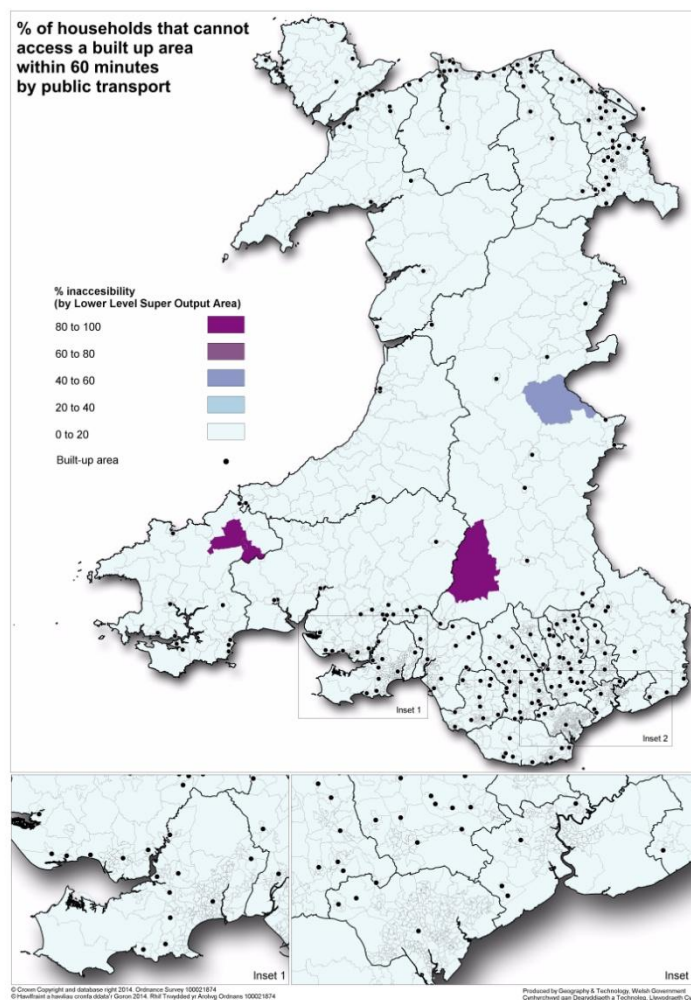
46 Population of 2000+

47 Tuesday morning, 7.00am to 9.00am

48 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

2.7.19   Combining data showing access by public transport and access to a car reveals that of those households who cannot access a built up area by public transport within 60 minutes, 7.1 per cent do not have access to a car. There are particular pockets of inaccessibility in Cardiff, Gwynedd and Pontypridd (see Figure 2.32 and Figure A.16, Annex A).

Figure 2.32: Map showing percentage of households that do not have access to a car in areas where people have generally poor access to built up areas[49]

Map showing percentage of households that do not have access to a car in areas where people cannot access a 'Built-up area' within 60 minutes by public transport

% inaccesibility (by Lower Level Super Output Area)
25 to 30
20 to 25
15 to 20
10 to 15
5 to 10
0 to 5
Built-up area

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Produced by Geography & Technology, Welsh Government
Cynhyrchwyd gan Dearyddiaeth a Technoleg, Llywodraeth Cymru

Inset 1   Inset 2

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49 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

Access to Further and Higher Education

2.7.20   Access to further and higher education by car and public transport has been examined to look at access more generally and variations across Wales (a list of facilities is provided at Annex B).

2.7.21   In terms of access to further education, during the week[50], 93.4 per cent of households can access a further education facility within 60 minutes by public transport (Figure A.17, Annex A). It is important to note that the assessment refers to all sites and therefore the accessibility of households to the main campus buildings will be lower. Areas not so well served include Ceredigion (35.2 per cent), Pembrokeshire (38.2 per cent) and Powys (40 per cent), (see 3 and Figure A.18, Annex A).

Figure 2.33: Map showing percentage of people that cannot access a Further Education facility within 60 minutes by public transport[51]

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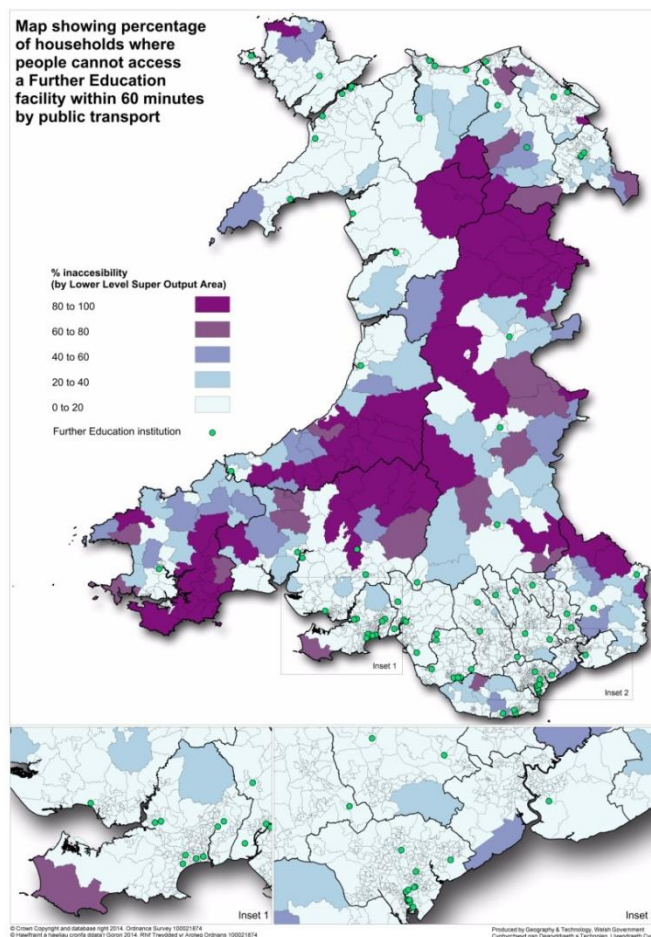
50 Tuesday morning, 7.00am to 9.00am
51 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

2.7.22 Combining data showing access by public transport and access to a car reveals that of those households who cannot access a further education facility by public transport within 60 minutes, 10.5 per cent do not have access to a car. Lack of access is highest in Blaenau Gwent (29.8 per cent) and Rhondda Cynon Taf (23.7 per cent), (see Figure 2.34 and Figure A.20, Annex A).

Figure 2.34: Map showing percentage of households that do not have access to a car in areas where people have generally poor access to a Further Education facility[52]
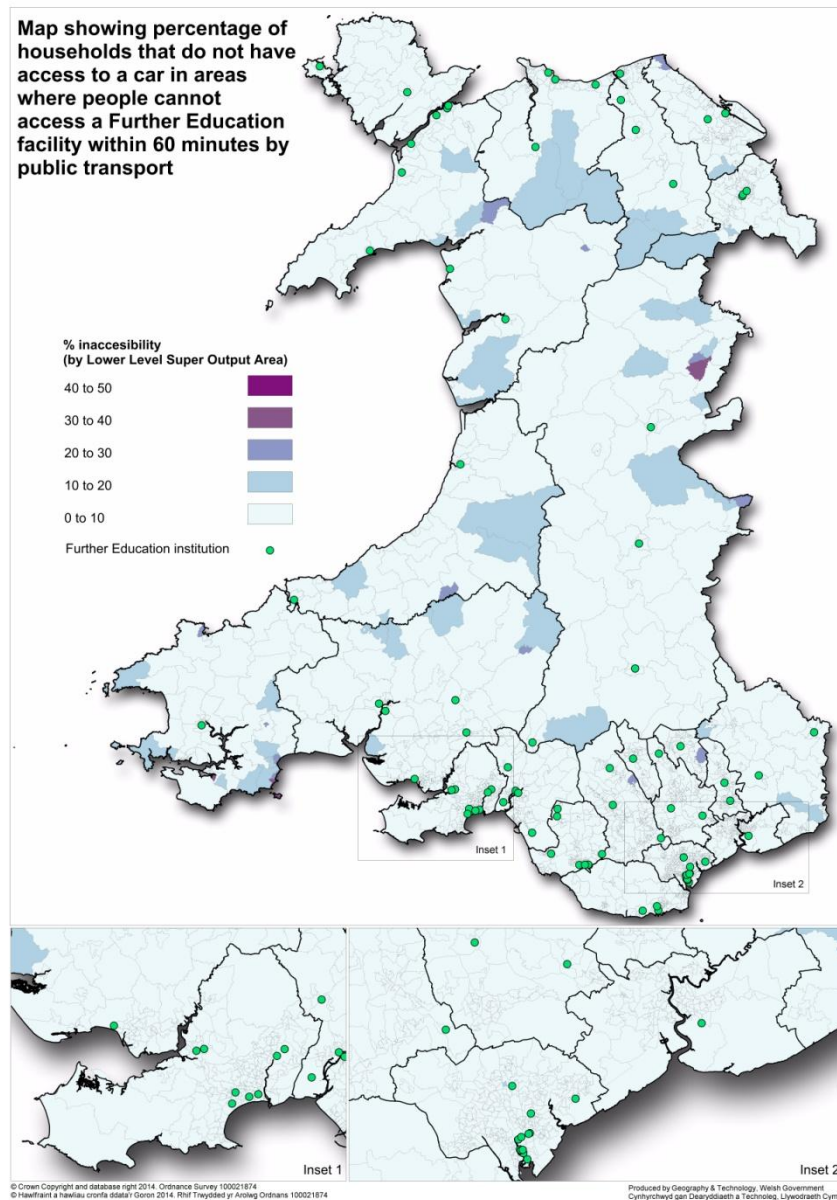
52 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

2.7.23   **Higher education** - during the week[53], 70.4 per cent of households can access a higher education facility within 60 minutes by public transport (Figure A.21, Annex A). Areas not so well served include Blaenau Gwent (96.6 per cent), Pembrokeshire (99.7 per cent) and Powys (98.3 per cent) (see Figure 2.35 and Figure A.22, Annex A).

Figure 2.35: Map showing percentage of people that cannot access a Higher Education facility within 60 minutes by public transport[54]

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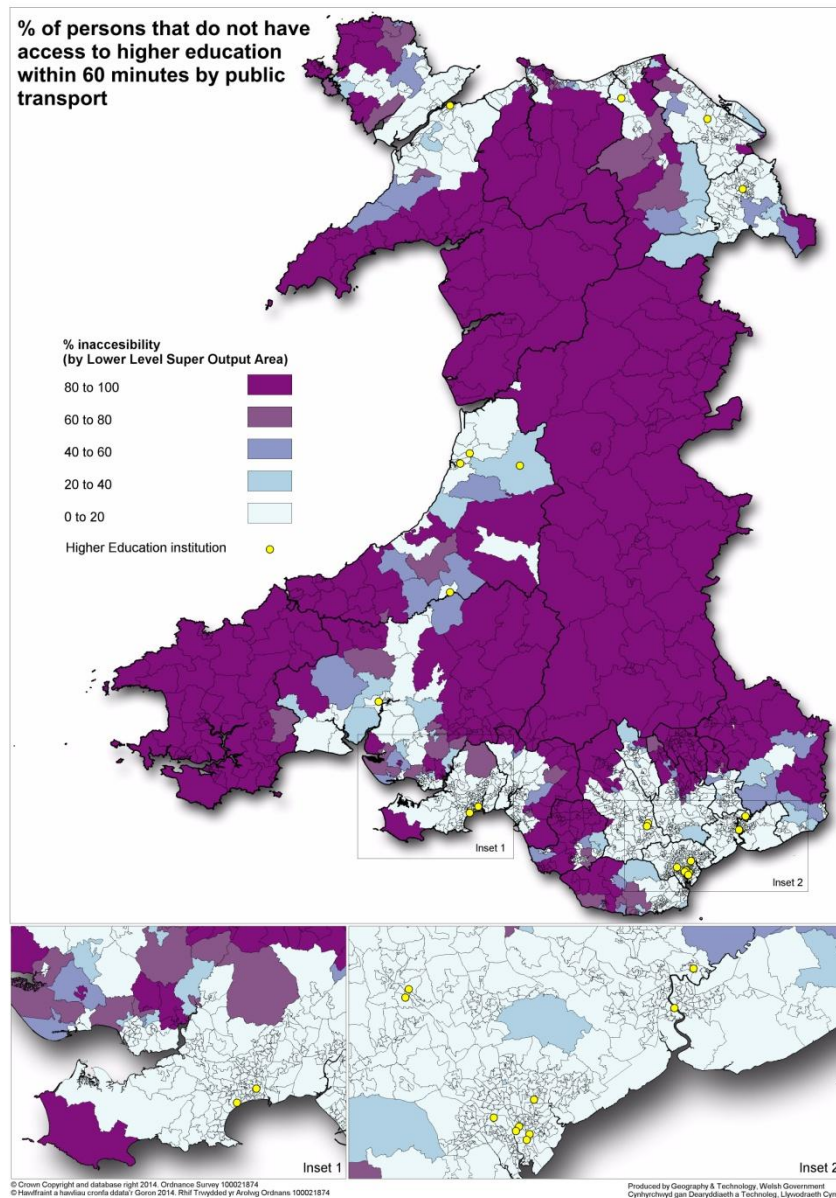
53 Tuesday morning, 7.00am to 9.00am
[54] Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

2.7.24   Comparing data showing access by public transport and access to a car reveals that of those households who cannot access a higher education facility by public transport within 60 minutes, 5.7 per cent do not have access to a car. Lack of access is highest in Blaenau Gwent (27.8 per cent) (see Figure 2.36 and Figure A.23, Annex A).

Figure 2.36: Map showing percentage of households that do not have access to a car in areas where people have generally poor access to a Higher Education facility[55]

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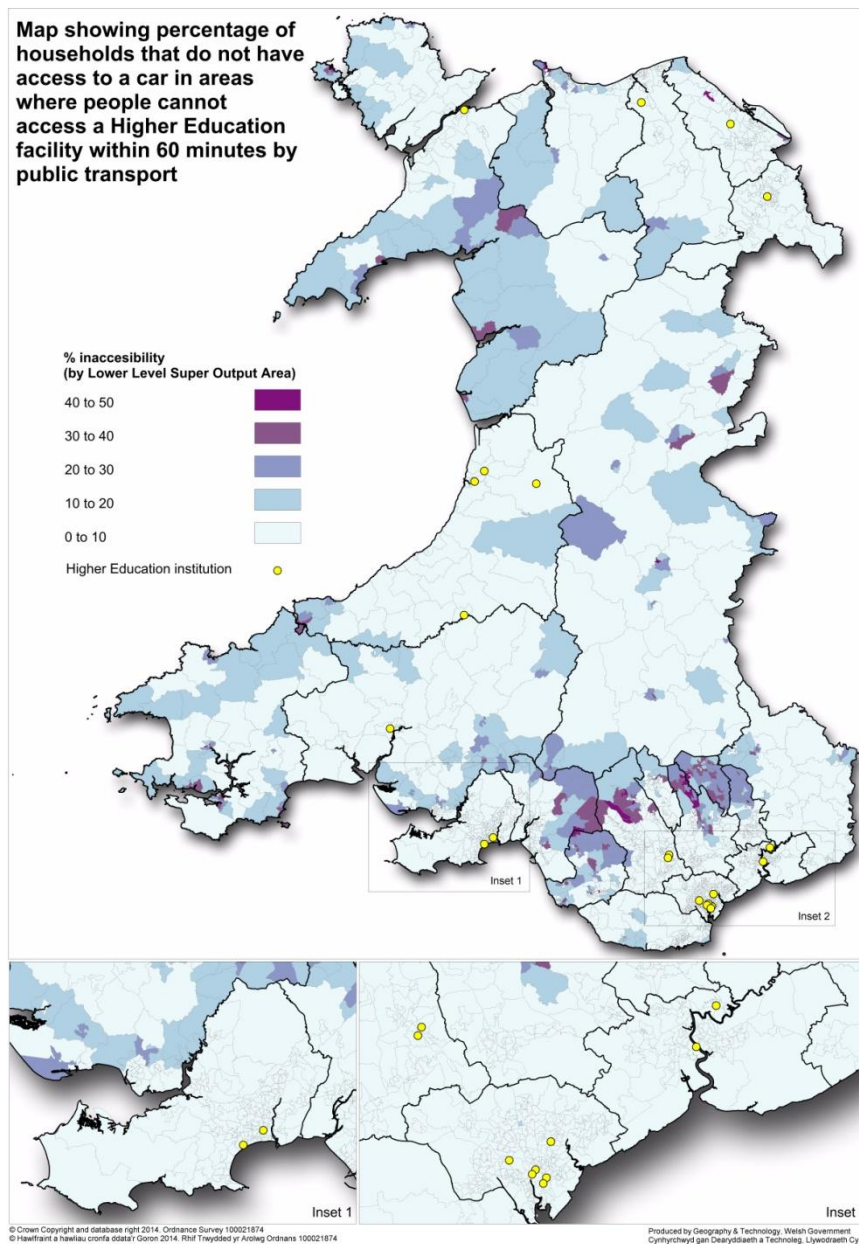
55 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

Access to Key Tourist Sites

2.7.25   During the week[56], 87.1 per cent of households can access a key tourist site within 60 minutes by public transport (Figure A.24, Annex A). Areas not so well served include Powys (70.2 per cent), Pembrokeshire (45.80 per cent) and Ceredigion (45.5 per cent) (see Figure 2.37 and Figure A.25, Annex A).

Figure 2.37: Map showing percentage of people that cannot access a Key Tourist Site by public transport within 60 minutes[57]

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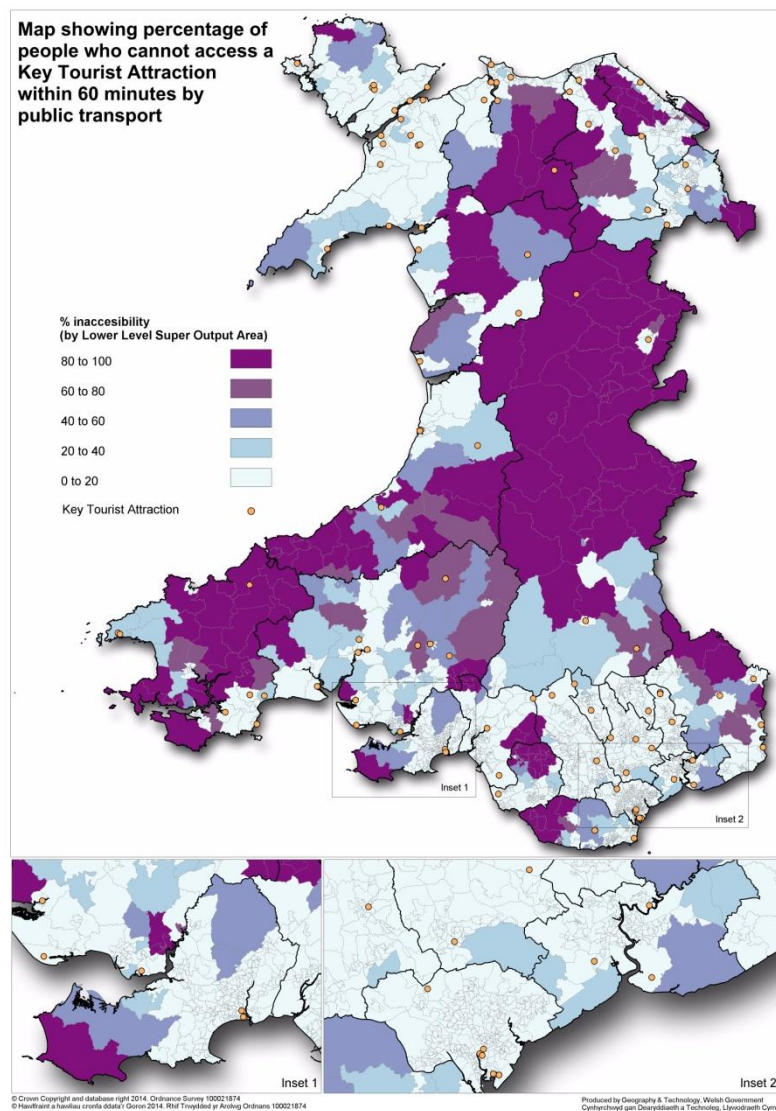
56 Tuesday morning, 7.00am to 9.00am
57 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

2.7.26   Comparing data showing access by public transport and access to a car reveals that of those households who cannot access a key tourist site by public transport within 60 minutes, 13.8 per cent do not have access to a car (see Figure 2.38 and Figure A.26, Annex A).

Figure 2.38: Map showing percentage of households that do not have access to a car in areas where people have generally poor access to Key Tourist Sites[58]

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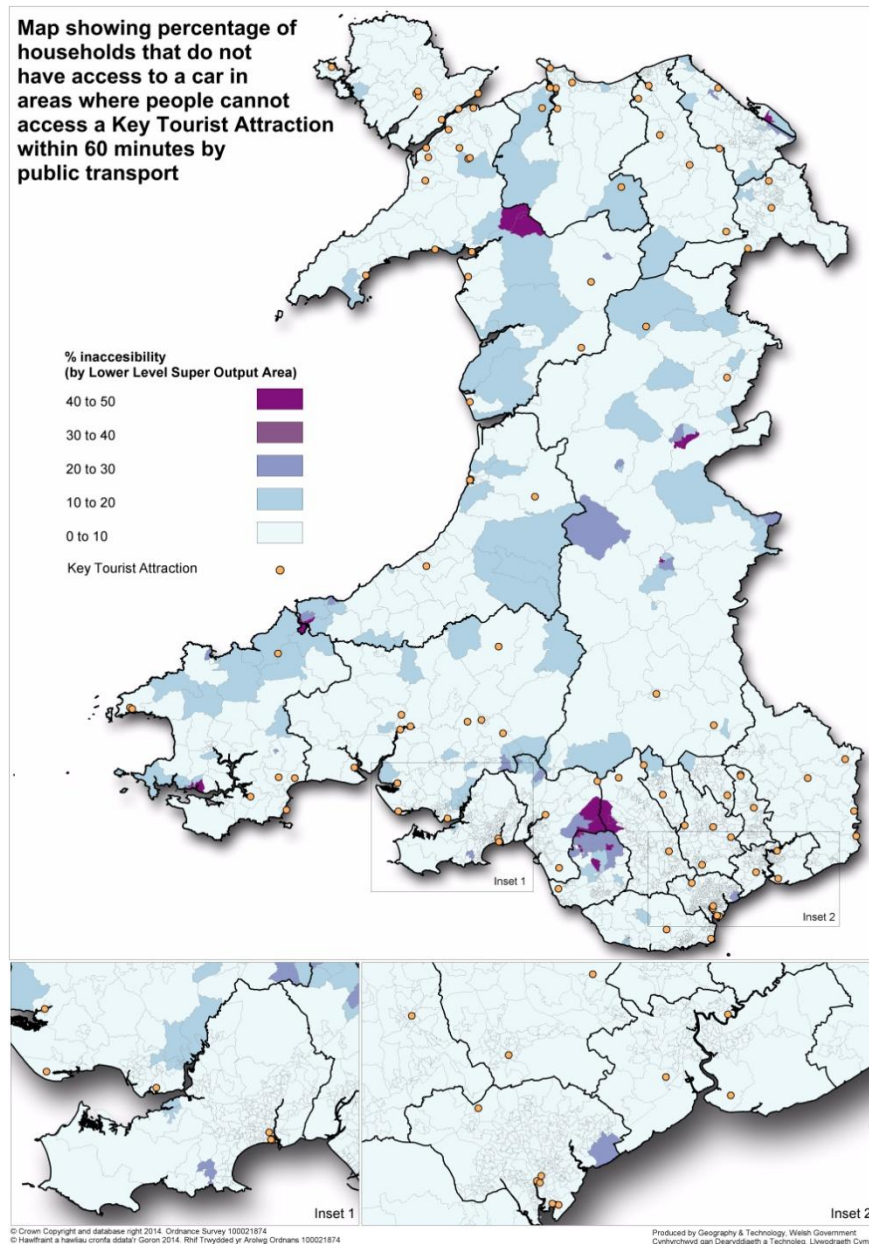
58 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

2.8   Environmental

2.8.1   The Wales Transport Strategy sets out the high level outcomes that we are aiming to achieve, these include the benefits of improved air quality, lower noise levels, healthy ecosystems which support both people and wildlife; and an accessible and well protected landscape and heritage.

2.8.2   Current and future actions will focus on reduction of transport emissions to between 5.21 and 5.78 MtCO2e against a baseline of 7.14 MtCO2e by 2020.

2.8.3   As well as reducing the impact of transport on our environment, we also need to ensure that our transport network is resilient to the impacts of climate change, including the impacts of flooding, storms, landslides and coastal erosion.

Greenhouse gas emissions and trends[59]

2.8.4   The greenhouse gas (GHG) emissions for Wales for 1990 – 2012 are shown in Figures 2.39 and 2.40. The total emissions in 2012 were 45,826 ktCO2e, with 42% of emissions from energy supply, 17% from business, 13% from transport, 13% from agriculture and 9% from residential sources.

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59 Source Document: Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland:1990 –2012 Report to the Department of Energy and Climate Change, The Scottish Government, The Welsh Government and The Northern Ireland Department of the Environment. https://www.gov.uk/government/statistics/devolved-administration-greenhouse-gas-inventories

Figure 2.39: 1990-2012 Wales GHG Emission Inventory (ktCO2e)[60]

NC Format	Base Year	1990	1995	2000	2005	2008	2009	2010	2011	2012	% of 2012
Agriculture	7,746	7,746	7,774	7,489	7,044	6,014	5,947	6,124	6,129	6,142	13%
Business	13,621	13,572	14,562	16,860	10,141	9,804	8,104	9,707	9,100	7,976	17%
Energy Supply	17,477	17,477	12,767	16,180	17,197	19,324	16,277	16,558	15,719	19,066	42%
Industrial Process	2,749	2,912	3,087	3,283	2,804	2,454	1,500	2,166	2,017	1,554	3%
LULUCF	70	70	-111	-447	-597	-561	-591	-483	-632	-491	-1%
Public	748	748	674	515	508	431	423	449	411	440	1%
Residential	4,983	4,964	5,120	5,277	4,822	4,660	4,365	4,951	3,848	4,233	9%
Transport	6,061	6,061	6,053	6,134	6,417	6,318	6,056	5,950	5,844	5,770	13%
Waste Management	2,370	2,370	2,423	2,051	1,558	1,477	1,395	1,234	1,196	1,137	2%
Total	**55,827**	**55,921**	**52,349**	**57,342**	**49,896**	**49,921**	**43,477**	**46,657**	**43,633**	**45,826**	**100%**

Figure 2.40: Total GHG Emissions by NC category for Base Year to 2012, as kt CO2e, Wales[61]

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60 Source Document: Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland:1990 –2012 Report to the Department of Energy and Climate Change, The Scottish Government, The Welsh Government and The Northern Ireland Department of the Environment. https://www.gov.uk/government/statistics/devolved-administration-greenhouse-gas-inventories
61 Source Document: Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland:1990 –2012 Report to the Department of Energy and Climate Change, The Scottish Government, The Welsh Government and The Northern Ireland Department of the Environment. https://www.gov.uk/government/statistics/devolved-administration-greenhouse-gas-inventories

2.8.5   Transport emissions accounted for 13% of Wales' total GHG emissions in 2012, with 93% of all transport emissions coming from road transport and 57% from cars. This is illustrated in Figures 2.39, 2.40 and 2.41 below. The transport sector also includes 2% from rail (including stationary sources), 3% from national navigation and coastal shipping, 1.5% from military aviation and shipping and 0.2% from domestic aviation.

Figure 2.41: Total GHG Emissions from Transport, Base Year to 2012,[62]
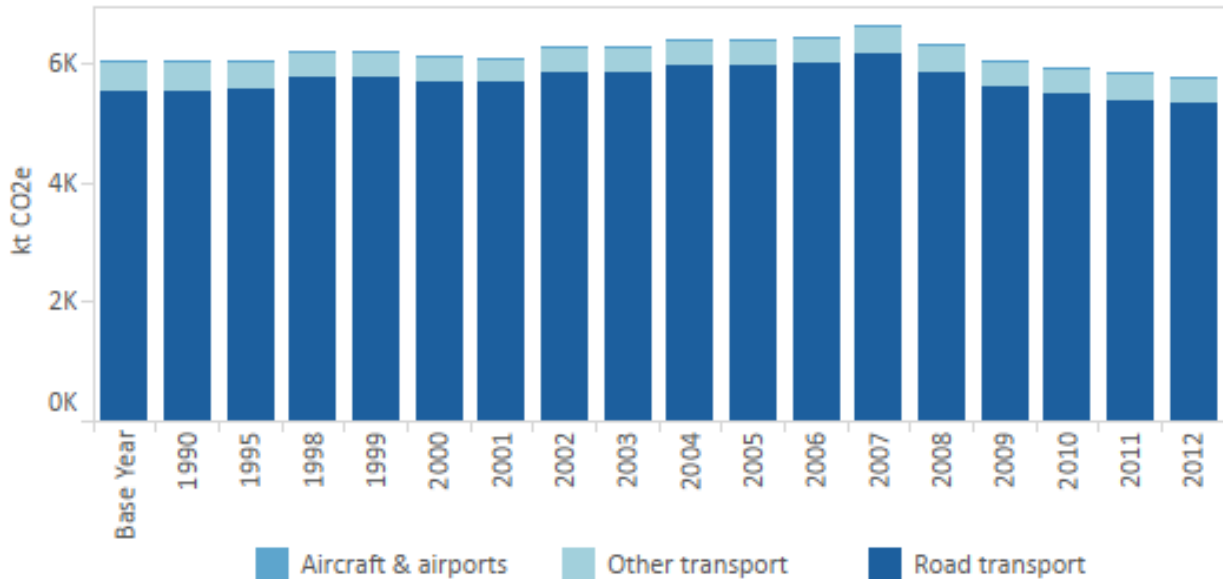
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[62] Source Document: Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland:1990 –2012 Report to the Department of Energy and Climate Change, The Scottish Government, The Welsh Government and The Northern Ireland Department of the Environment. https://www.gov.uk/government/statistics/devolved-administration-greenhouse-gas-inventories

Figure 2.42: Road Transport CO2 Emissions (fuel sales basis), Wales[63]
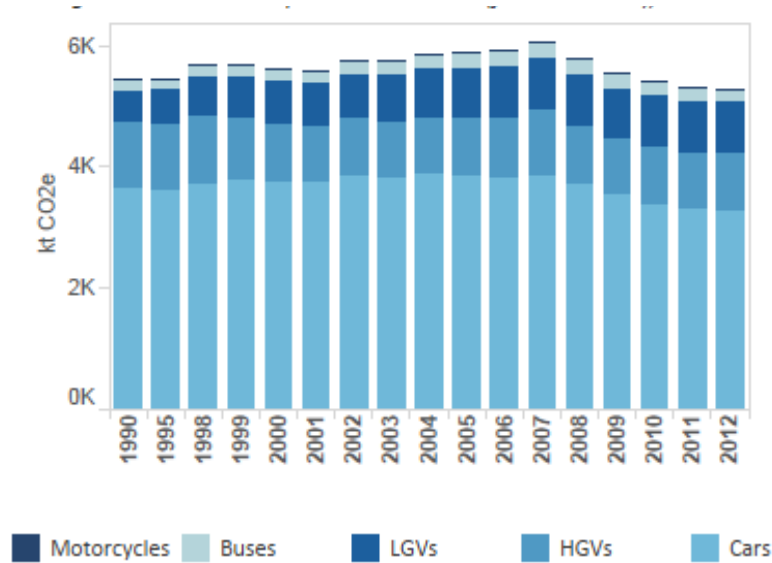
Figure 2.43: Road Transport CO2 Emissions (vkm basis), Wales[64]

63 Source Document: Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland:1990 –2012 Report to the Department of Energy and Climate Change, The Scottish Government, The Welsh Government and The Northern Ireland Department of the Environment. https://www.gov.uk/government/statistics/devolved-administration-greenhouse-gas-inventories
64 Source Document: Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland:1990 –2012 Report to the Department of Energy and Climate Change, The Scottish Government, The Welsh Government and The Northern Ireland Department of the Environment. https://www.gov.uk/government/statistics/devolved-administration-greenhouse-gas-inventories

2.8.6   Total emissions from the transport sector in Wales have decreased by 5% between the 1990 base year and 2012. There have been improvements in the efficiency of transport vehicles, but also a strong growth in transport demand since 1990 and increased affordability of cars over the period. Emissions peaked in 2007 and have since declined partly due to improvements in average fuel efficiency of vehicles and the switch from petrol to diesel cars and from a reduction in traffic volumes in this latter part of the time series.

2.8.7   Emissions between 2011 and 2012 reduced by 1.3%, as shown in Figure 2.44, driven by the changes in emissions from passenger cars. Although emissions from road diesel increased between 2011 and 2012 by 2%, emissions from petrol have decreased by 5%, which has led to an overall reduction in emissions in the transport sector.

Figure 2.44: Change in GHG Emissions from Base Year to 2012 and from 2011 to 2012, Wales[65]

	Base Year to 2012 as %	Base Year to 2012 kt	2011 to 2012 as %	2011 to 2012 kt
Aircraft & Airports	85.7%	6.9	-14.3%	-2.5
Road Transport	-3.4%	-186.4	-0.6%	-33.6
Other Transport	-21.9%	-111.9	-8.9%	-38.7
Transport	-4.8%	-291.4	-1.3%	-74.8

2.8.8   The UK Climate Change Act 2008 established the framework for the UK's low carbon transition. The Climate Change Act is not concerned with regulating emissions from specific projects or sectors but establishing a trajectory for overall emission reduction and, through the advice of the statutory Committee on Climate Change, enabling emission reduction to occur in the most cost effective place.

2.8.9   The Committee on Climate Change has published detailed advice on emission reduction both in relation to UK Carbon Budgets and targets and specifically in relation to Wales. Their most recent advice relevant to transport is set out in:

- Annual Progress Report 2014 - Chapter 5: Progress reducing transport emissions[66]

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65 Source Document: Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland:1990 –2012 Report to the Department of Energy and Climate Change, The Scottish Government, The Welsh Government and The Northern Ireland Department of the Environment. https://www.gov.uk/government/statistics/devolved-administration-greenhouse-gas-inventories
66Committee on Climate Change Annual Progress Report 2014 - http://www.theccc.org.uk/publication/meeting-carbon-budgets-2014-progress-report-to-parliament/

- Fourth Carbon Budget Review - Technical Report, Chapter 5: Reducing emissions from transport[67]. In terms of where emission reductions from transport should be found, the Committee on Climate Change is clear that technology will be the key factor in emission reduction for transport and its abatement scenario assumes the bulk of reductions to 2030 will come from: electric vehicles and hydrogen, engine efficiency improvements and biofuels:

- Engine efficiency via lightweighting, aerodynamic improvements and low rolling resistance tyres

- Biofuel use in conventional vehicles (to 8% of total liquid fuel energy consumption) in the medium term

- Ultra-low emissions vehicles, including plug-in hybrid, battery electric and hydrogen fuel cell vehicles

- Driving economically, efficiently and within speed limits to reduce fuel consumption

- Use of low or no fuel options such as car clubs, teleworking, walking and cycling, and more efficient freight logistics

2.8.10   In addition, there are a range of sustainable travel interventions set out in Section 3 which support transport emission reduction, including the Active Travel Act, investment in public transport, opportunities arising from the new franchise, delivery of South East Wales' Metro and electrification.

2.8.11   The Committee on Climate Change's update emission abatement scenarios from their Fourth Carbon Budget Review report are set out below.

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[67] Fourth Carbon Budget Review - Technical Report - http://www.theccc.org.uk/publication/fourth-carbon-budget-review/

Figure 2.45: Committee on Climate Change update abatement scenarios
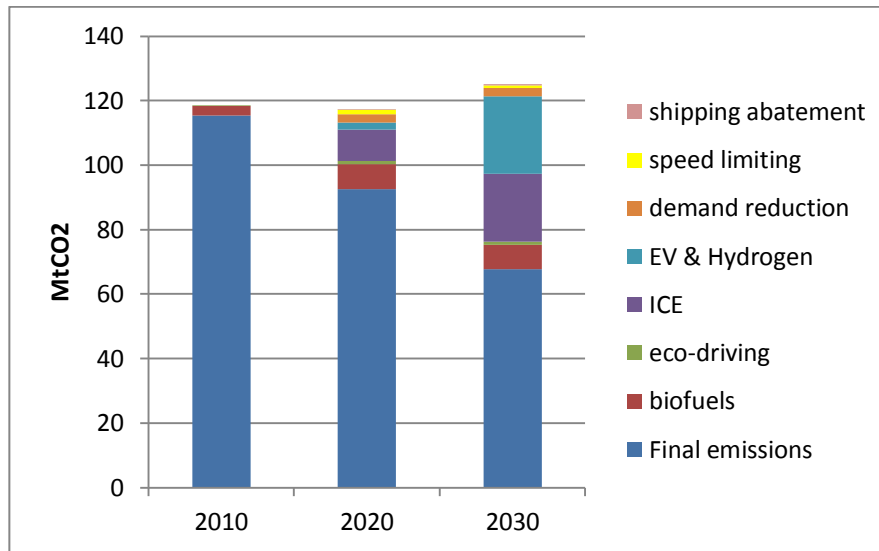
2.8.12   The transport sector is responsible for approximately a fifth (19%) of emissions covered by our 3% reduction target, with the baseline average emission level of 6.28 Mt CO2e. As shown by Figure 2.46, the latest data shows that emissions from the Transport sector have reduced to 5.77 MtCO2e in 2012, which represents a -8.2% reduction compared to the baseline.

Figure 2.46: 3% target emission levels and indicative emissions pathway to 2020 target in the transport sector
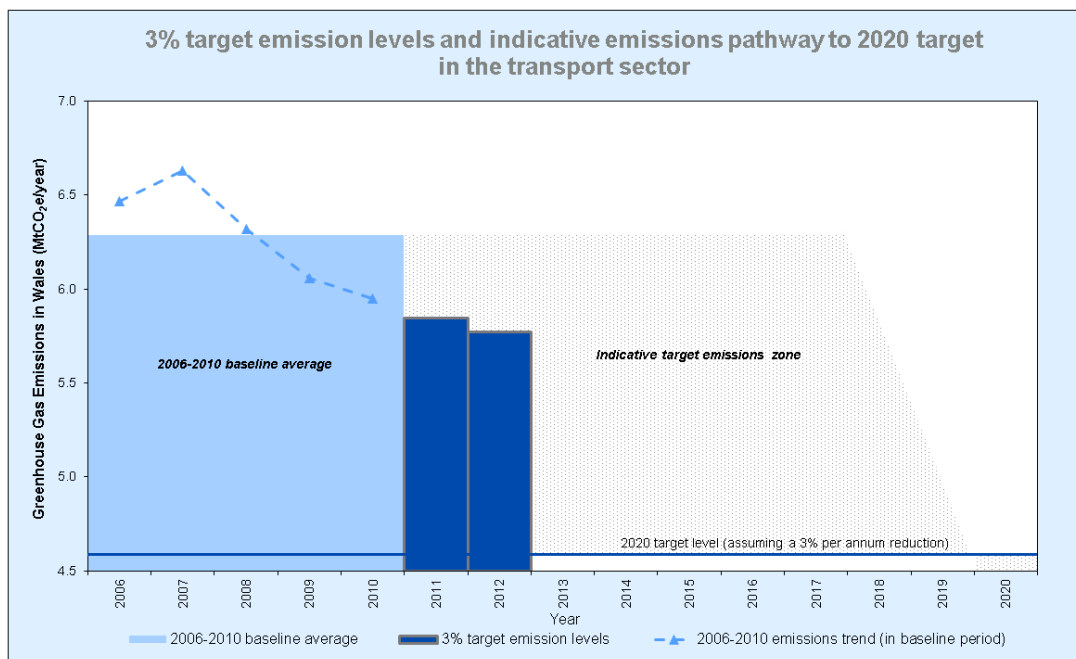
2.8.13   Underlying this trend are a number of factors that have helped to reduce emissions. For example, the fuel efficiency of new cars continues to improve68. At the UK level, average CO2 emissions for new cars registered in 2012 show a 3.8% improvement on 2011 and there was a 24.9% increase in ultra-low emissions vehicles registered in 2012 compared to 2011. At 126.3 gCO2/km in 2013, the efficiency for new vehicles registered in Wales was also better than the UK average for those registered in 2012 (128.3 gCO2/km).

Climate Change Resilience

2.8.14   The UK Climate Change risk assessment was published in 2012 and we have used the evidence from that assessment to identify the issues for transport in Wales.

2.8.15   Flooding of roads and railways, and the associated disruption, is projected to increase. Not only does this affect some of the main roads including motorways, but many rural communities can be cut off if their access roads flood. Some of the main railway lines in Wales are particularly vulnerable to flooding including those on the west and north coasts.

2.8.16   It is estimated that about 22km of motorways, over 2,300km of A roads and other roads and over 400km of railway lines in the UK are at significant likelihood of flooding. It is projected that these figures would gradually increase as flood risk increases, with an overall increase of about 20 per cent by the 2080s[69].

2.8.17   Disruption and delay to road and rail traffic and the associated consequences for society and business is likely to increase if flooding increases. Some detailed analysis of costs has been carried out for the 2007 flood, which affected large parts of England and Wales. The estimated cost of transport disruption for England and Wales was around £100 million[70].

2.8.18   The annual frequency of occurrence of the 2007 flood varies from location to location. An equivalent flood of this magnitude might have an annual probability of 1.3 per cent per cent (1 in 75 years) or greater by the 2080s[71].

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68 Transport Indicator UKT1a

69 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69487/pb13698-climate-risk-assessment.pdf

70 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69487/pb13698-climate-risk-assessment.pdf

71 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69487/pb13698-climate-risk-assessment.pdf

2.8.19   The incidence of landslips affecting transport in Wales may increase. The main cause of this is increased rainfall leading to greater slope instabilities. This is a particular concern as there are a relatively large number of transport corridors in valleys. The number of roads and railways at risk of landslides may double by the 2080s[72].

2.8.20   Coastal erosion is likely to be an increasing threat to infrastructure either on or close to the Welsh coast. Erosion and extreme storm events can cause damage and disruption to transport and infrastructure on the Welsh coast, even with the benefits of stronger artificial defences. Some major transport links run along the coast and are therefore vulnerable. These include main road and rail links along the north Wales coast. Erosion and flooding can undermine structures, increase the chances of landslips, cause damage to railway tracks and roads, and disrupt signalling.

2.8.21   Given the topography and the fact that many transport links are along the coast in Wales, the potential vulnerability to flooding and erosion can create large problems for social and economic activity. Some of the main links that have been affected by flooding and coastal erosion and subject to historical flooding events are:

- the railway on the west coast

- the Conwy Valley railway to Blaenau Ffestiniog and the Dyfi estuary

- the M4 and M48 near the Severn crossings

- the A487 at Fishguard

- road and rail links along the north Wales coast including the A55 (Colwyn Bay – Abergele)

- the main railway line along the Dee estuary

- A4042 Llanellen

- A487 Dyfi Bridge

2.8.22   A further threat to roads and railways is bridge scour which could potentially increase as a result of increases in flood flows in rivers.

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72 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69487/pb13698-climate-risk-assessment.pdf

2.8.23   The UK Climate Change risk assessment identified that increased temperatures will affect transport infrastructure including road surfaces and rail. Rail buckles were identified as a potentially serious problem, and the number of rail buckles could increase by a factor of 3 to 5 by the 2080s due to rising temperatures. There are currently about two rail buckles a year in Wales (six occurred in the hot summer of 2006).

2.8.24   The UK Climate Change Risk Assessment identified that higher winter temperatures may benefit transport as disruption and delay caused by snow and ice may become less frequent. This may also lead to a reduction in adverse weather related maintenance and repair requirements. This would however increase the risk of being less well prepared for occasional severe winters. The capability to respond to severe winters is still likely to be required. There still remains a strong likelihood of periods of snowfall and freezing conditions and on occasion this could be unusual in its severity. With higher winder temperatures there is an increased risk of heavier rainfall which may quickly enter the drainage systems compared to gradual snow melt and consequently lead to flooding incidents.

2.8.25   A particular problem with warmer winters is a potential increase in the freeze/thaw cycle. This contributes to damage to paved surfaces (including roads, runways and ports) and also creates dangerous driving conditions.

2.8.26   The Strategic Environmental Assessment of thjs Plan, in assessing the impact on Climate Change states that some of the interventions are located in areas at risk from flooding which would have adverse effects. Significant positive effects have however been identified as a result of the proposed A55 Abergwyngregyn to Tai'r Meibion Improvements as it will resolve current flooding problems at this location. No cumulative effects have been identified in relation to Climate Change.

2.8.27   In terms of Climate Change mitigation and enhancement, road interventions will be designed and built in line with guidance from the Design Manual for Roads and Bridges, which has been updated to reflect consideration of climate change issues (e.g. Interim Advice Note 173/13 provides guidance on the assessment of scour and other hydraulic actions at highway structures). All new projects being developed have a requirement to future proof design against climate change induced effects such as extreme weather events etc. and are developed in consultation with Statutory Environmental Bodies such as Natural Resources Wales who can advise on management of such effects.

2.8.28   The Welsh Government Trunk Road Maintenance Manual (TRMM) provides guidance on adverse weather planning which is implemented by the Trunk Road Agents and considered in the design process. In addition interventions

have been developed, and will be delivered, in line with the recommendations in the Climate Change Strategy for Wales and associated documents.

Natural Resource Management

2.8.29   Natural Resource Management aims to ensure that we make the most of the opportunities that Wales' natural resources provide. This needs to respect the limits of natural processes that continue to be our life support system. The Welsh Government's overall aim is to ensure that Wales has increasingly resilient and diverse ecosystems that deliver economic, environmental and social benefits.

2.8.30   The Welsh Government is working on creating a framework which will seek to balance the demands we put on our natural resources.

2.8.31   The Welsh Government will seek to introduce new legislation through the Environment Bill to make sure the right legislative framework is in place to manage our natural resources in a way that will deliver lasting benefits for now and for future generations. Our focus will be on changing some of the existing legislation where we can have the biggest impact:

- to enable Natural Resources Wales to manage our natural resources in a more joined up way

- to make sure the decisions we take in relation to our natural resources support our economy and communities, as well as the environment

- to simplify processes and to have better quality evidence on our natural resources

- to make sure the legislation is right for Wales and is aligned to our priorities.

Noise Management

2.8.32   The Welsh Government's 'A noise action plan for Wales 2013 – 2018' [73] maps the priority areas for taking action for reducing road noise and also covers the management of railway, port and air traffic noise. The plan recognises the relationship between noise and air pollution and road safety measures and the need to look at them holistically to make sure interventions on one do not have unintended or unacceptable consequences on the others.

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73 http://wales.gov.uk/docs/desh/publications/131217noise-action-plan-for-wales-en.pdf

2.8.33   As well as specific action to reduce the effect of road noise on communities, it is important when assessing the effects of proposed new transport infrastructure to ensure that it does not exacerbate existing problems.

2.8.34   The Noise Action Planning Priority Areas are shown in Figure 2.47. These include 220 road priority areas and 27 rail priority areas confirmed and published in 2014.

Figure 2.47: Noise Action Planning Priority Areas (2014)
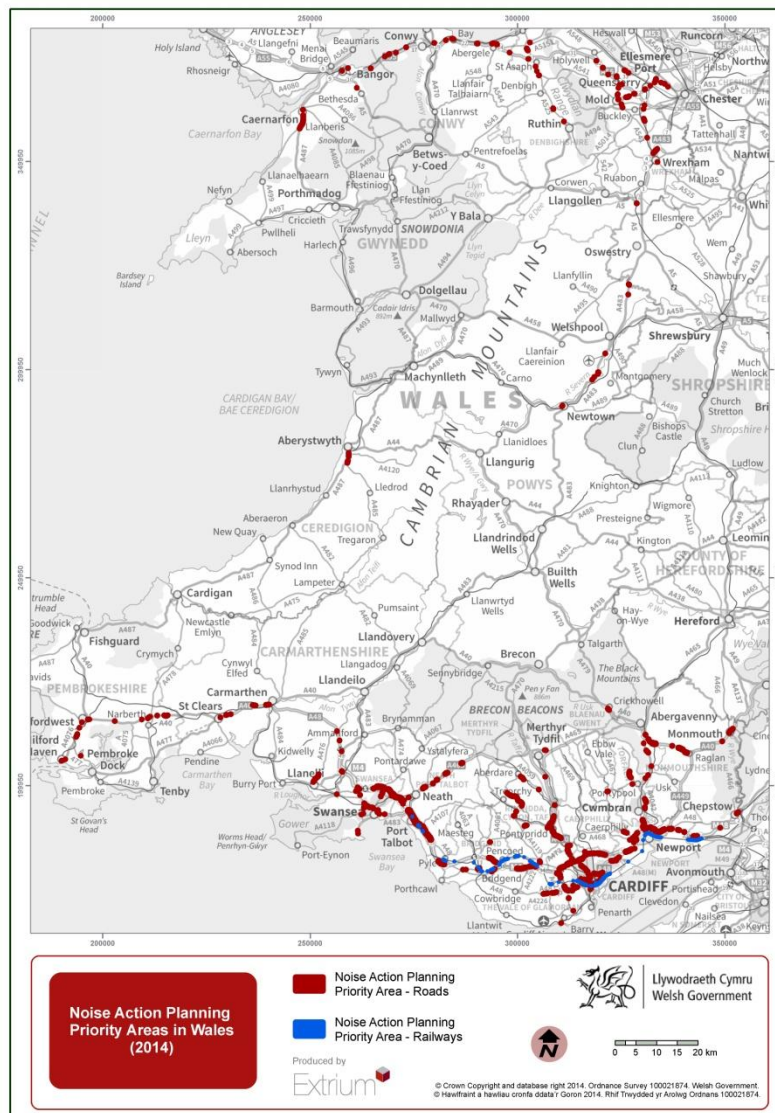
Air Quality

2.8.35   There are 39 Air Quality Management Areas (AQMAs) in Wales (as of April 2014). Figure 2.48 shows their location (all AQMAs are in South and Mid Wales).

2.8.36   There are currently 39 Air Quality Management Areas in Wales, the majority of which involve Nitrogen Dioxide from road related sources.

Figure 2.48: Air Quality Management Areas in Wales
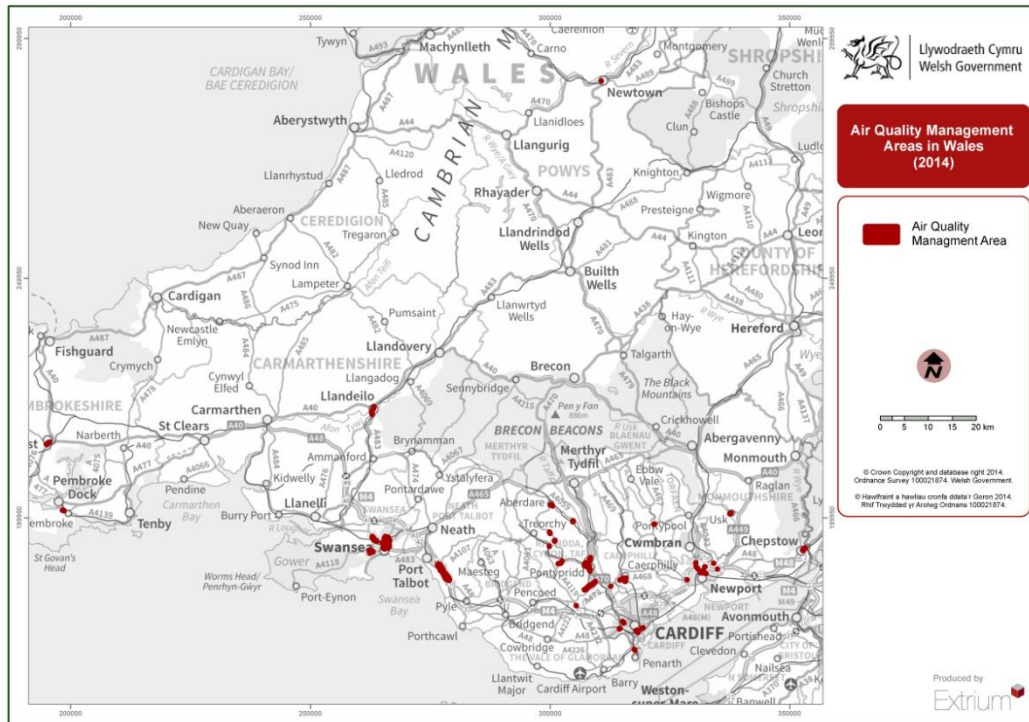
The Natural Environment

2.8.37   Biodiversity conservation and enhancement is an integral part of planning and managing the transport network. Transport infrastructure and the way it operates can raise challenges to the conservation of natural features and wildlife but can also present significant opportunities to enhance wildlife habitats and the enjoyment and understanding of our natural heritage.

2.8.38   Wales is widely regarded to have landscapes and cultural heritage features which contribute significantly to the character of Wales both for residents and visitors.

2.8.39   The avoidance, minimisation, reuse and recycling of materials to reduce waste is increasingly the standard for operations on transport networks, so that negative impacts on natural resources are reduced.

2.8.40   The Welsh Government's waste strategy (Towards Zero Waste[74]) sets the following construction and demolition waste targets that the transport sector should strive to meet, namely a waste prevention target of -1.4% per annum from a 2005 baseline, and 90% preparing for reuse, recycling, and other material recovery by 2019/20. The imperative to ensure the efficient use of material resources should also include incorporating as much recycled content as possible into construction materials (including the use of waste derived compost / anaerobic digestion digestate in landscaping topsoil), thus helping achieve a circular economy for Wales.

2.8.41   Water quality through the standards set by European and UK legislation needs to be protected to support both people and wildlife. Reviews of the Welsh Government's Trunk Road and Motorway network drainage assets continue taking into account the risk of water pollution occurring in that location, with the intention of setting out a prioritised programme for delivering improvements.

2.8.42   In taking forward projects consideration is made of the implications of the use of energy in street lighting and other assets, in terms of its effects on road users, green house gas emissions, landscape and wildlife.

2.8.43   In assessing the effects of infrastructure projects and the management of existing infrastructure involves looking at ways of supporting natural features, particular attention is given to features in Wales that have been designated for their environmental value.

2.9   Key National and Regional Findings

2.9.1   The previous sections set out detailed evidence about the current operation of Wales' transport system and how it serves the access needs of people and freight. This section draws together the key themes emerging from that evidence base and, where appropriate, picks up key messages arising from separate studies undertaken across Wales, including the work of the Bus Policy Advisory Group, the Freight Task and Finish Group, the Metro Scoping Study and the Ministerial Task Force on North Wales Transport. It is intended that the evidence base will be kept regularly updated and will enable us to respond to changing circumstances.

2.9.2   The demographic trends over the short to longer term are projecting an increase in population with a substantial growth in the number of older people. This trend, coupled with people working for and living longer indicates that there will be growth in the number of journeys made to key services and employment.

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74 http://wales.gov.uk/topics/environmentcountryside/epq/waste_recycling/publication/towardszero/?lang=en

It also points to the importance of improving the accessibility of transport infrastructure and services, so that they are available to all.

2.9.3   The 2011 Census data confirms the car is still the main form of transport to and from work. The impact of growth in urban areas such as Cardiff will also add further pressure on the transport network and services. There is scope to increase the share of all journeys for public transport and to dramatically increase the level of active travel given that, across Wales, 35 per cent of people travelling to their workplace are within 5km or less.

2.9.4   Nearly 23 per cent of households in Wales do not have access to a car. The percentage of households with access to a car varies significantly across the country, with some communities in Cardiff, Newport, Swansea and the South Wales Valleys with over 50 per cent of households without access to a car. Whereas in rural areas, a much higher proportion of households have access to a car. Although not the only explanation for lower levels of access to a car, there is a clear link between communities which fall into this category and high long term unemployment figures and poor access to key employment centres. Households that do not have access to a car in more rural areas will have limited travel choices, given the less extensive and less frequent nature of public transport in rural areas. More generally, the cost of fuel tends to be higher in rural areas and for many journeys the choice of alternative modes of transport may not be available; this can result in a higher travel costs.

2.9.5   The evidence highlights a number of communities with high levels of inaccessibility where access to employment and key services is challenging. Improving accessibility for these communities will be a focus for this Plan.

2.9.6   The evidence in relation to access to further and higher education, health services and tourist attractions also indicates that there is scope to improve public transport as an attractive mode to access these services. Travelling by public transport from Mid Wales, east Pembrokeshire and north Anglesey to further education establishments and from rural communities to higher education is poor. There are also pockets of poor connectivity, particularly when you take into account lack of access to a car, in many urban areas including Cardiff and Rhondda Cynon Taf. Accessibility to health services from some parts of Wales including the Heads of the Valleys, parts of Neath Port Talbot, Mid Wales including Meirionnydd is difficult by public transport.

2.9.7   There was a sharp drop in freight traffic in 2008 and 2009 when the economy was in recession but, by 2010, which is the latest date for which road freight statistics are available, freight tonne kilometres by both rail and road were rising again. Another key trend has been the increasing dominance of road transport at the expense of rail for freight.

2.9.8 The upward trend in rail passengers is likely to continue into the future. We need to ensure demand can be accommodated and attract new users through transport integration, accessible, safe stations, reliable and frequent services offering good journey times.

2.9.9 Bus is by for the most significant public transport mode but there is a real challenge because the number of fare paying passengers is falling. The challenge is to increase patronage and commercial viability of services which will improve bus transport overall and ensure that any subsidy can be focused where it will have the greatest impact.

2.9.10 The challenge of maintaining resilience on the road and rail network is growing more difficult as a consequence of climate change impacts. There is a need to ensure that we understand the risks to the transport network, which may relate to flooding, high winds, landslips, coastal erosion and performance of assets under extreme temperatures, and then to ensure that appropriate action is being taken to address these risks. We also need to work with local authorities and Network Rail who are responsible for local roads and rail network respectively.

2.9.11 Our research into recent studies undertaken at a regional level and our analysis of the key findings arising from regional plans and strategies reinforce the issues and opportunities already reflected in the above conclusions.

2.9.12 There are regional differences as regards the service and infrastructure needs necessary to improve transport provision across Wales which the Plan will address and these are reflected below:

North Wales

- Homeworking is slightly higher than the Welsh average at 6 per cent and at the same time travel to work by car at 75.1 per cent is slightly above the Welsh average of 74.2 per cent.

- The use of public transport is low for travel to work, at less than 1 per cent for train and 4.2 per cent for bus. The lack of viable and affordable alternatives to the car to access key employment sites and other services has been identified in the work of the Ministerial Task Force on North Wales Transport.

- Access to work, higher education and services is an issue for many communities in the Meirionnydd, Lleyn and Anglesey areas.

- The data on freight movement through Holyhead Port shows growth in road freight and this is likely to continue.

- Travel across the border into England is important with a substantial number of vehicle movements. Also important is connectivity across to Ireland through Holyhead Port.

- There are a number of capacity issued on the North Wales network on the A55, linked to with ferry traffic and summer traffic, in particular around Junctions 15 and 16, Britannia Bridge and Junction 1 Holyhead Blackbridge.

- Resilience of the road and rail corridors to planned and unplanned events has been identified as an issue in the region in particular the A55 and the north Wales main coast line. The A55 road network has been closed to flooding on one occasion in the 13/14 period. Britannia Bridge also experienced one closure last year and eighteen partial closures due to high winds. Flooding has also caused problems on the rail corridor.

- There is a need to focus on improving connectivity across the region between communities and key service and employment centres. It will deliver improvements to connectivity across the border both to the east and south of the region.

Mid Wales

- The number of people working from home is 12.9 per cent, higher than the Welsh average of 5.4 per cent. At the same time the percentage of people travelling long distances (over 20km) to work is relatively high at 17.8 per cent in Powys and 17.2 per cent in Ceredigion.

- Access from mid Wales to higher and further education and to acute NHS hospitals is generally poor, dictated by the patterns on service delivery.

- These issues point to the importance of reducing journey times along the road corridors and identifying where long distance public transport services can play a role in improving accessibility.

- The take-up of active travel modes is already higher than the Welsh average, 15.8 per cent compared to 12.1 per cent. There will be opportunities to sustain and increase the take up of active travel because just over a quarter of the work place zones in Mid Wales are within 5km of households.

  Landslips have occurred on the A470 south of Dolgellau, A5 east of Bethesda and A487 Tal y Llyn pass near Machynlleth. These routes are at high altitude and have different characteristics. Most recently isolated smaller rock falls have occurred on the A5 (2014) and on the A487 (2012), resulting in disruption and a long and inconvenient diversion route.

South West Wales

- There are wide variations across the region, due to the diverse nature of the settlement patterns, with large urban centres such as Swansea, and more sparsely populated rural areas. This diversity is reflected in the evidence reviewed.

- Public transport use is lower than the Welsh average, although slightly higher in Swansea (at 5.7 per cent). There are higher frequency services and better coverage to the south and east of the region where the majority of the population lives, and less extensive provision in the more sparsely populated rural areas.

- Car travel to work is slightly higher than the Welsh average at 76.3 per cent.

- In 13/14 the M4 Neath River Bridge was closed twice due to high winds resulting in significant delays. Coastal flooding, combined with high onshore winds affected the A487 in Fishguard. Across the South Wales Trunk Road Agency area, patrols of flood sensitive sites were instigated on 32 occasions in 2013/14 and across the motorway and trunk road network there were 67 instances of fallen trees.

- There are accessibility issues within the region, with Pembrokeshire showing evidence of poor access by public transport to further and higher education and to acute NHS Hospitals. Travelling by public transport to acute hospitals is also difficult from some parts of Neath Port Talbot. Accessing higher education from Carmarthenshire by public transport is also difficult.

- There are three small Airports in the region: Swansea, Pembrey and Withybush. They do not currently play a strategic role or provide scheduled services, but they all have the potential to be developed to serve small niche markets for business and leisure travel.

South East Wales

- Active travel is broadly in line with the Welsh average, though much higher in Cardiff (19.2 per cent). There are a higher proportion of people travelling short distances to workplace zones (under 5km) which could potentially be undertaken by active travel modes, particularly Torfaen (40.7 per cent), Merthyr Tydfil (44.3 per cent) and Blaenau Gwent (46.6 per cent). Distance to workplace zones is higher in Monmouthshire, though there are still a quarter of people travelling distances of under 5km.

- There are a number of key current capacity constraints on both the highway and public transport networks. A number of sections of both the highway and public

transport network have capacity issues, including M4 around Newport, southern section of the A470 (Pontypridd to Cardiff), sections of the A472, peak period train services to Pontypridd, Ebbw Vale and Barry; and key urban bus services in Cardiff and Newport.

- Resilience of the motorway and trunk road network to planned and unplanned events has been identified as an issue in the region in particular the M4, M48 and A4042. In the same period the M4 Second Severn Crossing was fully closed once due to high winds whilst the M48 Severn Bridge was closed twice fully and six times partially disrupting high sided vehicle movement. Intense rainfall closed the M48 in both directions on two occasions and affected pedestrian movements at the A40 in Monmouth. The A4042 Llanellen Bridge was closed six times in the same period of time due to flooding, causing a lengthy diversion route.

- Urban congestion is an issue within the region which will need to be addressed.

- Travel to work is dominated by the car (73.7 per cent), although that is much lower in Cardiff (62.0 per cent). Bearing in mind the availability of public transport services in the region and the congestion issues on the road network, there is a real opportunity to improve the attractiveness of public transport.

- There are accessibility issues to NHS Major Acute Hospitals in parts of Monmouthshire, Blaenau Gwent, Rhondda Cynon Taf, Vale of Glamorgan and Caerphilly. Access to further education by public transport is generally very good and so is access to higher education with the exception for people living in Blaenau Gwent and Bridgend.

- The Cardiff Capital Region Metro has the potential to play a key role in addressing regional issues around capacity, congestion and accessibility, increase the take up of sustainable forms of travel for short journeys and improve the integration between buses and rail and between other modes and public transport.

3 Delivering Improvements

3.1 Introduction

3.1.1 This section sets out the priorities and interventions to be taken forward in the short term (next five years), medium term (up to next ten years) and longer term (next twenty to thirty years). Improvements identified will be taken forward by Welsh Government or are for other organisations to deliver. These improvements will enable investments to be directed to secure maximum value for money and impact.

3.1.2 The previous section on "Current Position and Future Trends" provides the evidence about economic, demographic and transport trends. This information together with the common issues and opportunities identified in existing strategies and plans and which are relevant to Wales or parts of Wales provides the context and evidence to inform decisions on the future revenue and capital investments priorities needed to improve transport in Wales.

3.1.3 Whilst Welsh Government will lead on delivery of many of the priorities set out in the Plan we will also have a role in guiding and influencing, managing and supporting other organisations to deliver transport improvements.

3.1.4 Whatever its role, delivering a common vision with focus on similar priorities is critical to achieve maximum impact and value for money from our investment whether by Welsh Government or by others.

3.1.5 The key findings from the data have informed our key priorities to be taken forward during this Plan period and beyond.

3.2 Roads

3.2.1 Responsibility for the safe operation and maintenance of the road network is split between the Welsh Government[75], which is the highway authority for the motorway and trunk road network; and the local authorities who are the highway authority for the local roads in their respective areas. In addition, a small proportion of roads are 'unadopted' and their maintenance is the responsibility of the residents or businesses located on that road.

3.2.2 Highway authorities have statutory responsibilities in relation to the roads they are responsible for. These responsibilities are significant and serious, and if not

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[75] The Welsh Ministers are the Highway Authority for the motorway and trunk road network

properly discharged, could leave the relevant highway authority, and individuals, at risk of prosecution for various offences up to and including corporate manslaughter. The main responsibilities are set out in European and UK legislation including but not limited to the Highways Act 1980.

3.2.3   The Highways Act 1980 places responsibilities on highway authorities to:

- maintain and operate the highways they are responsible for including the day to day running and winter service.

- keep public highways open and remove obstructions that may affect the use and safety of the highway and those using the highway

3.2.4   There are other statutory obligations that fall on highways authorities because they are responsible for the highway asset. This includes EU and UK legislation as well as relevant British and International standards. (For example, the Environmental Noise Directive.)

3.2.5   Road safety is a key concern for the management of the road network with collisions happening every day on Welsh roads that can potentially have tragic consequences for those involved and their families. As part of the Road Safety Framework for Wales published in 2013 we have set challenging targets for casualty reduction. Compared to the average for 2004-08 we want to see:

- a 40 per cent reduction in the total number of people killed and seriously injured on Welsh roads by 2020, meaning 562 fewer killed and seriously injured casualties

- a 25 per cent reduction in the number of motorcyclists killed and seriously injured on Welsh roads by 2020, meaning 64 fewer motorcyclist killed and seriously injured casualties

- a 40 per cent reduction in the number of young people (aged 16-24) killed and seriously injured on Welsh roads by 2020, meaning 139 fewer young people killed and seriously injured casualties.

3.2.6   The actions in the Road Safety Framework will be kept under review to ensure there is a clear plan for delivery including assigning ownership for actions and setting specific timescales. Initial plans will focus on progress up to 2016 when the Framework is due for formal review.

Trunk Road improvements, maintenance, operation and management

3.2.7 As the highways authority for trunk roads and motorways in Wales, the Welsh Government[76], is directly responsibility for the maintenance, operation and management of this £13.5bn asset. There are over 75 miles of motorway and over 1000 miles of trunk road.

3.2.8 Key components of the network include bridges, tunnels, retaining walls and gantries. There are over 3,700 such structures on the motorway and trunk road network across Wales with an estimated value of approximately £3bn. There are also six road tunnels on the network across Wales.

3.2.9 The Welsh Government seeks to avoid unplanned maintenance of the motorway and trunk road network which causes delay and disruption and operates its Traffic Officer service to deal with incident management.

3.2.10 Road verges and associated landholdings (often known as the "soft estate") play a vital role in mitigating the impacts of roads. It provides screening for properties, landscape integration, the location culture heritage features, habitat for wildlife, water retention and treatment and a place for highway and utility related equipment. The Welsh Government's soft estate covers approximately 3,000 hectares.

3.2.11 Investment in the existing road network is an ongoing requirement. Each year, capital and revenue programmes and projects are reviewed and a priority ranking assessment is carried out to ensure value for money and to establish which projects should be progressed to maintain safety and required service levels.

3.2.12 We will identify invest to save schemes and funding streams to improve network safety, resilience, reliability, whole life costing and support economic growth. For example, there are centrally funded capital bids submitted to improve safety, resilience, reliability and support economic growth. They encompass winter service delivery, M4 Junction 33 – 34 resilience, addressing the backlog in roads condition and preventative maintenance, highway structures asset stock investment, drainage and geotechnical programme delivery, A55 drainage and the national integrated transport information system. Alongside these there are bids supporting the road verges for wildflowers initiative, tree planting for recovery and the noise action plan for Wales.

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76 The Welsh Ministers are the Highway Authority for the motorway and trunk road network

3.2.13   There are also proposals to develop a Streetworks Strategy stemming from the Traffic Management Act 2004 and New Roads and Streetworks Act 1991, which would enable enhanced control of network availability.

3.2.14   We are currently reviewing our delivery model to drive efficiency and better value for money which would enable us to maintain an acceptable level of performance from the network with the investment levels available.

3.2.15   Intelligent Transport Systems (ITS) and innovative technical solutions will continue to be investigated and rolled out at locations on the network that will provide benefits to the public, freight and those managing the network. This will complement the existing systems and further improve the ability of our two traffic management centres (Conwy and Coryton) to dynamically manage the network in response to unplanned incidents as well as major events. Additionally, measures to reduce our energy consumption such as low energy lighting and innovative techniques to manage the network will be rolled out where specific business cases allow.

3.2.16   We are also responsible for identifying the need for any major projects which would substantially upgrade or extend the network and then planning and delivering those projects. The need for a major project can arise because of congestion on the existing network or as a result of a change in the wider environment. This could a significant investment in a particular location, or because there is a significant change in asset condition that requires a major project to address, e.g. the need for a replacement bridge.

3.2.17   The nature of the trunk road network in Wales is such that it provides critical connectivity for many communities, including in rural areas and deprived communities. The network will change over time and, as well as building new sections of highway, we are currently investigating a programme of trunking and de-trunking to ensure the network reflects its strategic role.

3.2.18   An efficient, effective trunk and motorway network has an important role to play in supporting the Welsh economy enabling access across Wales and cross-border for people and freight. It helps businesses to be competitive, reducing transport costs, allowing speedy and reliable movement of goods and products and access to a labour force. Delays on the network and unreliability in journey times, affects productivity and reduces access to markets. Congestion can increase emissions from transport and schemes that reduce congestion can reduce this and improve local air quality. Similarly the network has an important role to play in enabling people to access services.

3.2.19   A key driver for investing in new major enhancements to the trunk and motorway network is to stimulate the economy. The contribution an individual project will make to the economy as a whole will vary and a key part of the

business case development process for individual projects is to determine the benefits arising from that specific project. Our investment also enables us to contribute directly to tackling poverty by ensuring that our contracts and delivery arrangements provide for training opportunities, apprenticeships and jobs for people.

3.2.20   Maintaining investment in the construction of new roads, major extensions of existing roads or substantial upgrades of existing roads and in the maintenance, operation and management of the trunk and motorway network will:

- Enhance connectivity between places in Wales or across the border for the benefit of people and businesses, enabling people to access jobs, key services, recreation and link communities and also enabling freight to be transported efficiently

- Address congestion, lack of capacity, lack of resilience or safety issues and bring benefits to people and businesses in terms of safer, faster and / or more reliable journeys

- Improve asset condition which enhances both safety and performance of the network, adopting Asset Management principles, to deliver best value for money

- Ensure we fulfil our statutory responsibility as the highways authority to maintain, operate the network and ensure the safety of those using the network and meet other statutory obligations, for example, in relation to the environment, such as noise, water, air and biodiversity

- Ensure that the network is safe and minimise the risk of collisions occurring and ensure that, when collisions do occur, the risk of someone being killed or seriously injured is minimised

- Maintain asset value and strike the appropriate balance in investing now to prolong asset life and manage the risk of larger costs later

- Allow Welsh Government, to trunk additional stretches of road, currently the responsibility of local authorities, where those sections of road serve a strategic highways function and de-trunk other sections where appropriate

- Allow Welsh Government to undertake a planned and coordinated approach rather than reactive maintenance, providing more efficient use of resources and reducing network disruption to the travelling public

3.2.21   Traffic volume is forecast to grow by 33 per cent by 2040. There has also been an increase in vehicle miles which indicates our short term strategy should

focus on improving connectivity, addressing congestion, tackling sub-standard networks and pinch points and introducing overtaking opportunities to improve road safety. A package approach of seeking ways to make better use of the existing network, managing demand and transfer from car to public transport will also be considered as possible measures to address congestion.

3.2.22   Within this context, our investment priorities for the trunk and motorway network are:

- **Ensuring the safe operation of the network and fulfilling our statutory responsibilities as the highways authority**
  (Wales Transport Strategy Outcome 5: Safety and Security of travel, Outcome 14: air pollution and other harmful emissions, Outcome 15: the local environment and Outcome 17: biodiversity - Wales Transport Strategy)

- **Ensuring the efficient and effective operation of the network**
  (Wales Transport Strategy Outcome 6: Employment, Outcome 7: Connectivity: nationally and internationally, Outcome 8: Reliable transport system and Outcome 9: Freight)

- **Providing enhanced connectivity for communities, business and key services**
  (Outcome 6: Employment, Outcome 8: Reliable transport system and Outcome 9: Freight - Wales Transport Strategy)

- **Ensuring Wales has high quality transport links and is well connected to the rest of the UK and internationally**
  (Outcome 6: Employment, Outcome 7: Connectivity: nationally and internationally, Outcome 8: Reliable transport system and Outcome 9: Freight - Wales Transport Strategy)

- **Maintaining asset value and optimising investment now to manage future costs**
  (Wales Transport Strategy Outcome 6: Employment, Outcome 8: Reliable transport system and Outcome 9: Freight)

3.2.23   Any investment will also enable us to contribute directly to tackling poverty by ensuring that our contracts and delivery arrangements provide for training opportunities, apprenticeships and jobs for people.

3.2.24   In maintaining existing transport infrastructure and planning new infrastructure, highway authorities in Wales will need to assess the effects of climate change and integrate mitigation and adaptation measures including into the design and management process.

3.2.25   Highway authorities should also take into account the recommendations in the Wales Coastal Flooding Review – Phase 2[77] report[78].

Local road network

3.2.26   Local roads form an important part of the highways network. In total there are 32,728km of local roads made up of 2,752km of A roads, 12,814km of B and C roads and 17,162km of unclassified roads[79].

3.2.27   Information on the condition of local roads indicates that 13.2 per cent require further investigation / maintenance. During the financial years 2012/13 to 2014/15, local authorities have been supported by Welsh Government through additional revenue, to borrow £180m capital to improve their highway infrastructure. This injection of additional funding has contributed to addressing the deterioration of the local highway asset and reducing the percentage of the road network requiring intervention. Local authorities will set out their key transport issues and specific priorities for the local road network within their Local Transport Plans, to be submitted to the Welsh Government by January 2015.

3.2.28   Whilst local Authorities are statutorily responsible for local roads, the Welsh Government may still take an interest in investment requirements and projects. Local roads infrastructure forms an intrinsic part of the Welsh transport system and direct investment in improvements by Welsh Government may be the most appropriate and cost effective way to deliver transport improvements that support our wider objectives.

3.2.29   Within this context, the priorities for Welsh Government investment in the local transport network are:

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77 http://naturalresourceswales.gov.uk/alerts/flood-warnings/recent-flooding-incidents/wales-coastal-flooding-review-phase-2-report/?lang=en
78 http://www.google.co.uk/url?url=http://naturalresourceswales.gov.uk/content/docs/pdfs/flooding-and-alerts-pdfs/wales-coastal-flooding-review-phase-2
report.pdf%3Flang%3Den&rct=j&frm=1&q=&esrc=s&sa=U&ei=Z5Q2VN_7OMne7Aa7soDIDA&ved=0CBQQFjAA&usg=AFQjCNHyPXPPwpB67Jyi_ZnOETsUSwUO1Q
79 Statistical Bulletin, Road Lengths & Conditions 2013, SB122/2013

- **Providing enhanced connectivity for communities, business and key services**
  (Wales Transport Strategy - Outcome 6: Employment, Outcome 8: Reliable transport system and Outcome 9: Freight)

- **Ensuring Wales has high quality transport links and is well connected to the rest of the UK and internationally**
  (Wales Transport Strategy - Outcome 6: Employment, Outcome 7: Connectivity: nationally and internationally, Outcome 8: Reliable transport system and Outcome 9: Freight)

- **Improving safety and accessibility for all**
  (Wales Transport Strategy - Outcome 5: Safety and Security of travel)

3.3 Roads - Specific interventions

3.3.1 We will operate a safe and efficient road network and improve access to employment:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[80]					National/ Regional
				1	2	3	4	5	
R1	Enable the day to day safe, efficient and effective operation of the trunk and motorway network through regular inspection and maintenance, supported by appropriate enforcement and other specific services including winter service	Reduce congestion/ improve journey time, journey time reliability and road safety issues. Ministerial Task Force – North Wales Transport.	Short term	▓	▓	▓	▓	▓	National
R2	Deliver the actions set out in the Road Safety Framework for Wales	To address continuing collisions and reduce the number of people being	Short / Medium term			▓	▓		National

80 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[80]					National/ Regional
				1	2	3	4	5	
		killed or seriously injured				▓	▓		
R3	Develop proposals for a Wales Infrastructure Investment Plan capital-funded grant to support strategic regional transport improvements, which would include improvements to the local road network and access to employment	Will vary from project to project supported, but overall rationale is to address poor accessibility and congestion and improve integration for transport infrastructure where the local authority is the lead. Picks up on priorities identified by the Ministerial Task Force on North Wales Transport.	Short / Medium term	▓	▓	▓	▓	▓	National
R4	Deliver a programme of road safety improvements outside schools on the trunk road	Evidence from pupils about road safety concerns	Short term				▓	▓	National

3.3.2   We will complete the following schemes currently under construction:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[81]					National/ Regional
				1	2	3	4	5	
R5	Improvements under construction to A465 Brynmawr to Tredegar (Section 3 of the Heads of the Valley dualling)	Addresses poor accessibility in Heads of the Valleys communities and road safety issues	Short term				▓	▓	SE Wales

81 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[81]					National/ Regional
				1	2	3	4	5	
R6	Junction 33 M4 west / A4232 south dedicated slip road	Improve network resilience by addressing journey time reliability issues	Short term	■	■	■		■	SE Wales
R7	A55 Safe Havens / Emergency Crossovers	Improve network resilience by addressing journey time reliability issues	Short term				■	■	North Wales

3.3.3 We will continue to progress the following committed schemes through to construction, subject to the business case still justifying the expenditure and obtaining the necessary statutory consents:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[82]					National/ Regional
				1	2	3	4	5	
R8	Improvements to the M4 corridor around Newport	Addresses congestion, poor journey time reliability and air quality issues	Short term	■	■		■		SE Wales
R9	Brynglas Tunnels safety improvements	Improves resilience and addresses journey time reliability issues and enhances safety in the tunnels	Short term				■		SE Wales
R10	Improvements to A465 Gilwern to Brynmawr (Section 2 of the Heads of the Valley dualling)	Addresses poor accessibility in Heads of the Valleys communities and road safety issues	Short term				■	■	SE Wales
R11	Improvements to A465 from A470 to Hirwaun (Section 6 of the Heads of the	Addresses poor accessibility in Heads of the Valleys	Medium term				■	■	SE Wales

82 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[82]					National/ Regional
				1	2	3	4	5	
	Valley dualling)	communities and road safety issues					▓	▓	
R12	Improvements to A465 Dowlais Top to A470 (Section 5 of the Heads of the Valley dualling)	Addresses poor accessibility in Heads of the Valleys communities and road safety issues	Medium term				▓	▓	SE Wales
R13	Eastern Bay Link: Queensgate to Ocean Way, Cardiff	Addresses congestion and improves access to the Cardiff Enterprise Zone	Short term	▓			▓		SE Wales
R14	Improvements to Five Mile Lane, Vale of Glamorgan	Addresses journey time reliability issues and improves access to the St Athan Enterprise Zone	Short term				▓		SE Wales
R15	Improvements to the A40 Llanddewi Velfrey to Penblewin	Addresses road safety and improves accessibility to the Haven Waterway Enterprise Zone and employment sites on a TEN-T Core Route	Medium term				▓		West Wales
R16	A483 / A489 Newtown bypass	Addresses congestion and improves access to employment sites	Short term	▓	▓		▓		Mid Wales
R17	A487 Caernarfon to Bontnewydd bypass	Addresses congestion, road safety and journey time reliability	Short term				▓		North Wales
R18	A55 Junctions 15 and 16 Improvements	Addresses journey time reliability on a TEN-T Core Route	Short term	▓	▓				North Wales
R19	Improvements to the A55 Crossing of the Menai	Addresses journey time reliability on a TEN-T Core Route	Short term				▓		North Wales
				▓	▓		▓		

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[82]					National/ Regional
				1	2	3	4	5	
R20	A55 Abergwyngregyn to Tai'r Meibion improvements	Address journey time reliability and improve resilience on a TEN-T Core Route	Short term	■	■		■		North Wales
R21	M4 Junction 28	Addresses congestion and capacity issues	Short term	■	■				SE Wales
R22	A483 Llandeilo bypass*	Addresses congestion, road safety and journey time reliability	Short term	■	■				South West Wales
R23	A487 Dyfi Bridge	Improve network resilience by addressing journey time reliability issues	Short term					■	Mid Wales

* funding options for this project are being explored

3.3.4   We will continue to develop the following schemes, testing the business case and options for a preferred route, and subject to a viable business case and obtaining the necessary statutory consents, deliver the scheme:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[83]					National/ Regional
				1	2	3	4	5	
R24	Develop a scheme for improvements to the A494/A55/A548 Deeside Corridor	Addresses congestion and capacity issues	Short / medium term	■	■			■	North Wales

3.3.5   We will review the extent of the strategic road network in Wales that sits under the Welsh Government's responsibility:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[84]					National/ Regional
				1	2	3	4	5	
R25	Continue to progress proposals to potentially trunk the following sections of highway: - A4232 Culverhouse Cross to Queen's Gate Roundabout (Cardiff / Vale of Glamorgan) - A483 Fabian Way to Swansea (Neath Port Talbot/Swansea) - A470 M4 J32 to A48 Gabalfa interchange (Cardiff) - A477 Pembroke Dock to Johnston (Pembrokeshire) - A548 Connah's Quay (A548/A550 Junction) to Mostyn (Flintshire)	Helps to create a strategic trunk road network to link main centres of population and economic activity, improve major port, airport and rail terminal access, improve end to end connectivity and improve access to Enterprise Zones	Short term	▓				▓	National
R26	Continue to progress proposals to potentially de-trunk the following sections of highway (and trunk alternative routes, where appropriate):	To improve road safety, reduce community severance, improve local accessibility and local inclusion, improve health and wellbeing, reduce	Short term				▓	▓	National

84 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[84]					National/ Regional
				1	2	3	4	5	
	- A44 / A487 Aberystwyth - A40 section through Abergavenny - A470 from Gellilydan to Blaenau Ffestiniog	noise and improve air quality.					▓	▓	

3.3.6   We will give further consideration to the case for interventions to inform a future decision on whether further action is required and, if so, the nature of an appropriate scheme:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[85]					National/ Regional
				1	2	3	4	5	
R27	Adopting a corridor approach, identify where there are resilience issues on the network which justify the need for improvements, including: - A55 resilience improvements - M4 Port Talbot Junction 41 – assess outcome of the trial and determine the way forward - A55 Menai Crossing	Improve journey times, safety and resilience of trunk and motorway network	Short to Long term	▓					National
R28	Engage with the UK Government and partners in	Improve journey times, safety and resilience of trunk	Short to Long term					▓	Mid Wales

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[85]					National/ Regional
				1	2	3	4	5	
	England to progress the following schemes: - A483 Pant to Llanymynech (cross border scheme) - A458 Buttington Cross to Wollaston Cross (cross border scheme)	and motorway network						▓	
R29	Building on the corridor approach set out in the Route Management Plan, use the evidence base about the journey times and reliability on the highway network to identify a programme of improvements. This will include reviewing the case for the remaining NTP 2010 schemes not separately listed in this Plan (see Annex E).	Improve journey times, safety and resilience of trunk and motorway network by addressing capacity constraints, congestion, pinch points and road safety issues	Short Term	▓	▓			▓	National
R30	Intelligent Transport Systems (ITS) and innovative technical solutions will continue to be investigated and rolled out at locations on the network that will provide benefits to	To complement existing systems and further improve the ability of our two traffic management centres (Conwy and Coryton) to dynamically manage the network in	Short term		▓		▓	▓	National

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[85]					National/ Regional
				1	2	3	4	5	
	the public, freight and those managing the network.	response to unplanned incidents as well as major events.			■		■	■	
R31	Measures to reduce our energy consumption such as low energy lighting and innovative techniques to manage the network will be rolled out where specific business cases allow.	To work towards satisfying EU and Welsh Government carbon targets						■	National

3.4   Freight

3.4.1   Freight transport is an essential part of a thriving economy and of people's everyday life. It is dominated by the private sector – businesses moving goods and materials for other businesses, but it relies on infrastructure that is often provided, managed and maintained by the public sector, be it at national or local level.

3.4.2   Within this context, the priorities for Welsh Government investment in the local transport network are:

• **Providing enhanced connectivity for business**
(Wales Transport Strategy - Outcome 6: Employment, Outcome 8: Reliable transport system and Outcome 9: Freight)

• **Ensuring Wales has high quality transport links and is well connected to the rest of the UK and internationally**
(Wales Transport Strategy - Outcome 6: Employment, Outcome 7: Connectivity: nationally and internationally, Outcome 8: Reliable transport system and Outcome 9: Freight)

• **Improving safety and accessibility for all**
(Wales Transport Strategy - Outcome 5: Safety and Security of travel)

3.4.3   A Freight Task and Finish Group was convened in 2013 to advise on key drivers of demand, capacity issues and the priority interventions needed to support the development of Enterprise Zones, City Regions and commercial and business centres in Wales more widely.

3.4.4   The Group reported in reported in Spring 2014 with a number of findings and recommendations (see Annex D). The Group reflected that the key freight forecast is a growth in imports into the UK generally, and especially of consumer goods, and a growth in inter-modal freight networks to accommodate them. More specifically:

- continuing growth in container freight, largely comprising consumer goods, via certain key ports in England

- continuing growth in rail freight in order to transport containers to consolidation and distribution centres in the UK

- continuing growth in road freight to distribute the freight to and from centres for the final stage of the journey, especially light goods vehicles for the 'last leg'

3.4.5   Based on the advice on the Group, the following key considerations inform our approach to freight:

- there is a need to fully integrate freight requirements and opportunities into transport planning, infrastructure developments and economic development sites

- road, rail and shipping are all important to Wales as freight modes

- the key objective should be to ensure they are as inter-connected as practicable along major routes in Wales in order to maximise our capability to accommodate inter-modal freight, the growth area of the future

- whilst recognising the importance of road freight to the market, opportunities for further modal shifts should be maximised to help secure a more sustainable mix

3.4.7. The Group's recommendations have been accepted as the priority interventions for freight and are reflected in the proposed interventions set out in   this Plan. The Group's recommendations have been accepted as the priority interventions for freight. They are reflected in a number of the specific road   interventions set out at 3.3 above and specific rail interventions set out at 3.09 below, which can be cross-referred with the Group's recommendations at Annex D.

3.5   Freight - Specific Interventions

3.5.1   We will ensure that freight requirements are giving full consideration in developing all transport interventions and will:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[86]					National/ Regional
				1	2	3	4	5	
F1	Implement the recommendations of the Freight Task and Finish Group, making an annual update to the Assembly on progress	Addresses growth in freight and the need to make appropriate provision to transport it.	Short term	■	■				National
F2	Keep opportunities to enable uptake of rail freight and short sea shipping under review	Evidence of balance of freight	Short term	■	■				National

3.6   Active Travel

3.6.1   Active travel is a key transport option and we want to enable more people to walk and cycle more often, particularly for shorter journeys. We see walking and cycling routes as forming an intrinsic, and increasingly important part of Wales' transport network.

3.6.2   The National Cycle Network, which has been developed by Sustrans working with partners, is a series of traffic-free lanes and quiet on-road routes. It covers over 1,200 miles in Wales. This network offers a range of routes from long distance paths to routes providing connectivity in urban areas and it continues to develop and grow.

3.6.3   The Active Travel (Wales) Act 2013 introduced new duties and requirements in relation to active travel and will support the provision of high quality, integrated active travel networks which people can use to access jobs and services. The

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86 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Act requires local authorities in Wales to map and plan for suitable routes for active travel, and to build and improve their infrastructure for walking and cycling every year. It creates new duties for highways authorities to consider the needs of walkers and cyclists and make better provision for them and we have published statutory Design Guidance on the standards that active travel infrastructure should meet.

3.6.4   The maps that will be developed in response to the Active Travel (Wales) Act 2013 will identify where investment should be directed to have the greatest impact. Benefits from increased levels of active travel include:

- cycling and walking more lessens the risk of developing heart disease, type 2 diabetes and some cancers

- sickness absence related to physical inactivity costs the UK economy around £5.5 billion each year - however, an increase in physical activity of over one hour per week (e.g. 90 minutes), easily achieved through walking or cycling to work, could lead to a measurable reduction in levels of absenteeism

- cycling and walking saves money on petrol costs and parking charges

- cycling and walking is better for the environment, reducing pollution levels

3.6.5   We will support greater use of Active Travel modes through behaviour change initiatives (see 3.17). We will also make improvements to Active Travel outside schools on the trunk road network (see 3.3).

3.6.6   Our priorities for investing in active travel are:

- **Supporting the implementation of the Active Travel (Wales) Act 2013 and improving connectivity to key sites such as workplaces, hospitals, schools, shopping and recreation areas**
  (Wales Transport Strategy – Outcome 1: Healthcare and social services, Outcome 2: Education, training and lifelong learning, Outcome 3: shopping and leisure, Outcome 4: Healthy lifestyles, Outcome 6: employment, Outcome 10: Visitor attractions, green spaces and the countryside)

- **Improving safety and accessibility for all**
  (Wales Transport Strategy – Outcome 5: Safety and security of travel, Outcome 2: Education, training and lifelong learning)

- **Encouraging uptake of active travel for shorter journeys**
  (Wales Transport Strategy – Outcome 1: Healthcare and social services, Outcome 2: Education, training and lifelong learning, Outcome 3: shopping and

leisure, Outcome 4: Healthy lifestyles, Outcome 6: employment, Outcome 10: Visitor attractions, green spaces and the countryside)

3.7 Active Travel – Specific Interventions

3.7.1 We will support the implementation of the Active Travel (Wales) Act 2013 by:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[87]					National/ Regional
				1	2	3	4	5	
AT1	Ensure the Active Travel (Wales) Act 2013 is delivered by: - Considering the Existing Route Maps for approval when submitted in 2015 - Considering the Integrated Network Maps for approval when submitted in 2018 - Directing funding for walking and cycling to the delivery of schemes that contribute to active travel	There are opportunities to make active travel an option for more journeys to work, particularly for trips under 5km and to support the implementation of the Active Travel (Wales) Act	Short Term						National
AT2	Deliver the actions set out in the Active Travel Action Plan	There are opportunities to make active travel an option for more journeys to work, particularly for trips under 5km and to support the implementation of the Active Travel (Wales) Act.	Short to Medium term						National

87 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[87]					National/ Regional
				1	2	3	4	5	
AT3	Work with partners to deliver a programme of improvements to the National Cycle Network and that contribute to the objectives of the Active Travel Act	There are opportunities to make active travel an option for more journeys to work, particularly for trips under 5km and to support the implementation of the Active Travel (Wales) Act	Short term						National

3.8   Rail Infrastructure

3.8.1   Rail is an important component of the transport network in Wales for both passengers and freight. The rail network is a linear network that reaches many parts of Wales[88]. The Wales Route[89], a Network Rail management unit covering but not entirely congruent with geographic Wales, is responsible for just under 1500 miles of track, nearly 2000 bridges and 244 stations.

3.8.2   Responsibility for rail infrastructure in Wales is non-devolved. Network Rail is the asset owner and rail network operator[90] and the UK Government is responsible for specifying the enhancements that will be delivered[91] and setting out the funding available. There is a structured process of planning investment requirements and developing a programme of schemes to be delivered in each five year control period with the independent safety and economic regulator, the Office of Rail Regulation, overseeing this process. We are currently in the delivery phase of Control Period 5 (April 2014 to March 2019) and the planning phase of Control Period 6 (April 2019 to March 2024).

3.8.3   As part of the specification of enhancements to be delivered by Network Rail in England and Wales during Control Period 5, the Secretary of State for Transport announced the electrification of the Great Western Main Line from Cardiff onwards to Swansea, and the Valley Lines. Electrification and modernisation of these parts of the railway will bring significant potential to

88   A   map   of   the   current   network   is   at: http://www.nationalrail.co.uk/stations_destinations/maps.aspx#SÃ©quence_1
89 Wales Route Plan 2011 - http://www.networkrail.co.uk/aspx/4451.aspx?cd=1
90 Links to key Network Rail planning documents - http://www.networkrail.co.uk/structure-and-governance/planning-and-operating-the-railway/
91 High Level Output Statement for Control Period 5 - https://www.gov.uk/government/publications/high-level-output-specification-2012

introduce transformational change to the transport system in Wales. It also provides the potential for opportunities for employment and for growing supply chains through local sourcing of skills and materials, for improving our skills base in, for example, electrical engineering, and in securing community benefits. We will work closely with Network Rail to maximise these benefits in Wales.

3.8.4   The Welsh Government has a direct interest in these processes because we are responsible for the day to day management and funding of the current Wales and Borders rail franchise, and following the transfer of relevant functions, we will specify and award the next franchise.   Changes in infrastructure provision and charges directly affect the franchise and our costs. More broadly, rail is a core component of the transport system in Wales and it is in our interest to influence the investment decisions made by the UK Government and Network Rail and, in certain circumstances, invest directly ourselves to secure projects that contribute to our wider transport strategy and deliver wider benefits for Wales.   This is because:

- rail infrastructure forms an intrinsic part of the Welsh transport system and investing in improvements in the rail network may be the most appropriate and cost effective way to deliver transport improvements that support our wider objectives

- an efficient, effective rail network has a important role to play in supporting the Welsh economy enabling access across Wales and cross-border for people and freight

- an efficient, effective rail network also has an important role to play in enabling people to access key services, recreation and link communities across Wales. The nature of the rail network in Wales is such that it provides critical connectivity for many communities, including in rural areas and deprived communities

3.8.5   Investment in rail benefits the part of Wales in which the specific intervention is delivered but may also offer benefits to Wales as a whole, depending on the scale and strategic nature of the investment.

3.8.6   Investment in rail benefits anyone who wishes to travel via rail to access services such as healthcare or education, or to access jobs or business opportunities, or for tourism or leisure purposes, or simply to connect people with family, friends and the wider community.

3.8.7   Our first priority will be to seek to persuade the UK Government or Network Rail to invest in the rail network in Wales. Nevertheless there will be circumstances where Welsh Government investment is justified. On this basis we will:

- develop a project pipeline so that, when UK funding opportunities occur, there are Welsh projects at an appropriate stage of development that can be submitted for consideration and stand a chance of securing funding

- lever in UK or other sources of funding, for example drawing in investment from the ring-fenced funds[92] set up in each control period

- provide added value where we can add to planned UK investment

- address specific Welsh Government priorities, for example in terms of accessibility of stations or opening up access via rail to key sites

- reduce franchise costs or generate additional income for the franchise and therefore improve our revenue position where there is an opportunity

- ensure that our contracts and delivery arrangements provide for training opportunities, apprenticeships and jobs for people, to enable us to contribute directly to tackling poverty.

3.8.8   Within this context, the priorities for making Welsh Government investment in the rail network are:

- **Providing enhanced connectivity for communities, business and key services, particularly where our investment can lever in UK or other sources of funding**
  (Wales Transport Strategy - Outcome 6: Employment, Outcome 8: Reliable transport system and Outcome 9: Freight)

- **Ensuring Wales has high quality transport links and is well connected to the rest of the UK and internationally, particularly where our investment can lever in UK or other sources of funding**
  (Wales Transport Strategy - Outcome 6: Employment, Outcome 7: Connectivity: nationally and internationally, Outcome 8: Reliable transport system and Outcome 9: Freight)

- **Improving the accessibility and safety of stations and services, particularly where our investment can lever in UK or other sources of funding**
  (Wales Transport Strategy Outcome 6: Employment)

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92 CP5 ring-fenced funds - Level Crossing Risk Reduction Fund, National Stations Improvement Programme (NSIP), Access for All (AfA), East Coast Connectivity Fund, CP6 Development Fund, Network Rail Discretionary Fund (NRDF), Strategic Freight Network (SFN), Passenger Journey Improvement Fund (PJIF), High Speed 2, Innovation Fund

3.9   Rail Infrastructure - Specific interventions

3.9.1   We will support the delivery of the following committed schemes, subject to the business case still justifying the expenditure and the delivery agent obtaining any necessary statutory consents:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[93]					National/ Regional
				1	2	3	4	5	
RI1	Mid Tier Access for All programme: - station accessibility upgrades station improvement) at Radyr, Llandaf, Ystrad Mynach, Machynlleth and Chirk - easy access installation programme for small rural stations across Wales to provide wheelchair access by use of on-train ramps Funded through Welsh Government and DfT Access for All programme	Rail use has increased and there is potential for further growth There is a need to focus on improving connectivity and accessibility between communities and key employment centres, particularly for areas where accessibility is generally poor and where car ownership is low There is a need to ensure that people can access the rail network through physical accessibility improvements	Short term	▓	▓	▓	▓	▓	National
RI2	Station Improvement			▓	▓	▓	▓	▓	

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93 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[93]					National/ Regional
				1	2	3	4	5	
	Programme (NSIP+) station improvements at Aberystwyth, Rhyl, Ystrad Mynach, Pontypridd and Port Talbot Parkway. Funded through Welsh Government (Transport and Regeneration), ERDF, Network Rail, Arriva Trains Wales	Rail use has increased and there is potential for further growth There is a need to focus on improving connectivity and accessibility between communities and key employment centres, particularly for areas where accessibility is generally poor and where car ownership is low There is a need to ensure that people can access the rail network through physical accessibility improvements	Short term						National
RI3	Line extension and new station at Ebbw Vale Town Funded by Welsh Government	Rail use has increased and there is potential for further growth There is a need to focus on improving connectivity and accessibility between communities and key employment centres, particularly for areas where accessibility is	Short term						South East Wales

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[93]					National/ Regional
				1	2	3	4	5	
		generally poor and where car ownership is low							
RI4	Maesteg Branch frequency enhancement Funded by Welsh Government	Rail use has increased and there is potential for further growth There is a need to focus on improving connectivity and accessibility between communities and key employment centres, particularly for areas where accessibility is generally poor and where car ownership is low							South East Wales
RI5	Ebbw Vale line frequency enhancement (part of Phase 1 Metro) Funded by Welsh Government	Rail use has increased and there is potential for further growth There is a need to focus on improving connectivity and accessibility between communities and key employment centres, particularly for areas where accessibility is generally poor and where car ownership is low							South East Wales

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[93]					National/ Regional
				1	2	3	4	5	
RI6	North South journey time/capacity improvement project. Funded through Welsh Government	Rail use has increased and there is potential for further growth There is a need to focus on improving connectivity and accessibility between communities and key employment centres, particularly for areas where accessibility is generally poor and where car ownership is low	Short term	▓		▓	▓	▓	North Wales

3.9.2   Whilst recognising that rail is non-devolved, we will identify priorities for future rail investment in Wales to inform Network Rail and UK Government investment plans and, where appropriate, Welsh Government investment plans:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[94]					National / Regional
				1	2	3	4	5	
RI7	Contribute to Network Rail's Long Term Planning Process and the development of an ambitious Wales Route Strategy	Rail use has increased and there is potential for further growth. There is a need to focus on improving connectivity and accessibility between	Short term			▓		▓	National

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[94]					National / Regional
				1	2	3	4	5	
		communities and key employment centres, particularly for areas where accessibility is generally poor and where car ownership is low.				■		■	
RI8	Develop assessment criteria and, using those criteria, a prioritised list of station improvement proposals to draw down funding from relevant HLOS specific funds (as rail is non-devolved).	Rail use for travel to work is generally low. Recent increases in rail use indicate potential for further growth.	Short term	■			■	■	National
RI9	Continue to develop the following station schemes, subject to the business case and necessary consents: - Cardiff Central - Llanelli (Access for all - funding allocated) - Cathays (Access for all - allocated) - Taff's Well - accessibility upgrade and station improvement planned (Grip 4 to be completed March 2015) - Flint - accessibility upgrade undergoing	Rail use for travel to work is generally low. Recent increases in rail use indicate potential for further growth. There is a need to ensure that people can access the rail network through physical accessibility improvements.	Short term	■			■	■	National

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[94]					National / Regional
				1	2	3	4	5	
	feasibility study (Grip 4 complete March 2015)			■			■	■	
RI10	Develop assessment criteria and, using those criteria, a prioritised list of new station proposals for further consideration (in relation to securing funding from the rail industry). The following stations will be assessed as part of this process: South East Wales - Roath Park/ Wedal Road, Crwys Road, Gabalfa, Ely Mill/ Victoria Park, Caerleon, Llanwern, Newport West (on Ebbw Line), Crumlin, St Mellons, Newport Road/ Rover Way, Brackla, St Fagans, Magor South West Wales - Templeton, St Clears, Cockett, Landore Mid Wales - Bow Street, Carno, Howey North Wales - Broughton, North Wrexham, Deeside Industrial Park/ Northern Gateway (as alternative to upgraded Hawarden Bridge Station),	Recent increases in rail use indicate potential for further growth.	Medium / Long term	■	■	■	■	■	National

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[94]					National / Regional
				1	2	3	4	5	
	South Wrexham, Llangefni								
RI11	Identify and prioritise opportunities to improve efficiency or capacity on the rail network and draw down HLOS specific funds through: - level crossing closures - line speed improvements	Will enable journey time improvements which may enable additional services and, potentially increase patronage, and enhance rail safety	Short term				▓		National
RI12	Where appropriate, identify other priorities for investment in rail in Wales and bring those priorities to the attention of the UK Government given that rail infrastructure is not devolved: - North Wales rail modernisation including electrification - upgrade of the relief lines from Severn Tunnel to mainline standard - other priorities to be identified	Rail use for travel to work is generally low Recent increases in rail use indicate potential for further growth There is a need to focus on improving connectivity and accessibility between communities and key employment centres, particularly for areas where accessibility is generally poor and where car ownership is low The lack of viable and affordable alternatives to the car to access key	Short to medium term			▓	▓	▓	National

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[94]					National / Regional
				1	2	3	4	5	
		employment sites and other services has been identified in the work of the Ministerial Task Force on North Wales Transport				▓	▓	▓	

3.10   Rail Services

3.10.1   Rail passenger services provide crucial connectivity for people travelling within, as well as to and from, Wales. Rail freight plays an important role in supporting a number of business sectors in Wales and there is potential to develop its use further. Journeys by rail, whether by people or for freight, are fundamental to sustaining and developing our economy.

3.10.2   Since 2006 the Welsh Government has been responsible for the management of the Wales and Borders franchise, through a Joint Parties Agreement with the UK Government's Department for Transport. As the funding transferred by the UK Government in 2006-07 was only at a level sufficient to cover the baseline franchise, it has been challenging for the Welsh Government to bridge the gap between the capacity provided to us in the franchise and the capacity customers require.

3.10.3   However, despite this challenge, the Welsh Government has significantly expanded service capacity and passenger numbers in the Wales and Borders franchise area since 2003. Between 2003-04 and 2012-13, train kilometres for services provided by Arriva Trains Wales increased by 31 per cent. It is anticipated that passenger demand will continue to increase significantly. The Welsh Government will be working to ensure that train capacity is sufficient to respond to this increased demand, while also seeing improvements in service quality.

3.10.4   The current Wales and Borders franchise comes to an end in October 2018. Agreement in principle has been reached on the transfer of responsibility for specifying and awarding the next Wales and Borders franchise. The new franchise offers the opportunity to shape a specification which reflects the pattern of use that has developed and the basis on which to enhance Wales' economic competitiveness.

3.10.5   We will set out priorities for services in the next Wales and Borders franchise. This will be informed by the views of all stakeholders and will take account of

the recommendations made by the National Assembly's Enterprise and Business Committee in December 2013 following its inquiry into the future of the franchise.

3.11   Rail Services – Specific Interventions

3.11.1   We will ensure delivery of good quality rail services in Wales through effective management of the Wales and Borders Rail Franchise, building positive working relationships with other franchise operators serving Wales and identifying priorities for the next franchise:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[95]					National / Regional
				1	2	3	4	5	
RS 1	Manage the current franchise including: - ensuring the contract is managed effectively - introduction of new services on the Cambrian Main Line and Heart of Wales Line - a review of currently proposed service enhancements (including those listed in Annex F)	£177m spent on the franchise (including additional services above the original specification) in 2013/14. National Rail Passenger Survey shows overall satisfaction with Arriva Trains Wales has improved since the franchise began (83% in Spring 2014). In 2013-14, Arriva Trains Wales's average punctuality was 93.1%. The proportion of passengers satisfied with punctuality/reliability in the Spring	Short term	▓	▓		▓	▓	National

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95 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[95]					National / Regional
				1	2	3	4	5	
		2014 wave of the National Passenger Survey was 82%.		▓	▓		▓	▓	
RS 2	Prepare for the next franchise to be in a position to let the franchise: - Establish the policy framework within which the franchise will be let - Identify appropriate service frequencies and identify any additional services that should be included - Develop commercial strategy, informed by modelling work - Consider possible role of alliancing	Rail use for travel to work is generally low. Recent increases in rail use indicate potential for further growth. There is a need to focus on improving connectivity and accessibility between communities and key employment centres, particularly for areas where accessibility is generally poor and where car ownership is low.	Short/ Medium term					▓	National

3.12   Bus and Community Transport

3.12.1   Local bus services cater for the vast majority of local public transport needs across Wales, and buses continue to provide the backbone of the public transport network.

3.12.2   Every day, 62,000 people rely on the bus to get to work, and about a quarter of a million people use bus services every day to get to hospital appointments, visit friends, go shopping or access leisure. Buses are particularly important for young people and older people, for women and disabled people, and for people on low incomes, but there is scope to broaden the appeal of this mode of transport.

3.12.3   A key focus of this Plan is to bring forward co-ordinated interventions to improve the attractiveness of bus travel.   We want to see more services operating commercially and to see the proportion of fare paying passengers increase as a whole.   This will be good for the bus sector and good for passengers with

greater stability in service provision. It will also mean that public subsidy can be concentrated where it is needed most.

3.12.4   Following changes made in the 1980s, local bus services outside London are deregulated. Under these arrangements, the majority of local bus services in Wales are commercially operated by bus companies, with local authorities playing a role in co-ordinating local bus services, making arrangements for the provision of socially necessary bus services and providing passenger information and infrastructure.

3.12.5   The Welsh Government currently provides funding to local authorities to support key socially necessary bus services across Wales, and funds the provision of concessionary travel arrangements for people aged over 60, disabled people and seriously injured service personnel and service veterans. The Welsh Government has also made available capital funding to support improvements to infrastructure designed to support the more efficient operation of bus services. In addition, Welsh Government has also funded specific bus services such as TrawsCymru (see below) which provide nationally strategic important links.

3.12.6   In 2014 the Welsh Government established a Bus Policy Advisory Group to help set the strategic objectives for the promotion of better bus services in Wales. The Welsh Bus Advisory Group recommended the establishment of national quality standards for the delivery of bus and community transport services across Wales covering the following key components:

- Network review and development

- Fares

- Information

- Quality

- Reliability

3.12.7   The Group recommended that one of the key building blocks for the delivery of improved local bus services was the development of new Network Partnership Boards involving local authorities, bus operators, bus users and key trip generators. The Welsh Government will investigate through the Group how these new proposed Network Partnerships should be developed.

3.12.8   Community and voluntary transport services also play a vital role in providing affordable and accessible passenger transport opportunities for communities across Wales, especially those which are socially or geographically isolated. For example, the Bwcabus project, which provides integrated passenger transport to rural communities in the Teifi Valley and Lampeter areas in west Wales.

3.12.9   Cross-border bus services are important and Welsh Government will be encouraging local authorities to consider how best to join up services.

3.12.10   A review of the TrawsCymru longer distance bus network was carried out last year and made a number of recommendations for improvements recognising the continued strategic importance of a network of key longer distance bus routes linking key centres across Wales (see Fig x) . The review recommended that the Welsh Government play a more prominent role in the planning and delivery of longer distance bus services in Wales, with routes supported by the introduction of Quality Bus Partnership Schemes.

Figure 3.1: TrawsCymru Bus Network

3.12.11   Our investment priorities for bus and community transport are:

- **Providing enhanced connectivity for communities, business and key services, particularly where that connectivity would not otherwise be provided**
  (Wales Transport Strategy - Outcome 6: Employment and Outcome 8: Reliable transport system)

- **Improving the accessibility and safety of transport hubs and services**
  (Wales Transport Strategy Outcome 6: Employment)

- **Removing barriers to efficient service provision by improvements to infrastructure**
  (Wales Transport Strategy Outcome 6: Employment)

- **Enabling improved access to information and integration of services, ticketing and timetabling**
  (Wales Transport Strategy - Outcome 6: Employment, Outcome 7: Connectivity: nationally and internationally, Outcome 8: Reliable transport system)

3.13   Bus and Community Transport - Specific interventions

3.13.1   We will continue to allocate funding to support public transport services:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[96]					National / Regional
				1	2	3	4	5	
BCT1	Provide funding to support socially necessary services	There is a need to improve access to the public transport network so that people can access employment and services – particularly where accessibility is generally poor and where car ownership is low	Short term		▓		▓	▓	National
BCT2	Develop options for targeted funding for bus	There is a need to improve access to the public transport	Short term		▓		▓	▓	National

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96 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[96]					National / Regional
				1	2	3	4	5	
	and community transport services focused on: - Rural services - Access to hospital and other key services - Access to employment sites	network so that people can access employment and services – particularly where accessibility is generally poor and where car ownership is low			▓		▓	▓	
BC T3	Continue to provide a concessionary fares scheme for older people, disabled people and seriously injured service personnel and veterans	There is a need to improve access to the public transport network so that people can access employment and services – particularly where accessibility is generally poor and where car ownership is low	Short term		▓		▓	▓	National
BC T4	Deliver Youth Concessionary fare scheme for 16 and 17 year olds	There is a need to improve access to the public transport network so that people can access employment and services – particularly where accessibility is generally poor and where car ownership is low	Short term		▓		▓	▓	National

3.13.2   We will deliver the following:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[97]					National/ Regional
				1	2	3	4	5	
BC T5	Implement the recommendations arising from the Bus Policy Advisory Group Review in 2014	Addresses the need to make appropriate provision for bus services.	Short term		▓	▓	▓	▓	National
BC T6	Implement greater central management of TrawsCymru services and determine if there is a viable business case to introduce new TrawsCymru services	Addresses gaps in strategic public transport provision across Wales to improve accessibility to jobs and services	Short term		▓	▓	▓	▓	National
BC T7	Produce All Wales Bus Quality Standard for bus and community transport service in partnership with local authorities, operators and users. Standard will include components such as : - Availability of accessible bi-lingual information - A fares policy that is easy to understand - Customer care / satisfaction - Access for	Improves quality and accessibility of bus services for all passengers to encourage increased patronage and improved accessibility for disabled people. Recommendation arising from the Bus Policy Advisory Group Review in 2014	Short term		▓	▓	▓	▓	National

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97 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[97]					National/ Regional
				1	2	3	4	5	
	disabled people - Personal safety at passenger waiting facilities and on vehicles								
BC T8	Develop a policy statement on accessibility of bus services which will be used to inform standards and funding obligations. It will cover: - Accessible bi-lingual information including on buses - Training for drivers - Infrastructure - rollout of orange wallet scheme	There is a need to improve access to the public transport network so that people can access employment and services – particularly where accessibility is generally poor and where car ownership is low	Short term						National
BC T9	Evaluate pilots in Ceredigion and the Vale of Glamorgan to inform development of longer term approach to supporting community transport	Provide sustainable travel options in communities where there is currently a lack of choice	Short term						National
BC T10	Evaluate the effectiveness of Bwcabus and similar schemes and use that evidence to inform future approach to demand-led transport services, particularly in rural areas	Improve journey times in areas where public transport connectivity is poor	Short term						National

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[97]					National/ Regional
				1	2	3	4	5	
BC T11	Develop a voluntary concordat with Confederation of Passenger Transport, other operators and Traffic Commissioner to introduce measures which ensure greater stability for local bus networks such as increasing the length of notice period needed to change local bus services and restricting timetable changes to certain pre-determined dates in each calendar year	Decline in bus passenger numbers and opportunity to make buses a more attractive option	Short term		▓	▓	▓	▓	National
BC T12	Work with local authorities and bus operators to identify congestion and pinch points on the network that impact on bus reliability and punctuality and ensure that solutions are integrated into wider highway improvements programme	Address journey times and journey reliability and make them more attractive to passengers and thereby enhance the commercial viability of routes	Short term			▓	▓		National
BC T13	Work with community transport providers to develop car club schemes in areas	There are areas of Wales where people experience difficulties in accessing	Short		▓	▓	▓		National

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[97]					National/ Regional
				1	2	3	4	5	
	where people have difficulty in accessing employment opportunities and services	employment and services – particularly where accessibility is generally poor and where car ownership is low							
BC T14	Strategic Bus Priority Develop a package of bus priority measures along key strategic corridors	Address capacity limitations Improved frequency and journey time, reliability	Short / Medium term						National

3.14   Children and young people

3.14.1   The Welsh Government is committed to putting the principles of the UN Convention on the Rights of the Child put into practice. We want to ensure that children and young people are engaged in determining priorities for transport and that engagement leads to an improvement in the facilities and services they use and that the influence they have had is reported back clearly.

3.14.2   We have worked closely with the Children's Commissioner for Wales to embed this approach in strengthening the risk assessment of walked routes to school over the last year. As highlighted in the section 3.3.6, we are now working with schools on the trunk road to develop a programme of safety improvements.

3.14.3   The Learner Travel (Wales) Measure 2008 sets the legislative framework for school travel in Wales. The Learner Travel Statutory Provision and Operational Guidance has been revised, including to give more detailed advice on the risk assessment of walked routes to school, and the revised version was published in 2014. The guidance sets out the statutory provisions which local authorities must consider in undertaking their responsibilities under the Learner Travel (Wales) Measure 2008.   It also includes advice on school and parental responsibilities, a frequently asked questions section outlining best practice.

3.14.4   Learners undertaking certain training opportunities are eligible for support towards transport expenses by the Welsh Government (Department for Education and Skills).

3.14.5   As reflected in the evidence on road safety in section 2.6, we recognise that children and young people are vulnerable road users and have prioritised road safety investment to help address casualties.

3.15   Children and young people - specific interventions

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[98]					National/ Regional
				1	2	3	4	5	
C1	Revise the Travel Behaviour Code supported by the Children's Commissioner	Potential to improve safety and make a range of travel options more attractive to learners	Short Term		■	■	■	■	National

3.16   Information and Transport Choices

3.16.1   Accessible, bi-lingual, clear and accurate information about transport is crucial to enabling the system to work as effectively as possible. We want to ensure that transport improvements are well-publicised to potential users, and that people can access easy to understand information about their travel options. For example, through improvements to, and increased awareness of Traveline Cymru and TrafficWales.com.

3.16.2   We also need to ensure that we are engaging with transport users who are best placed to inform us of their travel experiences. The Public Transport Users' Advisory Panel brings together organisations with expertise to deal with public transport user matters and will provide expert advice on issues that affect public transport users.

3.16.3   We would like to encourage more sustainable travel choices – by combining capital investment in sustainable transport with marketing and incentives which directly inform people about their personal travel options. We currently undertake a programme of travel planning activity that includes workplace, household and school travel planning:

- Workplace travel planning – helping employees to be more active on their everyday journeys, reduce the number of sick days, improve productivity and reduce staff turnover. We currently fund four regional travel planning co-

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98 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

coordinators to promote workplace travel planning and journey sharing through Share Cymru[99] - the All Wales Journey Share Scheme.

- Household personalised travel planning – providing tailored information, incentives, and motivation directly to individuals to help them voluntarily make more informed travel choices. We have undertaken a four year programme of personalised travel planning activity which will complete in December 2014.

- Travel planning in education - including activities to spark interest and encourage shift to active travel modes. We have funded Smarter Journeys and Bike It projects to encourage more active travel choices in schools across Wales.

3.16.4   Our priorities for investing in marketing and information are:

- **Improving information about sustainable and active travel to key sites such as workplaces, hospitals, schools, shopping and recreation areas**
  (Wales Transport Strategy – Outcome 1: Healthcare and social services, Outcome 2: Education, training and lifelong learning, Outcome 3: shopping and leisure, Outcome 4: Healthy lifestyles, Outcome 6: employment, Outcome 10: Visitor attractions, green spaces and the countryside)

- **Improving accessibility and integration for all**
  (Wales Transport Strategy – Outcome 5: Safety and security of travel, Outcome 2: Education, training and lifelong learning)

- **Encouraging uptake of sustainable and active travel**
  (Wales Transport Strategy – Outcome 1: Healthcare and social services, Outcome 2: Education, training and lifelong learning, Outcome 3: shopping and leisure, Outcome 4: Healthy lifestyles, Outcome 6: employment, Outcome 10: Visitor attractions, green spaces and the countryside)

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99 www.sharecymru.com

3.17   Information and Transport Choices – Specific interventions

3.17.1   We will support the improvements to marketing and information:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[100]					National/ Regional
				1	2	3	4	5	
ITC 1	Review travel planning interventions funded by the Welsh Government to ensure that they are focused and targeted appropriately	There are opportunities to make active travel an option for more journeys to work, particularly for trips under 5km	Short Term						National
ITC 2	Determine a way forward and approach to delivering personalised travel planning	There are opportunities to make active travel an option for more journeys to work, particularly for trips under 5km and to support the implementation of the Active Travel (Wales) Act.	Short term						National

3.18   Ports

3.18.1   Welsh ports make a significant contribution to the Welsh economy, with a number forming part of the Trans-European Transport Network (TEN-T), the EU's strategic transport infrastructure policy.

3.18.2   There are three models of port ownership in Wales; trust, local authority and private. All exist side by side in Wales and are run on a commercial basis.

3.18.3   The Welsh ports industry service four main markets:

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[100] Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

- Roll-on Roll-off (ro-ro) and passenger traffic with links to the Republic of Ireland handled by Holyhead, Fishguard and Pembroke Dock; acting as the gateway between the Republic of Ireland and the rest of Europe

- major oil and energy sector traffic handled by Milford Haven and offshore renewable energy facilities at the Port of Mostyn

- markets served by the ports at Newport, Cardiff, Port Talbot and Swansea handle dry and liquid bulk, forest products, iron and steel products and some container traffic

- a range of smaller ports where there is a mixture of general cargo, and significant leisure activity, including a growing cruise sector

3.18.4 Government statistics classify ports as either 'major' or 'minor' (i.e. handling less than 1Mt per year) according to their throughput. Welsh 'major' ports include the ports of Cardiff, Fishguard, Holyhead, Milford Haven, Newport, Port Talbot and Swansea. The 'minor' ports include Barry, Burry, Mostyn, Neath, Anglesey, Llanelli, Llandulas and Port Penrhyn.

3.18.5 In 2012 54.6 million tonnes (Mt) of freight went through Welsh ports, accounting for 11% of the United Kingdom (UK) total of 500.9 Mt.101. The top three ports by volume in Wales (Milford Haven, Port Talbot and Holyhead) carry over 80 per cent of all Welsh throughputs.

3.18.6 The three most important commercial ports in Wales meet specialised shipping needs:

- Milford Haven handles mainly crude oil, petroleum products and liquefied natural gas (LNG)

- Port Talbot imports iron ore and coal mostly for the adjacent steelworks

- Holyhead is the main port for freight and sea passenger transport with the Irish Republic

3.18.7 Welsh ports act as the gateway between the Republic of Ireland and the rest of Europe with, for example, over 80 per cent of HGV traffic between Ireland and Europe passing through Wales. In 2012[102]:

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101 Sea Transport Statistical Bulletin 2013, Welsh Government (March 2014)

102 Ibid

- Around 386,000 lorries and unaccompanied trailers passed through Welsh ports to and from Ireland. Around three quarters of this traffic went through Holyhead

- In 2012 there were 2.6 million sea passengers travelling between Wales and Ireland; 1.9 million of these passed through Holyhead with the remainder using the ports of Fishguard and Milford Haven

- There were 634,000 accompanied passenger vehicles, made up of 621,000 cars and 13,000 coaches

- There were almost 8,000 ship arrivals in Wales during 2012

- In 2012 Milford Haven alone handled 8% of the UK total (38.1 Mt)

3.18.8   Welsh ports need to be able to maintain existing operations and take opportunities to grow and diversify in the future.

3.18.9   In terms of future growth and diversification, Welsh ports have the potential to play a greater role within inter-modal freight networks, and we are supporting their use as cruise liner call ports, and more generally encouraging the tourism aspect of ports and marinas in line with 'Partnership for Growth: The Welsh Government Strategy for Tourism 2013-2020'.

3.18.10   Due to their land holdings, ports in Wales are in a good position to provide transit facilities for handling goods passing between different transport modes, as well as hosting value added processes such as manufacturing, enhancing economic growth and job opportunities in the local area. For example, there are ambitious plans for ports in Wales to further serve the low carbon agenda specifically in nuclear, wave/tidal and offshore wind industries.

3.18.11   Effective onward links with the wider transport network are vital and need to be integral consideration in transport planning, with transport investment, where relevant, primarily related to improving connectivity to ports and largely driven by economic development opportunities.

3.18.12   We have accepted the recommendations of the Wales Freight Task & Finish Group, which was established to advise on key interventions required to drive economic growth and their recommendations have been reflected in the interventions set out in this plan. For example, the improvements to the M4, the A40 and the A55. We are also making the case to the UK Government for further improvements to the rail infrastructure in Wales to maximise the potential for Welsh ports to compete for the continued increase in container freight forecast by Network Rail as part of its long term planning process.

3.18.13 We would like to see an increase in short sea shipping (essentially the movement of cargo and passengers by sea between European ports) through Welsh ports to help improve the sustainability of the freight network, as well as enhancing local economic growth and jobs. This ambition is aligned with the EU TEN-T Motorways of the Sea concept and we are working with the Wales Ports Group to scope potential opportunities, including the need for further transport interventions.

3.18.14 Transport investment priorities for ports are set out below:

- **Providing enhanced connectivity for communities, business and key services, particularly where our investment can lever in UK or other sources of funding**
  (Wales Transport Strategy - Outcome 6: Employment, Outcome 8: Reliable transport system and Outcome 9: Freight)

- **Ensuring Wales has high quality transport links and is well connected to the rest of the UK and internationally, particularly where our investment can lever in UK or other sources of funding**
  (Wales Transport Strategy - Outcome 6: Employment, Outcome 7: Connectivity: nationally and internationally, Outcome 8: Reliable transport system and Outcome 9: Freight)

3.19   Ports – Specific interventions

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[103]					National/ Regional
				1	2	3	4	5	
P1	Develop a Memorandum of Understanding with the ports sector in Wales setting out how the Welsh Government and ports sector will	Significant freight traffic through Welsh ports	Short Term	■	■				National

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103 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[103]					National/ Regional
				1	2	3	4	5	
	work together			███	███				

3.20   Air transport

3.20.1   Aviation in Wales is an important economic and social asset, connecting Wales to a global economy which facilitates inward investment and trade; and airports are a critical part of our national infrastructure, acting as an economic driver and gateway into Wales for business and leisure purposes. Their importance is set out in our 'Interim Paper on Aviation', found at: http://wales.gov.uk/topics/transport/aviation-home/?lang=en.

3.20.2   The inter-relationship between aviation and other modes of transport needs to be integrated within our overall transport priorities for Wales, reflecting the needs of both passengers and freight.

3.20.3   Cardiff is Wales' major international airport and is part of the Trans-European Transport Network (TEN-T). As its sole shareholder, the Welsh Government's ambition is for it to be acknowledged as the airport of choice for Wales and to be our gateway for the world.

3.20.4   We are enhancing surface connectivity to Cardiff Airport by funding an express bus shuttle service between the airport and the city centre and Cardiff Bay, and funding improvements to the A4226 road (Five Mile Lane).

3.20.5   The Intra Wales Air Service has been running since May 2007. The current contract is due to expire on 9 December 2014. Recently, an independent review of the service was undertaken which included significant engagement of key industry experts and relevant stakeholders. This review has been the basis for developing a new specification for the future contracted service requirements.

3.20.6   The new PSO contract will provide two return services a day between Anglesey Airport and Cardiff.

3.20.7   Connectivity to other UK airports is also critical for the Welsh economy and businesses, including our tourism industry. The Ministerial Task Force on North Wales Transport has already identified the importance of connectivity into Manchester and Liverpool airports in particular, and the role of the A55 and the North Wales Main Line in providing the links.

3.20.8   We are making improvements to the A55 and making a case to the UK
Government for improvements to the rail infrastructure in North Wales. As set
out in our evidence to the Davies Airports Commission, good connectivity to
airports in South East England, Heathrow in particular, is crucial for South
Wales and will be improved by electrification of the Great Western Main Line
and the M4 relief road.

3.20.9   Our investment in airports will be largely driven by economic development
opportunities.   Transport investment, where relevant, will primarily relate to
improvements in connectivity to ports.   Transport investment priorities for
airports are set out below:

- **Providing enhanced connectivity for communities, business and key
  services, particularly where our investment can lever in UK or other
  sources of funding**
  (Wales Transport Strategy - Outcome 6: Employment, Outcome 8: Reliable
  transport system and Outcome 9: Freight)

- **Ensuring Wales has high quality transport links and is well connected to
  the rest of the UK and internationally, particularly where our investment
  can lever in other sources of funding**
  (Wales Transport Strategy - Outcome 6: Employment, Outcome 7: Connectivity:
  nationally and internationally, Outcome 8: Reliable transport system and
  Outcome 9: Freight)

3.21   Air transport – Specific Interventions

3.21.1   We will:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[104]					National/ Regional
				1	2	3	4	5	
A1	Manage the contract to provide two return services a day between Anglesey Airport	Recommendation following an independent review of the service, which included significant	Short Term	▓	▓				National

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104 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[104]					National/ Regional
				1	2	3	4	5	
	and Cardiff.	engagement of key industry experts

The new contract aims to seek better value for money for the funded service; for example by encouraging bidders to explore alternative route options during the aircraft's downtime (to be operated outside of the PSO), and increasing passenger numbers. | | ▓ | ▓ | | | | |

3.22   Blue Badge Scheme

3.22.1   The Blue Badge Scheme plays an important role to play in enabling disabled people to travel independently, either as a driver or a passenger, by providing for parking near where they need to go.

3.22.2   The delivery of the Blue Badge Scheme is the responsibility of local authorities and the Welsh Government has been taking steps to bring greater consistency to the implementation of the scheme and to ensure eligibility criteria cover an appropriate range of conditions.   As part of this effort, Robert Lloyd Griffiths, Director Wales - Institute of Directors and Autism Employment Ambassador for Wales, led a group of experts to review the Blue Badge scheme in Wales, with a particular focus on considering eligibility criteria for people with cognitive impairments. The Expert Group also addressed a number of issues about the wider implementation of the Blue Badge Scheme, ways in which administrative processes could be improved and the need to appropriately tackle abuse of the Scheme. Information was also gathered about the user experience of the

Scheme through engagement with access groups and organisations that represent disabled people.

3.22.3   We have developed a toolkit and guidance to support local authority decision making. We are also introducing an Independent Advisory Service to support local authorities in determining applications under the cognitive impairment criteria and other complex cases.

3.22.4   We will:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[105]					National/ Regional
				1	2	3	4	5	
BB1	Keep implementation of the Blue Badge Scheme under review	Expert Advisory Group report	Short term			▓		▓	National

3.23   Integrated Transport and Metro

3.23.1   We recognise that the transport system is intrinsically multi-modal and that integration between modes is critical to the effectiveness of the system as a whole. Many of the interventions set out in this Plan contribute to developing an integrated transport system, particularly those relating to public transport users - rail, bus and community transport, together with supporting initiatives such as comprehensive information and ticketing systems.

3.23.2   It is clear that effective transport systems support enhanced economic activity as set out in the 2006 Eddington Report[106] which found that 'there is clear evidence that a comprehensive and high-performing transport system is an important enabler of sustained economic prosperity.'

3.23.3   The European Union also highlighted the importance of Urban Mobility[107] to the economy, especially mobility in cities and city regions. It has identified the

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105 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

106   Eddington Transport Study, Dec 2006, commissioned by UK Chancellor of the Exchequer and The Secretary of State for Transport

delivery of better, smarter, sustainable and more integrated urban transport as a key policy objective to address issues of congestion, pollution and to help economic growth and employment.

3.23.4   Many important integrated transport inventions will be delivered at the local level and this is an area where we will need to carefully consider the priorities identified by local authorities in their Local Transport Plans.

3.23.5   More broadly we have identified the following investment priorities for integrated transport which will also apply to the Cardiff Capital Region Metro:

- **Providing enhanced connectivity for communities, business and key services**
  (Wales Transport Strategy - Outcome 6: Employment and Outcome 8: Reliable transport system, Outcome 1: Improve access to healthcare, Outcome 2: Improve access to education, training and lifelong learning, Outcome 3: Improve access to shopping and leisure facilities)

- **Improving the accessibility and safety of transport hubs and services**
  (Wales Transport Strategy Outcome 6: Employment, Outcome 5: Actual and perceived safety of travel, access to visitor attractions)

- **Enabling improved access to information and integration of services, ticketing and timetabling**
  (Wales Transport Strategy - Outcome 6: Employment, Outcome 7: Connectivity: nationally and internationally, Outcome 8: Reliable transport system and Outcome 9: Freight)

- **Ensuring the efficient and effective operation of the transport network**
  (Wales Transport Strategy - Outcome 6: Employment, Outcome 7: Connectivity: nationally and internationally, Outcome 8: Reliable transport system and Outcome 9: Freight)

3.23.6   A specific priority for integrated transport is the development of the Cardiff Capital Region Metro, the spatial priorities for which were set out in the 2013 Metro Impact Study[108] encompassing the coastal Cardiff-Newport conurbation and South Wales Valley towns comprising 10 local authorities and numerous transport operators. Within this area Metro aims to deliver enhanced

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108 http://wales.gov.uk/docs/det/publications/131126-metro-impact-study-main-report-en.pdf

connectivity to improve urban mobility and accessibility for people and enable businesses to reap the benefits of agglomeration.

Figure 3.2: Priority Metro Interventions
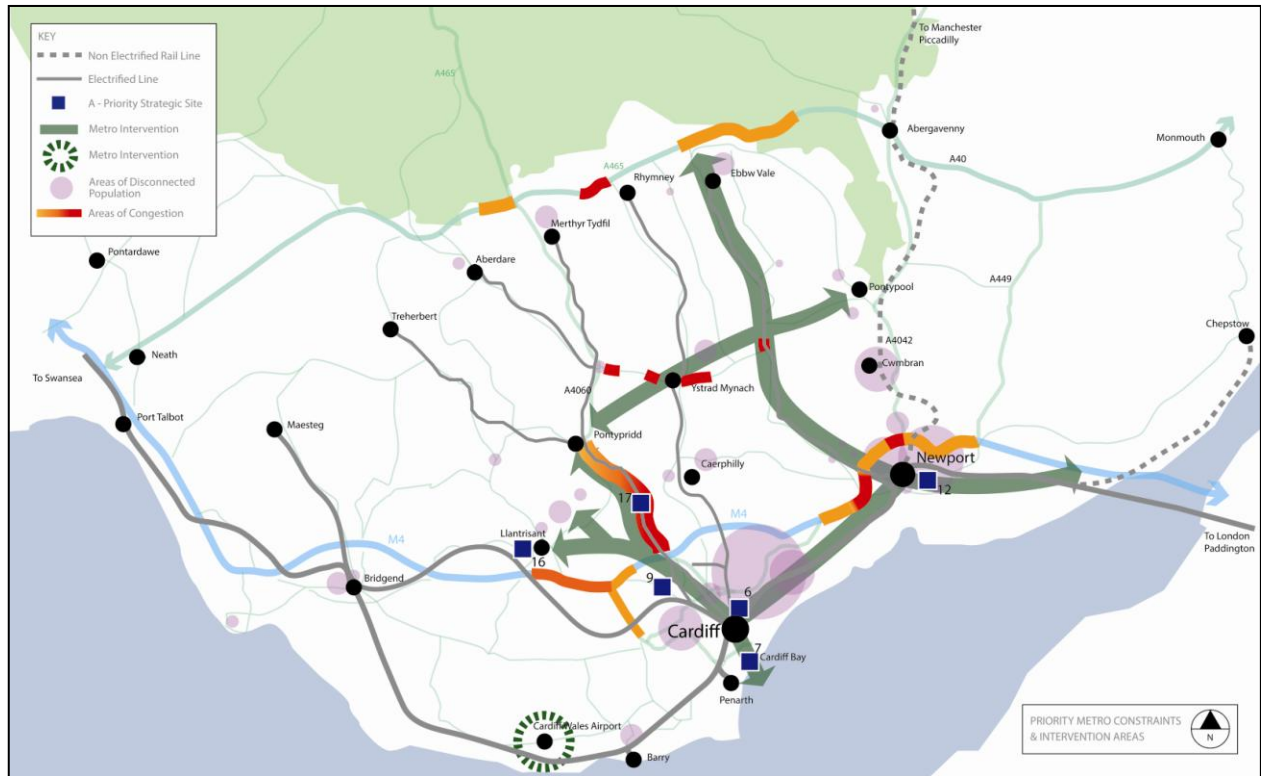
3.23.7   Metro is not a single scheme or project but will comprise a multiplicity of modes including improved rail and bus services, potentially supplemented by new modes (e.g. light rail/trams) and priority measures (e.g. bus rapid transit corridors), which collectively offer an attractive region wide alternative to the car. In this context, the vision for Cardiff Capital Region Metro is for a multi-modal, integrated, rapid transit network, offering the passenger a single ticket, "turn up and go" experience.

3.23.8   In order to ensure that public transport journeys become progressively more seamless for passengers and public transport patronage can grow substantially, several elements need to be brought together in forming the proposed integrated Metro network. These include:

- Integrated ticketing – including multi-operator / multi-mode products that facilitate cost effective and efficient transfer between vehicles

- Network integration – coordinate timetables to minimise waiting times when interchanging between services

- Physical integration at transport interchanges – easy movement between platforms and stops

- Comprehensive network information and branding – simplifying journey planning

3.23.9   The delivery of these elements will assist achieve the following Metro objectives:

- deliver maximum economic benefits across the Cardiff Capital Region

- encourage development and / or regeneration at strategic sites

- facilitate station focussed regeneration/development at key locations across the region

- support the maintenance or development of diverse, sustainable communities across the region

- provide an attractive, competitive alternative to the private car for many journeys

- reduce road congestion

- release additional capacity on the rail network

- reduce the adverse impacts of transport on the environment

- minimise the cost to government of public transport operations.

3.24   Cardiff Capital Region Metro & Integrated Transport – Specific interventions

3.24.1   Within the Metro phase 1 programme we will deliver:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[109]					National/ Regional
CCR M1	*Ebbw Vale Line Enhancement package*, Including:	Address capacity and congestion issues and contribute to	Short term						South East Wales

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[109] Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[109]					National/ Regional
	Extension to Ebbw Vale Town Centre, Provision of infrastructure to facilitate frequency enhancements (dualling line north of Crosskeys and additional platforms at Newbridge and Llanhilleth), Extension of platforms to 6 car length.	generalised journey time improvements.							
CCR M2	*Merthyr Line Enhancement Package*, Including: Additional passenger waiting facilities at Cardiff Queen Street, Cathays 'Access for All' and passenger facility improvements, Taffs Well, Park and Ride extension, Treforrest Estate Park and Ride scheme Merthyr Tydfil station improvement, Minor works at remaining stations to improve user facilities.	Improved physical access and waiting facilities on key transport corridor	Short term						South East Wales

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[109]					National/ Regional
CCR M3	*Maesteg Line Capacity Enhancements,* Provision of improved service frequency.	Address capacity and congestion issues and contribute to generalised journey time improvements.	Short term						South East Wales
CCR M4	*Interchange Improvement Programme*: Newport Bus Station Phase 2, Merthyr Tydfil Bus Station Preparatory works	Address bus terminal capacity issues and facilitate interchange	Short term						South East Wales
CCR M5	*Bus Priority Improvements*: including: A470 Pontypridd – Cardiff Bus Priority Programme, A472/A469 Crumlin Junction Improvements	Measures to assist journey time reliability at key points in the network. Support recommendations of Bus Policy Advisory Group.	Short term						South East Wales
CCR M6	*Bus Stop Improvement Programme*: Upgrade 10% of shelter stock on key corridors	Provision of improved waiting facilities to assist all passengers, particularly those with reduced mobility	Short term						South East Wales
CCR M7	*Smart Ticketing*, implement smart ticketing 'Pay as you Go' product	Reduced complexity, Opportunities to reduce boarding times. Support recommendations of Bus Policy Advisory Group.	Short term						South East Wales

3.24.2   We will continue to develop and appraise schemes identified in the Metro Impact Study[110] and will progress the actions set out in the Cardiff Capital Region Metro Update Report August 2014[111]:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[112]					National/ Regional
				1	2	3	4	5	
CC RM 8	Complete the transport planning work that will confirm the appropriate mix of public transport modes that should be developed for each corridor, enable the development of specific business cases and underpin long term Metro delivery, including consideration of light rail and other options.	Necessary stage in development of interventions to ensure that they are based on evidence and will be effective in addressing the issues the region faces	Short term						South East Wales
CC RM 9	With Network Rail and train operators, further test proposals to remove identified operational constraints and, if they appear feasible and deliver the anticipated benefits, will be subject to business case development. This will include the constraints	Address capacity and congestion issues in South East Wales and contribute to journey time improvements. Also wider economic rationale from agglomeration effects	Short/ Medium Term						South East Wales

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110 http://wales.gov.uk/topics/transport/public/metro/?lang=en

111 http://wales.gov.uk/docs/det/report/140826-cardiff-metro-update-report-august-2014-en.pdf

112 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[112]					National/ Regional
				1	2	3	4	5	
	identified in the August 2014 Metro update report such as capacity through Queen Street and Cardiff Central.				▓		▓		
CC RM 10	*Valley Lines Improvements* Investigate improvements to the existing valley rail lines to boost performance Investigations to look first at: - Rhymney - Coryton Line - City Line and Penarth Line	Address capacity limitations Improved frequency and journey time, reliability	Short / Medium / Long term				▓		South East Wales
CC RM 11	*Improving access to non-rail served communities:* Investigate options to provide high quality public transport to communities and proposed development areas not currently served by rail, including: East Cardiff and Newport urban areas, Abertillery, Hirwaun and North West Cardiff into Rhondda Cynon Taf	Address issues of poor accessibility for some communities and improve journey time	Medium / Long term				▓		South East Wales
CC RM 12	*City Centre Connectivity:* Investigate and prioritise options to improve public	Address poor accessibility for some communities within urban centres identified	Short / Medium term				▓		South East Wales

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[112]					National/ Regional
				1	2	3	4	5	
	transport across Cardiff and Newport city centres Proposals to be investigated include: - Cardiff Bay - City Centre Light Rail Link - Newport Bus Rapid Transit network - Transport hubs and stations	in the evidence base					▓	▓	
CC RM 13	*Park and Ride* Investigate the development of strategic park and ride facilities Initial locations to be tested: Pentrebach, Cardiff West, Llanwern and Severn Tunnel Junction	Address capacity limitations Improved frequency and journey time, reliability	Medium / Long term				▓	▓	South East Wales
CC RM 14	*Travel information* Develop programme to standardise and improve travel information provision	Increased awareness and promotion of public transport options	Short / Medium term				▓	▓	South East Wales

3.24.3 Other proposals set out in the Metro Summary report are covered as follows: the development of integrated ticketing is highlighted above in intervention IT2; the development of bus priority measures in BCT14; and proposals for new stations are covered under intervention RI10 in the rail section. The development of proposals around the use of the relief lines will be picked up in discussions with Network Rail on their Long Term Planning Process, which is intervention RI7 in the rail section.

3.24.4   We will also deliver the following integrated transport improvements:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[113]					National/ Regional
IT1	Make grant funding available to local authorities for transport, including schemes that will help to improve access to employment sites, road safety schemes and schemes that will deliver the Welsh Government's wider priorities	There is a need to focus on improving connectivity and accessibility between communities and key employment centres, particularly for areas where accessibility is generally poor and where car ownership is low

There are opportunities to make active travel an option for more journeys to work, particularly for trips under 5km and to support the implementation of the Active Travel (Wales) Act

There are remaining road safety issues that need to be addressed | Short/ Medium Term | | | | | | National |
| IT2 | Work with public transport operators to deliver integrated ticketing | Integrated ticketing solutions between bus services and between bus and rail services | Short term | | | | | | National |

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[113]					National/ Regional
	• Pilot integrated ticketing approaches in specific locations and use evidence to inform wider roll out • Continue to develop integrated multi modal multi operator ticketing All Wales Entitlement Card	Recommendation arising from the Bus Policy Advisory Group Review in 2014		▓	▓	▓	▓	▓	

3.24.5 We will identify priorities for the development of further integrated transport solutions:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[114]					National/ Regional
				1	2	3	4	5	
IT3	Review opportunities already identified by others to improve access between and to/ from Enterprise Zones, and working with others, identify further opportunities. Develop and	During the week 43% per cent of people can access an enterprise zone within 60 minutes by public transport. Areas not so well served include Carmarthenshire, Ceredigion, Powys and Swansea, with 100 per cent of people unable to access a	Short to longer term		▓		▓		National

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114 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[114]					National/ Regional
				1	2	3	4	5	
	deliver an improvement programme or support others to do this.	Enterprise Zone by public transport within 60 minutes			▓		▓	▓	
IT4	Undertake a feasibility study to investigate options to improve access to employment sites in the Deeside area by sustainable travel modes Develop and deliver an improvement programme or support others to do this	North Wales Integrated Transport Task Force, NEWABTS and Ministerial Task Force There is a need to focus on improving connectivity and accessibility between communities and key employment centres, particularly for areas where accessibility is generally poor and where car ownership is low Use of and access by public transport is generally poor in north Wales	Short to longer term		▓		▓	▓	North Wales
IT5	Working with the developer and local authority, clarify how the transport needs of people, goods and services accessing the Wylfa site will be met and delivered.	Ministerial Task Force There is a need to focus on improving connectivity and accessibility between communities and key employment centres, particularly for areas where accessibility is	Short term		▓		▓	▓	North Wales

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[114]					National/ Regional
				1	2	3	4	5	
		generally poor and where car ownership is low

Use of and access by public transport is generally poor in north Wales | | | ▓ | | ▓ | ▓ | |
| IT6 | Working with local authorities and Network Rail, identify a network of multi modal transport interchanges, park and ride and park and share hubs and develop a programme to implement. | Increase take up of public transport services and sustainable forms of travel and reduce demands on the road network. | Short to longer term | | ▓ | | ▓ | ▓ | National |

3.24.6   The Welsh Government's strategy, Together for Health (2011), sets out a vision for the NHS for providing high class services designed to support and meet the health and well being needs of individuals, families and local communities at, or as close to, their home as possible.

3.24.7   In response, Local Health Boards have developed service change plans which include specialist services being delivered on fewer expert sites, whilst more services will be delivered through primary and community based care closer to home.

3.24.8   It is important for key partners to work together to understand and respond to the potential transport implications facing those patients, carers, families and staff using NHS sites and services, particularly in circumstances where service provision is changing. Therefore, for each of the NHS reconfiguration areas (Betsi Cadwaladr; Hywel Dda and the South Wales Programme) the Welsh Government established a collaborative Health Transport Access Group involving the LHB's, the Wales Ambulance Services Trust, Community Health Councils, local government, the bus industry and the Community Transport Association.

3.24.9   The Groups are working to ensure that people, particularly those from disadvantaged groups and communities, are able to reach the key services they need, such as hospitals, either by traveling to those services or by having the

services brought nearer to them. Each Regional Health Transport Access Groups has worked collaboratively to prepare an Action Plan setting out a series of measures for improving access to healthcare over the next 12-18 months.

3.24.10   The Access Groups will act as a bridge between the Local Transport Plans prepared by the local authorities and the Integrated Medium Term Plans prepared by the Health Boards to ensure that access to healthcare is a priority. They are also well placed to be a key delivery agent for taking forward the recommendations stemming from the bus policy work.

3.24.11   We will progress the following:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[115]					National/ Regional
				1	2	3	4	5	
IT7	Work with Local Health Board, Wales Ambulance Services Trust, Community Health Councils, local government, the bus industry and the Community Transport Associations to deliver action plans setting out measures for improving access to healthcare.	Together for Health (2011). Responding to changes in health service delivery to ensure that people, particularly those from disadvantaged groups and communities, are able to reach the key services they need, such as hospitals, either by traveling to those services or by having the services brought nearer to them.	Short term	▓			▓	▓	National

115 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

3.25   Innovation, Research and Evidence Development

3.25.1   We will continue to look for opportunities to work in partnership with business and academia on innovative research and evidence development in order to help inform policy and implementation.

3.25.2   We are currently working with the UK's Transport Systems Catapult initiative to develop a datastore that brings together the transport data held for Wales into a spatial database capable of handling 'big data'. We are also actively investigating innovation in highway asset management with the Catapult and Welsh Universities. The Transport Systems Catapult is the UK's technology and innovation centre for Intelligent Mobility, harnessing emerging technologies to improve the movement of people and goods[116].

3.25.3   A comprehensive data catalogue will record the datasets held in the datastore and provide links to other relevant data held in other repositories. The datastore will contain the datasets used in the preparation of this National Transport Plan, as well as scheme specific data collected during the implementation of the plan. The datastore will be used in the regular evaluation of the National Transport Plan and will become a resource available for those wishing to undertake research in the transport field in Wales. We are currently running a pilot project with a view to establishing the repository in 2015.

3.25.4   This project, and separate work with a mobile phone provider to use their data to inform the development of transport projects, demonstrates that we are already identifying and exploiting the new opportunities identified in Professor Preston's report on Approaches to Strategic Transport Planning[117] commissioned via the Public Policy Institute Wales.

3.25.5   We are also working with the Welsh Small Business Research Initiative (SBRI) Innovation Catalyst Programme to find an innovative solution to help reduce the number of motorcyclists killed or seriously injured on Welsh roads by 25 per cent. SBRI is a well established process to connect public sector challenges with innovative ideas from industry[118].

3.25.6   We are also exploring the issues around low emission vehicles and the infrastructure for charging them. This is a maturing field which is being supported by both European Union, UK Government and private sector initiatives.

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116 https://ts.catapult.org.uk/about-us
117 Approaches to Strategic Transport Planning [Link]
118 http://wales.gov.uk/about/cabinet/decisions/dl2014/janmar/business/eh1055/?lang=en

3.25.7   We are looking at whether Wales specific initiatives should be developed to capitalise on the potential economic, environmental and social benefits that could result from an increased take up of low emission vehicles, including maximising opportunities for supporting our green growth agenda.

3.25.8   The Minister for Economy, Science and Transport has set up an expert Low Carbon Vehicle Steering Group to provide advice and recommendations on potential interventions, which will report by the end of 2014.

3.25.9   We are already committed to looking at suitable opportunities for installing charging infrastructure at the design stage of new road and major road improvement projects on the trunk road network.

3.25.10   We expect to explore the need for and feasibility of the Welsh Government taking more a more co-ordinating role in promoting existing initiatives and funding to consumers, business and the public sector, and of mapping the charging points in Wales.'

3.25.11   Our investment priorities are:

- **Supporting innovation and the rollout out of new technology, particularly where it can lever in other sources of funding**
  (Wales Transport Strategy - Outcome 6: Employment, Outcome 8: Reliable transport system and Outcome 9: Freight)

- **Developing the evidence base to inform better transport solutions** (Wales Transport Strategy - Outcome 6: Employment, Outcome 7: Connectivity: nationally and internationally, Outcome 8: Reliable transport system and Outcome 9: Freight)

3.25.12   We will:

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[119]					National/ Regional
				1	2	3	4	5	
IRE1	We will work with partners to develop an open datastore that brings together the transport data held for Wales into	To be used in the evaluation of the National Transport Plan	Short term						National

119 Priorities: 1) Economic growth, 2) Access to employment, 3) Tackling poverty, 4) Sustainable travel and safety 5) Access to services

Ref:	Intervention	Rationale from the evidence	Timing	Contributes to Priority[119]					National/ Regional
				1	2	3	4	5	
	a spatial database capable of handling 'big data'								
IRE 2	Develop standard processes to ensure appropriate input in the: - identification of the need for and design of modelling or assessment work - checking the output of any work commissioned to provide assurance it is up to standard	To improve accuracy of and confidence in modelling work undertaken	Short term						National
IRE 3	Issue revised and simplified WelTAG	To ensure that appraisal of schemes is fit for purpose	Short term						National
IRE 4	Consider the case for investing in a regional transport model for South East Wales	Necessary tool to improve transport planning and testing of scheme proposals on a multi-modal and region wide basis	Short term						South East Wales

4 Delivery and Funding

4.1 Delivery Plans

4.1.1   For the physical / capital interventions identified, the following maps set out the interventions that will be delivered during the next five years and the interventions where work will start but not be completed during that period. The maps reflect the current assumptions about the delivery profile of each intervention and may be subject to change, recognising the statutory processes that must be completed and the need to be responsive to changing circumstances.

4.1.2   These maps will be regularly updated as the delivery profile for specific interventions firms up.

Figure 4.1 Map showing physical interventions that will be delivered during the next five years
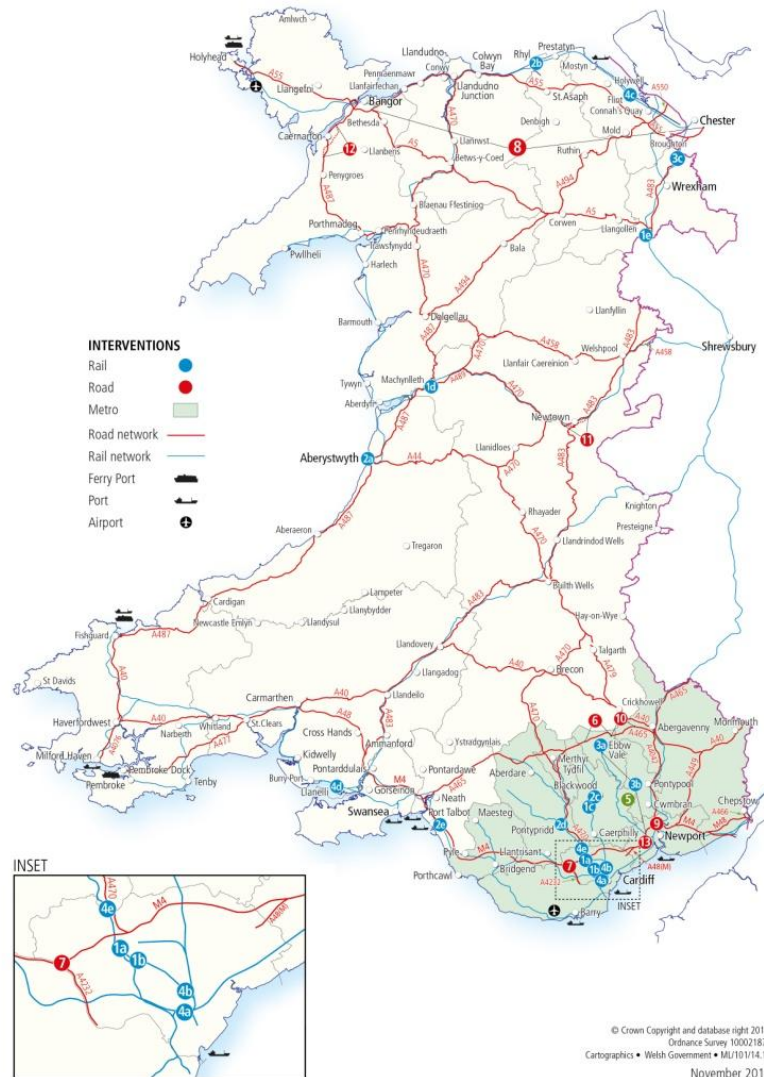
Physical Interventions that will be delivered during the next 5 years*

RAIL

1	Rl1	Mid Tier Access for All Programme (station accessibility upgrades and station improvements) at:
1a	Rla	Radyr
1b	Rlb	Llandaff
1c	Rlc	Ystad Mynach
1d	Rld	Machynlleth
1e	Rle	Chirk
2	Rl2	Nation Station Improvement Programme (NSIP+):
2a	Rl2a	Aberystwyth
2b	Rl2b	Rhyl
2c	Rl2c	Ystrad Mynach
2d	Rl2d	Pontypridd
2e	Rl2e	Port Talbot Parkway
3a	Rl3	Line extension and new station at Ebbw Vale Town
3b	Rl5	Rail Infrastructure - Ebbw Vale frequency enhancement (part of Phase 1 Metro)
3c	Rl6	North South journey time/capacity improvement project
4	Rl9	Continue to develop the following schemes, subject to the business case and necessary consents:
4a	Rl9a	Cardiff Central
4b	Rl9b	Cathays
4c	Rl9c	Flint
4d	Rl9d	Llanelli
4e	Rl9e	Taffs Well

INTEGRATED TRANSPORT & METRO

5	CCRM	Deliver the current Metro Phase 1 Programme

ROAD

6	R5	Improvements under construction to A465 Brynmawr to Tredegar (Section 3 of the Heads of the Valleys dualling)
7	R6	Junction 33 M4 West/A4232 south dedicated slip road
8	R7	A55 safe havens/emergency crossovers
9	R9	Brynglas Tunnels Safety Improvements
10	R10	Improvements to A465 Gilwern to Brymawr (Section 2 of the Heads of the Valley dualling)
11	R16	A483/A489 Newtown Bypass
12	R17	A487 Caernarfon to Bontnewydd bypass
13	R21	M4 junction 28

* Other interventions are being developed and that these will be added, if appropriate.

Figure 4.2 Map showing physical interventions where work will progress during the next five years
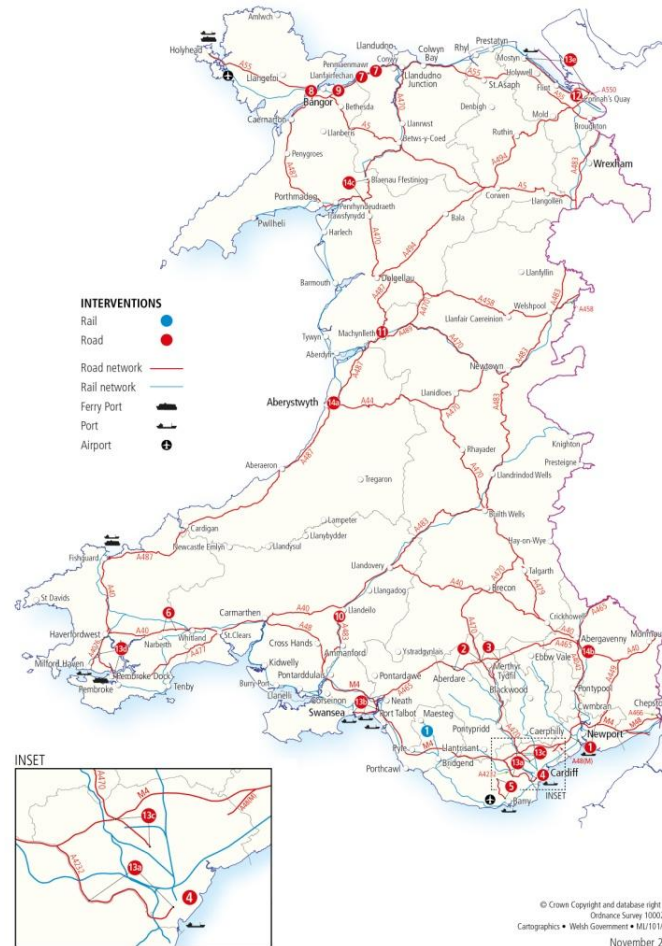
Physical Interventions that will be progressed during the next 5 years*

RAIL

1	RI4	Rail Infrastructure - Maesteg Branch frequency enhancements

ROAD

1	R8	Improvements to the M4 Corridor around Newport
2	R11	Improvements to A465 from A470 to Hirwaun (Section 6 of the Heads of the Valley dualling)
3	R12	Improvements to A465 Dowlais Top to A470 (Section 5 of the Heads of the Valley dualling)
4	R13	Eastern Bay Link: Queensgate to Ocean Way, Cardiff
5	R14	Improvements to Five mile lane, Vale of Glamorgan
6	R15	Improvements to the A40 Llanddewi Velfrey to Penblewin
7	R18	A55 Junction 15 and 16 Improvements
8	R19	Improvements to the A55 crossing of the Menai
9	R20	A55 Tai'r Meibion Improvements
10	R22	A483 Llandeilo Bypass
11	R23	Develop a scheme for the A487 Dyfi Bridge
12	R24	Develop a scheme for improvements to A494/A55/A548 Deeside Corridor
13	R25	Continue to progress proposals to potentially trunk the following sections of highway:
13a	R25a	A4232 Culverhouse Cross to Queen's Gate Roundabout (Cardiff/Vale of Glamorgan)
13b	R25b	A483 Fabian Way to Swansea
13c	R25c	A470 M4 J32 to A48 Gabalfa Interchange
13d	R25d	A477 Pembroke Dock to Johnston
13e	R25e	A548 Connah's Quay (A548/A550 Junction) to Mostyn
14	R26	Continue to progresss proposals to potentially de-trunk the following sections of highway (and trunk alternative routes, where appropriate):
14a	R26a	A44/A487 Aberystwyth
14b	R26b	A40 Section Abergavenny
14c	R26c	A470 from Gelliydan to Blaenau Ffestiniog

* Other interventions are being developed and that these will be added, if appropriate, including resilliance issues and cross border schemes

4.3   Funding

4.3.1   The budget position continues to be challenging, particularly for revenue, and we will have a very clear focus on ensuring value for money and driving efficiency in all transport interventions. Any procurement undertaken will adhere to the Wales Procurement Policy Statement, including to deliver community benefits. For example, the A465 Section 3 contract was the first central government contract to include social clauses. Namely, that 12% of the labour spend should be targeted against new entrant trainees.

4.3.2   The calculation of benefit cost ratios forms part of the assessment of the value for money provided by transport schemes. The prioritisation of transport schemes takes account of all the society, environmental and economy impacts of a scheme, including those which are not captured in the benefit / cost ratio.   The general principles that will inform our approach are set out below:

- The case for any intervention or specific project proposed should be backed by clear evidence of an issue(s) that needs to be addressed and evidence that the intervention or project will actually be effective in addressing that issue(s).

- A project should only be progressed if it supported by a viable business case. That business case should be proportionate to the level of investment involved and must be properly validated.

- In relation to services, the key objective should be to improve financial viability and sustainability of services and reduce the need for public subsidy and / or enable that subsidy to be better targeted.

- When providing grant funding for capital projects, the project sponsor should be required to provide match-funding to incentivise effective delivery and value for money. In addition, we should only make capped offers and should not underwrite over-spends.

- Where a evaluation or other evidence suggests an intervention or project is not being delivered effectively and / or will not deliver the anticipated benefits, this will be investigated and the intervention or project halted if that is the most appropriate and cost effective solution.

- All projects should be evaluated and the benefits delivered should be recorded and tested against the businesses case.

4.3.3   We will also further develop assurance / Q&A systems for all projects Welsh Government on scheme development and develop a system for recording details of projects, spend and benefits delivered to inform future work.

4.3.4   The interventions set out in this National Transport Plan will be delivered by drawing on a number of funding sources:

- Welsh Government transport capital and revenue budgets

- Welsh Government central capital, awarded on the basis of a business case for an individual project(s) in support of the Wales Infrastructure Investment Plan

- Joint funding with the wider Economy Department or wider Welsh Government, where the intervention delivers multiple objectives

- Borrowing, including early access to borrowing, for certain specific projects agreed by Cabinet

- Innovative finance, where the business case supports this method of financing a project as the most appropriate solution (including use of the Non-profit Distributing (NPD) investment model).

- European Structural funds, where the project(s) contributes to the objectives of the new European programmes

- Rural Development Plan, where the project(s) contributes to the objectives of the new programme

- Connecting Europe Facility, where the project(s) are located on the TEN-T Core Network and contribute to the achievement of TEN-T standards

- Other European funding sources where relevant to the delivery of a specific intervention

- Local government or other public sector bodies, including joint funding where the intervention delivers multiple objectives

- Enabling local government borrowing to allow projects to progress

- UK Government funding for: non-devolved areas of transport, including funding for the rail network via Network Rail, funding for new technology and innovation and other incentives and tax breaks

- Research councils, universities, the transport catapult and others, for approach research and development

- Private sector investment in specific projects, including developer contributions and joint funding where the intervention delivers multiple objectives

- National Lottery and other sources of funding for certain specific interventions

- Income from land or commercial developments associated with a transport improvement

4.3.5   The relevance of the various potential funding sources will vary depending on the nature of the specific intervention. The Welsh Government's transport capital funding will be concentrated on fulfilling our role as a highways authority; investment in integrated transport improvements including the Metro; road safety and support for local authorities where a project contributes to Welsh Government priorities. The Welsh Government's transport revenue will be concentrated on fulfilling our role as a highways authority and funding rail and bus services, including concessionary fares; funding innovative finance instruments and using smaller amounts to promote road safety and active travel.

4.3.6   The following projects have been identified for European Structural funding support and this list will continue to be refined before being confirmed in the final National Transport Plan:

Prioritised Projects	Intervention Ref	Business Case/Delivery Timescale	Lead Delivery Partner
Integrated rail infrastructure investments to be identified where they support increased access to employment	See 3.8	Wales Route Study – consultation in March 2016, published late Summer 2-16 Initial Industry Plan – September 2016.	Welsh Government Network Rail
Prioritise early investments in the Cardiff Capital Region Metro as set out in section 3.23	See 3.23	Phase 1 – Delivery by March 2016 Phase 2 – Business Case developed by March 2016.	Welsh Government Local authorities Network Rail
A40 Llanddewi Velfrey to Penblewin	R15	Business Case - Sept 2016 Publish Draft Orders - Oct 2016 SoW - late 2017	Welsh Government

Prioritised Projects	Intervention Ref	Business Case/Delivery Timescale	Lead Delivery Partner
A55 Junctions 15 and 16	R18	Business Case - Sept 2016 Publish Draft Orders - Oct 2016 SoW - late 2017	Welsh Government

4.3.7   Active travel interventions will be also taken forward as part of broader tourism and Enterprise Zone projects. The lead delivery partners detailed in the table above have extensive experience in delivering the projects identified, including EU funded schemes. They have the capacity to manage and deliver the following, as required by the European Commission:

- Tendering;

- Implementing environmental requirements;

- Developing and prioritising a mature project pipeline, financial project management; funding for maintenance and operations and administrative processes;

- Management of complex systems;

- Training and appropriate internal procedures to monitor and identify potential delays and to ensure a smooth and effective procurement;

- A early warning system to identify and solve any difficulties rising when delivering the project pipeline;

- Ensure that adequate assistance schemes are in place to help during procedure and implementation to be able to replace projects quickly when implementation is blocked.

5   Monitoring and Evaluation

5.1 Evidence- based approach

5.1.1 The Welsh Government follows an evidence based approach for understanding the performance of the transport system, assessing the need for intervention and considering the social, environmental and economic impacts of our plans for the transport system.

5.1.2 A set of national datasets has been established for this purpose. These provide consistent and comparable information across the whole of Wales and highlight areas where the transport system is under-performing. The datasets are updated regularly and are used to monitor the performance of the system, providing early alerts to emerging issues and information on longer term trends. The transport data is combined with other data sources, such as the census and land use data, to provide information on the social and environmental impacts of the transport system.

5.1.3 The transport data falls into five categories - journey times, the number of trips made, safety related, supplementary information and contextual information:

5.1.4 **Journey times** - the Welsh Government receives a digital update every three months on the location of all public transport stops and the published timetables. This is used to produce public transport journey times for each part of Wales to key destinations, including workplaces, hospitals, the centre of built up areas and education facilities.

5.1.5 The journey times on the road network are continuously monitored using the times provided by TrafficMaster from vehicles with specialist on-board equipment that reports details of the actual time taken to drive along each section of the road network used. The data is used to derive drive times from each part of Wales to key destinations, identify regular areas of congestion and journey time unreliability on the network. There is also a journey time collection system at key nodes on the motorway and trunk road system used for network management purposes and the Traffic Wales services.

5.1.6 **Travel volumes** - the amount of use made of the transport network in Wales is monitored through a regular series of traffic counts throughout Wales on various road types, air and rail passenger counts and the analysis of rail and bus ticket data.

5.1.7 **Safety** - records are kept of incidents on the rail network and all personal injury collisions on the road network, including the number of drivers, passengers, motor cyclists, pedestrians and cyclists killed or injured. The number of crimes on the rail network is reported to us by the British Transport Police.

5.1.8 **Supplementary information -** data is also gathered on the number of concessionary bus passes issued, the age and composition of the vehicle fleet, the punctuality of public transport services, and the condition of the highway network including defects which represent an immediate or urgent hazard. A regular survey of rail passengers reports on the level of user satisfaction with the rail service in Wales.

5.1.9 **Contextual information** - the demand for travel is affected by the cost of travel and data is available of public transport fares, car park charges, and fuel prices. Other non-transport data sets are examined to provide contextual information including the numbers of people in employment in Wales and changes in GDP.

5.2 Monitoring and Evaluation Plan

5.2.1 The performance of the transport network is monitored regularly using these data sets. They are supplemented with specifically collected data when required to assist in the evaluation of particular transport schemes and policies.

5.2.2 Before an intervention is started, the monitoring and evaluation plan should be drawn up which describes the need for the project, a detailed project description and the objectives for the intervention. It should also present the context for the intervention, the required inputs, the anticipated outputs, outcomes and impacts. For each of these latter five elements the plan should describe what evidence will be used in the project's evaluation report.

5.2.3 The monitoring and evaluation plan should also set out the timetable for producing the evaluation report.

5.2.4 Information of the context surrounding the intervention should be prepared using available evidence, such as changes in fuel prices, general growth in traffic levels and bus usage in the wider area. It is recommended that a project diary or log is maintained during the implementation and operation of the intervention. This can be used to record events such as weather events, when changes in car park prices occurred, significant changes in fuel prices or its availability, when a new development opened, which could be expected to affect the realisation of and level of impacts caused by the intervention.

5.2.5 The evidence used to present the context, inputs, outputs, intended outcomes and actual impacts should be based as far as possible on currently available data. The monitoring and evaluation plan should describe how use will be made of relevant data that is already collected and will be available when the evaluation report is written. The monitoring plan will detail where data will be collected specifically in order to evaluate the proposed intervention. This may include surveys such as focus groups with users and non-users of the

intervention and qualitative surveys. Where a significant sum of money is proposed for surveys, either in absolute terms or as a proportion of the total cost of the intervention, then a detailed description of the proposed survey and a justification of the need for the surveys should be presented in the monitoring plan.

5.2.6 Count data is often the main source of evidence collected specifically to evaluate a particular transport intervention. If 'before' and 'after' counts are to be used to provide evidence for a change, the dates for collection of the count data should be given in the monitoring plan. Where possible, the counts should be held at the same time of year and on the same days of the week in the before and after surveys. When the counts are undertaken details should be recorded of any circumstances which could have affected the count such as weather conditions and local roadworks.

5.2.7 The level of use of any part of the transport system is subject to daily variation and evidence should be provided on the degree of daily variation generally found in the area. This information can be obtained from automatic traffic counters, journey time collection systems, public transport operator data and automatic cycle counters. As there is daily variation in count data, counts collected for evaluating a transport intervention should be based, if possible, on multiple observations. It may therefore be desirable, for example, to count the number of bus users on a route for the same time each day (say 8am to 11am) on multiple days rather than to carry out a single 12 hour count. The intention is to detect a change as robustly as is feasible commensurate with the principles of proportionate and appropriate evaluation.

5.3   Evaluation Report

5.3.1 Following the completion of an intervention an evaluation report should be produced. This document should cover the items mentioned in section 5.2 above and present the evidence on the impacts of the scheme. Beneficial and adverse impacts should be recorded. The report should include any impacts that were not anticipated when the monitoring and evaluation plan was written but were observed during the monitoring of the intervention.

ANNEX

6   Annex A – Transport Data Tables

6.1   Travel to Work

Figure A.1: Travel to work[120]

Local Authority	Total Travelling to Work		Home work-ers	Tram/ train	Bus	Taxi	Motorcycle	Car/ Van	Cycle	Walk	Other
	No.	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Powys	63,653	4.7%	13.1%	0.7%	1.1%	0.2%	0.4%	68.5%	1.4%	13.7%	0.9%
Ceredigion	32,446	2.4%	12.5%	0.5%	2.9%	0.4%	0.5%	65.4%	1.2%	15.8%	0.8%
Mid Wales Total	**96,099**	**7.1%**	**12.9%**	**0.7%**	**1.7%**	0.3%	**0.4%**	**67.5%**	**1.3%**	**14.4%**	**0.9%**
Denbighshire	41,156	3.0%	6.4%	1.2%	3.4%	0.7%	0.5%	73.6%	1.6%	12.1%	0.7%
Flintshire	74,049	5.4%	4.4%	1.0%	4.0%	0.5%	0.7%	79.5%	1.8%	7.7%	0.6%
Gwynedd	53,961	4.0%	8.4%	0.8%	4.5%	0.2%	0.5%	68.9%	1.3%	14.6%	0.8%
Isle of Anglesey	30,431	2.2%	6.8%	0.8%	2.7%	0.4%	0.7%	76.5%	1.6%	9.5%	1.0%
Wrexham	63,614	4.7%	4.1%	0.9%	5.4%	0.7%	0.6%	77.6%	1.3%	8.8%	0.5%
Conwy	50,093	3.7%	7.2%	1.2%	4.4%	0.5%	0.6%	72.7%	1.3%	11.3%	0.9%
North Wales Total	**313,304**	**23.0%**	**6.0%**	**1.0%**	**4.2%**	0.5%	**0.6%**	**75.1%**	**1.5%**	**10.4%**	**0.7%**
Blaenau Gwent	28,291	2.1%	2.0%	0.9%	3.1%	0.6%	0.5%	82.2%	0.5%	9.8%	0.5%
Bridgend	61,259	4.5%	3.3%	2.6%	2.9%	0.6%	0.5%	79.8%	0.8%	9.0%	0.5%
Caerphilly	77,488	5.7%	2.9%	3.9%	3.9%	0.4%	0.5%	79.5%	0.6%	7.7%	0.5%
Cardiff	159,614	11.7%	3.8%	3.5%	10.2%	0.5%	0.4%	62.0%	3.7%	15.5%	0.6%
Merthyr Tydfil	25,099	1.8%	2.5%	2.0%	7.0%	0.9%	0.3%	76.4%	0.3%	10.0%	0.5%
Monmouthshire	42,817	3.1%	8.9%	2.3%	1.4%	0.2%	0.8%	74.1%	1.2%	10.4%	0.7%
Newport	64,408	4.7%	3.6%	2.2%	7.9%	0.7%	0.7%	73.6%	1.5%	9.3%	0.6%
Rhondda Cynon Taf	99,327	7.3%	2.8%	4.3%	4.0%	0.3%	0.5%	78.7%	0.5%	8.5%	0.5%
Torfaen	40,261	3.0%	2.8%	1.3%	4.8%	0.8%	0.8%	80.3%	0.8%	8.1%	0.4%
The Vale of Glamorgan	58,978	4.3%	5.3%	6.1%	2.9%	0.5%	0.6%	73.4%	1.7%	8.8%	0.7%
South East Wales Total	**657,542**	**48.2%**	**3.7%**	**3.3%**	**5.6%**	0.5%	**0.5%**	**73.7%**	**1.6%**	**10.5%**	**0.6%**
Carmarthenshire	80,680	5.9%	8.1%	1.1%	2.1%	0.3%	0.5%	76.9%	0.8%	9.5%	0.7%
Neath Port Talbot	58,980	4.3%	2.9%	1.7%	3.4%	0.5%	0.8%	80.5%	1.3%	8.4%	0.6%
Pembrokeshire	54,217	4.0%	9.7%	0.5%	3.0%	0.4%	0.7%	72.1%	0.9%	11.9%	0.9%
Swansea	102,793	7.5%	3.7%	1.0%	5.7%	0.7%	0.6%	75.6%	1.5%	10.5%	0.7%
South West Wales Total	**296,670**	**21.8%**	**5.9%**	**1.1%**	**3.8%**	0.5%	**0.6%**	**76.3%**	**1.1%**	**10.0%**	**0.7%**
Grand Total	**1,363,615**	**100.0%**	**5.4%**	**2.1%**	**4.6%**	0.5%	**0.6%**	**74.2%**	**1.4%**	**10.6%**	**0.6%**

120 Census (2011), Office for National Statistics

Figure A.2: Commuting patterns by Welsh local authority, 2012[121]

Local Authority	Total number of working residents	Total number of people working in the authority	Number of people working in home authority	Number of people commuting out of the authority	Number of people commuting into the authority
Blaenau Gwent	25,700	18,000	13,500	12,200	4,500
Bridgend	58,700	55,100	38,400	20,300	16,700
Caerphilly	72,400	57,000	36,200	36,200	20,800
Cardiff	155,700	201,700	124,500	31,200	77,200
Carmarthenshire	77,900	68,300	56,700	21,200	11,500
Ceredigion	31,500	33,100	27,800	3,700	5,400
Conwy	47,200	43,200	35,100	12,100	8,100
Denbighshire	41,600	41,100	28,700	13,000	12,400
Flintshire	70,800	54,600	41,500	29,300	13,100
Gwynedd	53,100	59,300	46,200	6,900	13,100
Isle of Anglesey	30,200	24,800	21,100	9,100	3,700
Merthyr Tydfil	22,600	21,800	13,400	9,200	8,400
Monmouthshire	41,300	41,600	24,200	17,100	17,400
Neath Port Talbot	56,600	46,700	32,300	24,200	14,300
Newport	62,800	73,600	42,600	20,200	31,000
Pembrokeshire	50,000	52,800	46,200	3,800	6,600
Powys	61,800	56,100	48,500	13,400	7,600
Rhondda Cynon Taf	93,700	75,800	56,000	37,700	19,800
Swansea	97,300	109,400	79,500	17,900	29,900
Torfaen	36,300	33,200	20,900	15,400	12,200
Vale of Glamorgan	55,300	37,000	25,500	29,900	11,500
Wrexham	63,000	59,900	45,000	18,000	14,900
Wales Total	**1,305,800**	**1,264,000**	**903,800**	**85,500**	**43,700**

6.2   Transport Trends

Freight

- Car traffic is forecast to grow by over 33 per cent by 2040, heavy goods vehicles (rigid and artic combined will grow less rapidly) and light goods vehicles show a considerable increase in all the forecast years.

- The rise in light goods vehicles is connected in part with the move towards internet shopping and the increased delivery of goods to people's homes.

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[121] Source: Transport Statistics Wales

These 'last mile' deliveries contribute to traffic congestion in the urban area but there is potential for the greater use of lower emission vehicles.

Figure A.3: Forecast per cent change in traffic kms, from 2010 to 2040[122]

Vehicle Type	Year					
	2015	2020	2025	2030	2035	2040
Car	2.5 %	11.6 %	18.3 %	24.1 %	29.2 %	33.5 %
LGV	6.3 %	22.0 %	38.0 %	53.5 %	67.5 %	81.1 %
Rigid	-3.2 %	-0.6 %	1.2 %	3.9 %	5.5 %	7.1 %
Artic	-7.0 %	0.2 %	7.8 %	15.0 %	23.9 %	33.4 %

- Network Rail has recently issued forecasts for the growth in rail freight up to 2045. This shows that the sectors with the most significant growth will be intermodal traffic, predominately related to goods in containers coming in by sea. The growth in domestic intermodal traffic is dependent upon the provision of additional rail located warehouses. The decline in the movement of coal will not be fully compensated for by an increase in the transport of bio-mass fuel.

- The recent ability of rail to maintain its share of the UK freight market has been the result of increased productivity in the rail sector which has reduced costs and the availability of grants for new facilities. Network Rail is also investing in the network to increase capacity at key pinchpoints on the network and to provide adequate clearance for rail wagons carrying containers on more parts of the rail network.

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122 Source: Source: DfT National Transport Model, 2013

Figure A.4: Rail freight forecasts by sector 2015 to 2045 (tonnes km), (with 2004 and 2011 actual data)[123]
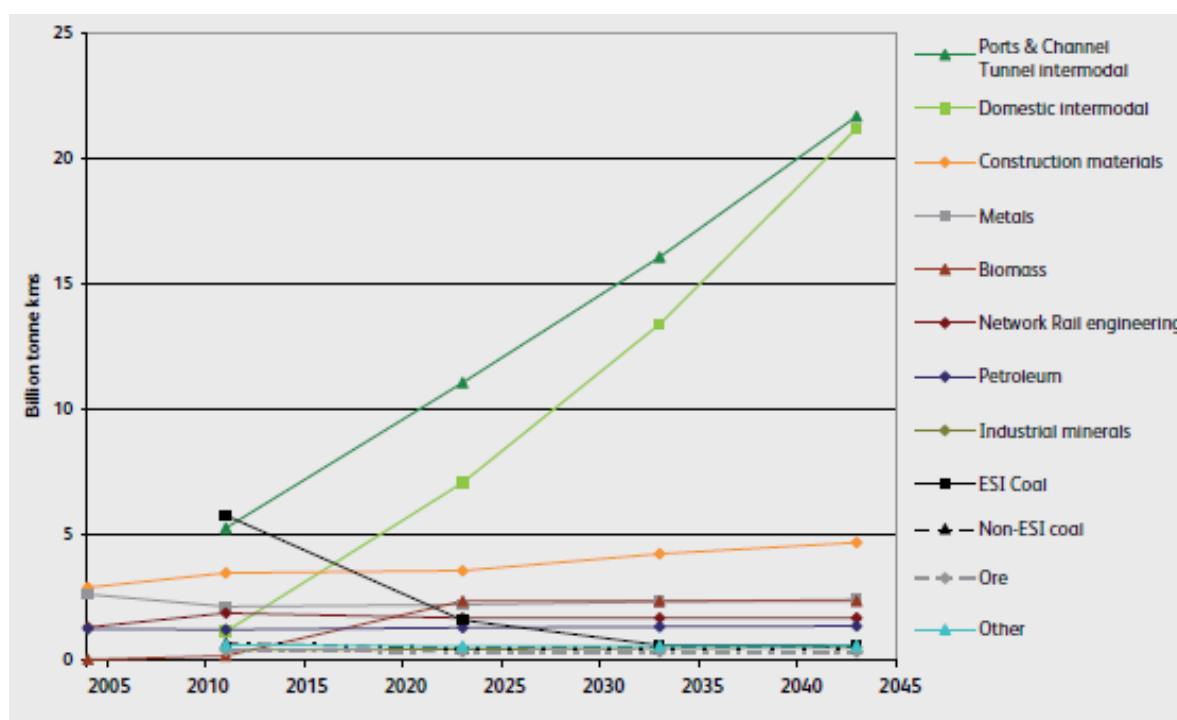
- The latest available forecasts for port traffic were produced by MDS Transmodel in 2007 before the current recession took place. These are shown in Figure A.5 below.

Figure A.5: Forecasts of growth in containerised traffic, twenty-foot equivalent units and Roll on – Roll off units, 2004 – 2030[124]

	Type	2004	2010	2015	2020	2025	2030	Annual growth %
Wales	Containerised traffic	105	155	197	217	239	367	5.0%
GB	Containerised traffic	7,086	10,001	12,135	14,138	16,602	19,702	4.0%
Wales	Roll on – roll off units	456	600	718	797	869	988	3.0%
GB	Roll on – roll off units	7,637	9,390	10,911	12,640	14,460	16,159	2.9%

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123 Source: Network Rail Freight Market Study 2013
124 Source: UK Port Demand Forecasts to 2030, MDS Transmodal 2006

- These forecasts predict a steady increase in port freight traffic in Wales up to 2025, although it increases at a lower rate each year, followed by a substantial increase between 2025 and 2030. As these forecasts were made before the latest recession, both the rate of increase in port freight may be lower than predicted here and the upturn in 2025 may be arrive later than predicted here or not at all.

Road Safety

Figure A.6: Total passenger casualties by age of passenger and age of driver, Wales, 2009 to 2013

	Age of driver								Total
	0-16	17-19	20-24	25-29	30-39	40-49	50-59	60 or over	all ages (a)
Passenger casualties aged 16-19									
2009	2	**320**	119	23	53	74	18	14	629
2010	5	**242**	96	15	47	56	54	20	537
2011	3	**265**	93	22	39	52	32	14	525
2012	5	**187**	76	19	33	43	13	9	386
2013	1	**137**	88	21	33	35	18	7	341
2009-2013:									
Proportion of total casualties	1%	**48%**	20%	4%	8%	11%	6%	3%	100%
Passeneger casualties aged 20-24									
2009	0	57	**214**	59	34	34	19	8	425
2010	0	52	**179**	62	57	38	38	9	435
2011	1	47	**175**	56	39	38	19	8	383
2012	0	44	**139**	53	29	31	19	11	326
2013	0	41	**148**	36	34	49	22	9	346
2009-2013:									
Proportion of total casualties	0%	13%	**45%**	14%	10%	10%	6%	2%	100%

Number and per cent

Source: Welsh Road Accident Database

(a) Total includes drivers of unknown age.

6.3 Accessibility

Access to a car[125]

Figure A.7: Households with access to a car by local authority[126]

Local Authority	Households - No Access to a car (%)	Households - Access to 1 car	Households - Access to 2 cars plus
Blaenau Gwent	29.0%	43.8%	27.3%
Bridgend	21.9%	44.0%	34.2%
Caerphilly	24.4%	43.2%	32.5%
Cardiff	29.0%	42.9%	28.1%

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125 Census (2011), Office for National Statistics
126 Census (2011), Office for National Statistics

Local Authority	Households - No Access to a car (%)	Households - Access to 1 car	Households - Access to 2 cars plus
Carmarthenshire	18.8%	43.5%	37.7%
Ceredigion	18.4%	43.2%	38.4%
Conwy	21.7%	44.2%	34.1%
Denbighshire	21.0%	44.0%	35.1%
Flintshire	17.0%	42.0%	41.1%
Gwynedd	21.4%	43.4%	35.2%
Isle of Anglesey	18.0%	42.7%	39.3%
Merthyr Tydfil	29.7%	43.2%	27.1%
Monmouthshire	15.2%	40.2%	44.6%
Neath Port Talbot	25.5%	43.3%	31.2%
Newport	27.9%	41.4%	30.7%
Pembrokeshire	17.9%	44.0%	38.1%
Powys	15.0%	42.8%	42.2%
Rhondda Cynon Taf	27.1%	42.6%	30.3%
Swansea	25.8%	43.3%	30.9%
The Vale of Glamorgan	19.4%	43.0%	37.7%
Torfaen	23.6%	43.5%	33.0%
Wrexham	22.2%	41.9%	35.9%
Total	**22.9%**	**43.0%**	**34.1%**

Access to Enterprise Zones[127]

Figure A.8: Access to Enterprise Zones by public transport[128]

	No of Persons	Percentage (%)
up to 30 minutes	359,982	11.75 %
30 - 60 minutes	955,132	31.18 %
60 - 90 minutes	731,652	23.88 %
90-120 minutes	370,813	12.10 %
over 120 minutes	645,877	21.08 %
Total	**3,063,456**	

Figure A.9: Persons that cannot access a Enterprise Zone within 60 minutes by public transport, by local authority

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127 https://business.wales.gov.uk/enterprisezones/zones. Enterprise Zones located in Anglesey, Central Cardiff, Deeside, Ebbw Vale, Haven Waterway, Snowdonia, St Athan – Cardiff Airport.
128 Tuesday morning, 7.00am to 9.00am

Local Authority	No of Persons	No. persons that cannot access within 60 minutes	(%) Persons that cannot access within 60 minutes
Blaenau Gwent	69814	0	0.00 %
Bridgend	139178	70406	50.59 %
Caerphilly	178806	25129	14.05 %
Cardiff	346090	27701	8.00 %
Carmarthenshire	183777	183777	100.00 %
Ceredigion	75922	75922	100.00 %
Conwy	115228	114333	99.22 %
Denbighshire	93734	91911	98.06 %
Flintshire	152506	28899	18.95 %
Gwynedd	121874	62106	50.96 %
Isle of Anglesey	69751	5075	7.28 %
Merthyr Tydfil	58802	16814	28.59 %
Monmouthshire	91323	72601	79.50 %
Neath Port Talbot	139812	126394	90.40 %
Newport	145736	12569	8.62 %
Pembrokeshire	122439	105335	86.03 %
Powys	132976	132976	100.00 %
Rhondda Cynon Taf	234410	150903	64.38 %
Swansea	239023	239023	100.00 %
The Vale of Glamorgan	126336	30511	24.15 %
Torfaen	91075	45108	49.53 %
Wrexham	134844	130849	97.04 %
Total	**3063456**	**1748342**	**57.07 %**

Figure A.10: Households that do not have access to a car (by local authority) as a percentage of those households where people cannot access a Enterprise Zone within 60 minutes by public transport[129]

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129 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

Local Authority	No. of Households that do not have access to a car (where people cannot access a Enterprise Zone within 60 minutes by public transport)	No. of Persons	Total No Access to a Car	No Access to a car (%)
Blaenau Gwent	0	69814	0	0.00 %
Bridgend	29347	139178	6650	22.66 %
Caerphilly	10245	178806	2388	23.31 %
Cardiff	11535	346090	4023	34.88 %
Carmarthenshire	78829	183777	14826	18.81 %
Ceredigion	31562	75922	5803	18.39 %
Conwy	50800	115228	11062	21.78 %
Denbighshire	39743	93734	8232	20.71 %
Flintshire	12112	152506	1398	11.54 %
Gwynedd	27676	121874	4700	16.98 %
Isle of Anglesey	2191	69751	190	8.67 %
Merthyr Tydfil	6823	58802	1758	25.77 %
Monmouthshire	30009	91323	4183	13.94 %
Neath Port Talbot	54400	139812	13448	24.72 %
Newport	4844	145736	648	13.38 %
Pembrokeshire	45656	122439	7593	16.63 %
Powys	58345	132976	8757	15.01 %
Rhondda Cynon Taf	64825	234410	19859	30.63 %
Swansea	103497	239023	26660	25.76 %
The Vale of Glamorgan	12821	126336	2350	18.33 %
Torfaen	18363	91075	3947	21.49 %
Wrexham	55303	134844	12117	21.91 %
Grand Total	748926	3063456	160592	21.44 %

Access to Hospitals

Figure A.11: Access to a NHS Major Acute Hospital by public transport

Time taken	Peak[130]		Off Peak[131]	
	No of Persons	Percentage (%)	No of Persons	Percentage (%)
up to 30 minutes	812836	26.53 %	802617	26.20 %
30 - 60 minutes	1373126	44.82 %	1383186	45.15 %
60 - 90 minutes	574087	18.74 %	536741	17.52 %
90-120 minutes	44292	1.45 %	56800	1.85 %
over 120 minutes	259115	8.46 %	284112	9.27 %
Total	3063456		3063456	

Figure A.12: Persons that cannot access a NHS Major Acute Hospital by public transport, within 60 minutes, by local authority

Local Authority	No of Persons	No. persons that cannot access within 60 minutes	(%) Persons that cannot access within 60 minutes
Blaenau Gwent	69814	21605	30.95 %
Bridgend	139178	1264	0.91 %
Caerphilly	178806	56860	31.80 %
Cardiff	346090	598	0.17 %
Carmarthenshire	183777	49819	27.11 %
Ceredigion	75922	33885	44.63 %
Conwy	115228	54141	46.99 %
Denbighshire	93734	12511	13.35 %
Flintshire	152506	92611	60.73 %
Gwynedd	121874	60718	49.82 %
Isle of Anglesey	69751	33671	48.27 %

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130 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

131 Census 2011 Lower Super Output Area, Tuesday afternoon, 2.00pm to 4.00pm

Local Authority	No of Persons	No. persons that cannot access within 60 minutes	(%) Persons that cannot access within 60 minutes
Merthyr Tydfil	58802	4975	8.46 %
Monmouthshire	91323	38918	42.62 %
Neath Port Talbot	139812	51862	37.09 %
Newport	145736	608	0.42 %
Pembrokeshire	122439	52278	42.70 %
Powys	132976	119694	90.01 %
Rhondda Cynon Taf	234410	77673	33.14 %
Swansea	239023	50612	21.17 %
The Vale of Glamorgan	126336	43799	34.67 %
Torfaen	91075	13011	14.29 %
Wrexham	134844	6381	4.73 %
Grand Total	**3063456**	**877494**	**28.64 %**

Figure A.13: Households that do not have access to a car (by local authority) as a percentage of those households where people cannot access a NHS Major Acute Hospital within 60 minutes by public transport[132]

Local Authority	No. of Households	No. of Persons	Total No Access to a Car	No Access to a car (%)
Blaenau Gwent	9372	21605	2729	29.12 %
Bridgend	486	1264	39	8.02 %
Caerphilly	23240	56860	5493	23.64 %
Cardiff	231	598	45	19.48 %
Carmarthenshire	20922	49819	2370	11.33 %
Ceredigion	15092	33885	2039	13.51 %
Conwy	24106	54141	4979	20.65 %
Denbighshire	5147	12511	436	8.47 %
Flintshire	38231	92611	6686	17.49 %
Gwynedd	28013	60718	5490	19.60 %
Isle of Anglesey	14872	33671	3138	21.10 %
Merthyr Tydfil	2056	4975	447	21.74 %
Monmouthshire	15839	38918	1662	10.49 %
Neath Port Talbot	22310	51862	5661	25.37 %
Newport	246	608	13	5.28 %
Pembrokeshire	22334	52278	3075	13.77 %

132 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

Local Authority	No. of Households	No. of Persons	Total No Access to a Car	No Access to a car (%)
Powys	52473	119694	7615	14.51 %
Rhondda Cynon Taf	33718	77673	10604	31.45 %
Swansea	21204	50612	2900	13.68 %
The Vale of Glamorgan	18248	43799	2580	14.14 %
Torfaen	5265	13011	1271	24.14 %
Wrexham	2571	6381	178	6.92 %
Grand Total	**375976**	**877494**	**69450**	**18.47 %**

Access to Built Up Areas[133]

Figure A.14: Access to a built up area by public transport[134]

	No of Persons	Percentage (%)
up to 30 minutes	2539523	82.90 %
30 - 60 minutes	413560	13.50 %
60 - 90 minutes	21667	0.71 %
90-120 minutes	1671	0.05 %
over 120 minutes	87035	2.84 %
Total	**3063456**	

Figure A.15: Persons that cannot access a built up area by public transport, within 60 minutes, by local authority

Local Authority	No of Persons	No. persons that cannot access within 60 minutes	(%) Persons that cannot access within 60 minutes
Blaenau Gwent	69814	0	0.00 %
Bridgend	139178	0	0.00 %
Caerphilly	178806	0	0.00 %

133 Population of 2000+

134 Tuesday morning, 7.00am to 9.00am

Cardiff	346090	598	0.17 %
Carmarthenshire	183777	16067	8.74 %
Ceredigion	75922	17961	23.66 %
Conwy	115228	3009	2.61 %
Denbighshire	93734	4404	4.70 %
Flintshire	152506	328	0.22 %
Gwynedd	121874	6442	5.29 %
Isle of Anglesey	69751	1426	2.04 %
Merthyr Tydfil	58802	476	0.81 %
Monmouthshire	91323	8139	8.91 %
Neath Port Talbot	139812	0	0.00 %
Newport	145736	329	0.23 %
Pembrokeshire	122439	17032	13.91 %
Powys	132976	25627	19.27 %
Rhondda Cynon Taf	234410	0	0.00 %
Swansea	239023	658	0.28 %
The Vale of Glamorgan	126336	3721	2.95 %
Torfaen	91075	154	0.17 %
Wrexham	134844	4002	2.97 %
Grand Total	3063456	110373	

Figure A.16: Households that do not have access to a car (by local authority) as a percentage of those households where people cannot access a built up area within 60 minutes by public transport[135]

Local Authority	No. of Households	No. of Persons	Total No Access to a Car	No Access to a car (%)
Cardiff	231	598	45	19.48 %
Carmarthenshire	6660	16067	434	6.52 %
Ceredigion	7751	17961	626	8.08 %
Conwy	1235	3009	123	9.96 %
Denbighshire	1792	4404	145	8.09 %
Flintshire	123	328	10	8.13 %
Gwynedd	2804	6442	385	13.73 %
Isle of Anglesey	576	1426	36	6.25 %
Merthyr Tydfil	204	476	27	13.24 %
Monmouthshire	3236	8139	152	4.70 %
Newport	133	329	4	3.01 %
Pembrokeshire	6978	17032	483	6.92 %

135 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

Powys	10765	25627	642	5.96 %
Swansea	261	658	15	5.75 %
The Vale of Glamorgan	1425	3721	52	3.65 %
Torfaen	65	154	6	9.23 %
Wrexham	1584	4002	62	3.91 %
Grand Total	**45823**	**110373**	**3247**	**7.09 %**

Access to Education

Figure A.17: Access to a Further Education facility by public transport[136]

	No of Persons	Percentage (%)
up to 30 minutes	2014635	65.76 %
30 - 60 minutes	845786	27.61 %
60 - 90 minutes	93089	3.04 %
90-120 minutes	9745	0.32 %
over 120 minutes	100201	3.27 %
Total	**3063456**	

Figure A.18: Persons that cannot access a Further Education facility by public transport, within 60 minutes, by local authority[137]

Local Authority	No of Persons	No. persons that cannot access within 60 minutes	(%) Persons that cannot access within 60 minutes
Blaenau Gwent	69814	254	0.36 %
Bridgend	139178	0	0.00 %
Caerphilly	178806	425	0.24 %
Cardiff	346090	322	0.09 %
Carmarthenshire	183777	24236	13.19 %
Ceredigion	75922	26703	35.17 %

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136 Tuesday morning, 7.00am to 9.00am

137 Tuesday morning, 7.00am to 9.00am

Conwy	115228	3384	2.94 %
Denbighshire	93734	6300	6.72 %
Flintshire	152506	4605	3.02 %
Gwynedd	121874	8849	7.26 %
Isle of Anglesey	69751	3601	5.16 %
Merthyr Tydfil	58802	247	0.42 %
Monmouthshire	91323	11387	12.47 %
Neath Port Talbot	139812	0	0.00 %
Newport	145736	943	0.65 %
Pembrokeshire	122439	46783	38.21 %
Powys	132976	53191	40.00 %
Rhondda Cynon Taf	234410	546	0.23 %
Swansea	239023	2269	0.95 %
The Vale of Glamorgan	126336	3556	2.81 %
Torfaen	91075	154	0.17 %
Wrexham	134844	5280	3.92 %
Grand Total	3063456	203036.7	6.63 %

Figure A.19: Households that do not have access to a car (by local authority) as a percentage of those households where people cannot access a Further Education facility within 60 minutes by public transport[138]

Local Authority	No. of Households	No. of Persons	Total No Access to a Car	No Access to a car (%)
Blaenau Gwent	114	254	34	29.82 %
Caerphilly	171	425	7	4.09 %
Cardiff	132	322	20	15.15 %
Carmarthenshire	10148	24236	898	8.85 %
Ceredigion	11380	26703	1269	11.15 %
Conwy	1380	3384	137	9.93 %
Denbighshire	2595	6300	211	8.13 %
Flintshire	1841	4605	122	6.63 %
Gwynedd	4022	8849	563	14.00 %
Isle of Anglesey	1505	3601	113	7.51 %
Merthyr Tydfil	103	247	10	9.71 %
Monmouthshire	4564	11387	259	5.67 %
Newport	411	943	40	9.73 %
Pembrokeshire	19950	46783	2673	13.40 %
Powys	22882	53191	2335	10.20 %

138 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

Local Authority	No. of Households	No. of Persons	Total No Access to a Car	No Access to a car (%)
Rhondda Cynon Taf	257	546	61	23.74 %
Swansea	897	2269	59	6.58 %
The Vale of Glamorgan	1378	3556	47	3.41 %
Torfaen	65	154	6	9.23 %
Wrexham	2149	5280	148	6.89 %
Grand Total	85944	203035	9012	10.49 %

Figure A.20: Access to a Higher Education facility by public transport[139]

	No of Persons	Percentage (%)
up to 30 minutes	923690	30.15 %
30 - 60 minutes	1233957	40.28 %
60 - 90 minutes	499983	16.32 %
90-120 minutes	61918	2.02 %
over 120 minutes	343908	11.23 %
Total	**3063456**	

Figure A.21: Persons that cannot access a Higher Education facility by public transport, within 60 minutes, by local authority[140]

Local Authority	No of Persons	No. persons that cannot access within 60 minutes	(%) Persons that cannot access within 60 minutes
Blaenau Gwent	69814	67454	96.62 %
Bridgend	139178	87658	62.98 %
Caerphilly	178806	47966	26.83 %
Cardiff	346090	322	0.09 %
Carmarthenshire	183777	84944	46.22 %
Ceredigion	75922	30569	40.26 %
Conwy	115228	49310	42.79 %
Denbighshire	93734	13125	14.00 %
Flintshire	152506	13458	8.82 %
Gwynedd	121874	62228	51.06 %

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139 Tuesday morning, 7.00am to 9.00am

140 Tuesday morning, 7.00am to 9.00am

Isle of Anglesey	69751	29622	42.47 %
Merthyr Tydfil	58802	6360	10.82 %
Monmouthshire	91323	46478	50.89 %
Neath Port Talbot	139812	31291	22.38 %
Newport	145736	206	0.14 %
Pembrokeshire	122439	122090	99.71 %
Powys	132976	130741	98.32 %
Rhondda Cynon Taf	234410	29252	12.48 %
Swansea	239023	3546	1.48 %
The Vale of Glamorgan	126336	25889	20.49 %
Torfaen	91075	18167	19.95 %
Wrexham	134844	5133	3.81 %
Grand Total	3063456	905809	29.57 %

Figure A.22: Households that do not have access to a car (by local authority) as a percentage of those households where people cannot access a Higher Education facility within 60 minutes by public transport[141]

Local Authority	No. of Households	No. of Persons	Total No Access to a Car	No Access to a car (%)
Blaenau Gwent	30416	69814	8436	27.74 %
Bridgend	58515	139178	8005	13.68 %
Caerphilly	74479	178806	5176	6.95 %
Cardiff	142557	346090	20	0.01 %
Carmarthenshire	78829	183777	5186	6.58 %
Ceredigion	31562	75922	1730	5.48 %
Conwy	51177	115228	4377	8.55 %
Denbighshire	40546	93734	463	1.14 %
Flintshire	63781	152506	813	1.27 %
Gwynedd	52473	121874	5566	10.61 %
Isle of Anglesey	30594	69751	2712	8.86 %
Merthyr Tydfil	24264	58802	791	3.26 %
Monmouthshire	38233	91323	2762	7.22 %
Neath Port Talbot	60393	139812	3079	5.10 %
Newport	61172	145736	8	0.01 %
Pembrokeshire	53122	122439	9487	17.86 %
Powys	58345	132976	8454	14.49 %
Rhondda Cynon Taf	99663	234410	3614	3.63 %
Swansea	103497	239023	122	0.12 %
The Vale of Glamorgan	53505	126336	1003	1.87 %

141 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

Torfaen	38524	91075	1895	4.92 %
Wrexham	57029	134844	90	0.16 %
Grand Total	1302676	3063456	73789	5.66 %

Access to Key Tourist Sites

Figure A.23: Access to Key Tourist Sites by public transport[142]

	No of Persons	Percentage (%)
up to 30 minutes	1833512	59.9%
30 - 60 minutes	833178	27.2%
60 - 90 minutes	101328	3.3%
90-120 minutes	5939	0.2%
over 120 minutes	289499	9.5%
Total	3063456	

Figure A.24: Persons that cannot access a Key Tourist Site by public transport, within 60 minutes, by local authority

Local Authority	No of Persons	No. persons that cannot access within 60 minutes	(%) Persons that cannot access within 60 minutes
Blaenau Gwent	69814	106	0.2%
Bridgend	139178	33413	24.0%
Caerphilly	178806	425	0.2%
Cardiff	346090	276	0.1%
Carmarthenshire	183777	41004	22.3%
Ceredigion	75922	34531	45.5%
Conwy	115228	10497	9.1%
Denbighshire	93734	9378	10.0%
Flintshire	152506	32798	21.5%
Gwynedd	121874	18104	14.9%
Isle of Anglesey	69751	4951	7.1%
Merthyr Tydfil	58802	476	0.8%
Monmouthshire	91323	12267	13.4%
Neath Port Talbot	139812	12336	8.8%
Newport	145736	2381	1.6%
Pembrokeshire	122439	56101	45.8%

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Local Authority	No of Persons	No. persons that cannot access within 60 minutes	(%) Persons that cannot access within 60 minutes
Powys	132976	93344	70.2%
Rhondda Cynon Taf	234410	2416	1.0%
Swansea	239023	5479	2.3%
The Vale of Glamorgan	126336	17339	13.7%
Torfaen	91075	292	0.3%
Wrexham	134844	8852	6.6%
Total	**3063456**	396766	13.0%

Figure A.25: Households that do not have access to a car (by local authority) as a percentage of those households where people cannot access a key tourist site facility within 60 minutes by public transport[143]

Local Authority	No. of Households	No. of Persons	Total No Access to a Car	No Access to a car (%)
Blaenau Gwent	51	106	8	15.7%
Bridgend	14181	33413	3832	27.0%
Caerphilly	171	425	7	4.1%
Cardiff	99	276	25	25.3%
Carmarthenshire	17335	41004	1945	11.2%
Ceredigion	15290	34531	1979	12.9%
Conwy	4295	10497	359	8.4%
Denbighshire	3924	9378	272	6.9%
Flintshire	13736	32798	1886	13.7%
Gwynedd	8088	18104	1309	16.2%
Isle of Anglesey	2007	4951	151	7.5%
Merthyr Tydfil	204	476	27	13.2%
Monmouthshire	4877	12267	243	5.0%
Neath Port Talbot	5281	12336	1358	25.7%
Newport	971	2381	53	5.5%
Pembrokeshire	23967	56101	3388	14.1%
Powys	40706	93344	5233	12.9%
Rhondda Cynon Taf	1071	2416	343	32.0%
Swansea	2221	5479	186	8.4%
The Vale of Glamorgan	6969	17339	538	7.7%
Torfaen	117	292	9	7.7%
Wrexham	3567	8852	202	5.7%

143 Census 2011 Lower Super Output Area, Tuesday morning, 7.00am to 9.00am

Local Authority	No. of Households	No. of Persons	Total No Access to a Car	No Access to a car (%)
Grand Total	169128	396766	23353	13.8%

7 Annex B – List of Higher and Further Education Facilities and Key Tourist Sites

Figure B.1: Table of Higher Education facilities

HE establishment	Campus
Aberystwyth University	Gogerddan
Aberystwyth University	Llanbadarn
Aberystwyth University	Penglais
Bangor University	Bangor
Cardiff Metropolitan University	Cyncoed
Cardiff Metropolitan University	Howard Gardens
Cardiff Metropolitan University	Llandaff
Cardiff University	Cardiff
Glyndwr University	Wrexham
Glyndwr University	Northop
Glyndwr University	St Asaph
Royal Welsh College of Music & Drama	Cardiff
Swansea University	Swansea
University of South Wales	Caerleon
University of South Wales	ATRiuM Cardiff
University of South Wales	Glyntaff
University of South Wales	Newport
University of South Wales	Treforest
University of Wales Trinity Saint David	Carmarthen
University of Wales Trinity Saint David	Lampeter
University of Wales Trinity Saint David	Swansea Met

Figure B.2: Table of Further Education facilities

Further Education Facilities	Campus
Bridgend College	Arts Academy
Bridgend College	Bridgend
Bridgend College	Maesteg
Bridgend College	Morien House
Bridgend College	Queens Road
Bridgend College	Pencoed
Bridgend College	Studio 54
Cardiff & Vale College	Barry Waterfront
Cardiff & Vale College	CBCC
Cardiff & Vale College	CCTC
Cardiff & Vale College	City Road
Cardiff & Vale College	Colcot Road
Cardiff & Vale College	Cooper's Yard
Cardiff & Vale College	Design Academy
Cardiff & Vale College	Dumballs Road 2

Further Education Facilities	Campus
Cardiff & Vale College	ICAT
Cardiff & Vale College	The Friary
Cardiff & Vale College	The Parade
Cardiff & Vale College	Trowbridge
Coleg Cambria	Deeside
Coleg Cambria	Llysfasi
Coleg Cambria	Northop
Coleg Cambria	Wrexham Training
Coleg Cambria	Yale (Bersham Road)
Coleg Cambria	Yale (Grove Park)
Coleg Ceredigion	Aberystwyth
Coleg Ceredigion	Cardigan
Coleg Gwent	Blaenau Gwent Learning Zone
Coleg Gwent	City of Newport
Coleg Gwent	Crosskeys
Coleg Gwent	Cwmbran Learn-IT Centre
Coleg Gwent	Monmouth Learn-IT Centre
Coleg Gwent	Pontypool
Coleg Gwent	Usk
Grwp Llandrillo Menai	Abergele
Grwp Llandrillo Menai	Colwyn Bay
Grwp Llandrillo Menai	Denbigh
Grwp Llandrillo Menai	Llanrwst
Grwp Llandrillo Menai	Rhos-on-Sea
Grwp Llandrillo Menai	Rhyl
Grwp Llandrillo Menai	St Asaph
Grwp Llandrillo Menai	Dolgellau
Grwp Llandrillo Menai	Glynllifon
Grwp Llandrillo Menai	Pwllheli
Grwp Llandrillo Menai	Bangor
Grwp Llandrillo Menai	Caernarfon
Grwp Llandrillo Menai	Holyhead
Grwp Llandrillo Menai	Llangefni
Grwp Llandrillo Menai	Parc Menai
Coleg Sir Gar	Ammanford
Coleg Sir Gar	Gelli Aur
Coleg Sir Gar	Graig
Coleg Sir Gar	Jobs Well
Coleg Sir Gar	Pibwrlwyd
Coleg y Cymoedd	Aberdare
Coleg y Cymoedd	Nantgarw
Coleg y Cymoedd	Rhondda
Coleg y Cymoedd	Rhymney
Coleg y Cymoedd	Ystrad Mynach
Gower College Swansea	Broadway Hair, Beauty and Holistic Centre
Gower College Swansea	Canolfan Gorseinon Centre
Gower College Swansea	Gorseinon
Gower College Swansea	Kingsway Centre
Gower College Swansea	Kingsway Hair Academy
Gower College Swansea	Llwyn y Bryn

Further Education Facilities	Campus
Gower College Swansea	Sandringham Park
Gower College Swansea	Sketty Hall
Grwp NPTC Group	Afan
Grwp NPTC Group	Brecon Beacons
Grwp NPTC Group	Llandarcy Academy of Sport
Grwp NPTC Group	Llandrindod Wells
Grwp NPTC Group	Maesteg
Grwp NPTC Group	Neath
Grwp NPTC Group	Newtown
Grwp NPTC Group	Queen Street
Grwp NPTC Group	Pontardawe
Grwp NPTC Group	Swansea
Grwp NPTC Group	Ystradgynlais
Pembrokeshire College	Haverfordwest
St David's Catholic Sixth Form College	Cardiff
The College Merthyr Tydfil	Merthyr Tydfil
WEA Cymru	Bangor
WEA Cymru	Cardiff
WEA Cymru	Harlech
YMCA Wales Community College	Cardiff

Figure B.3: List of Key Tourist Sites

ATTRACTION NAME	REGION	2013 VISITS	2012 VISITS	% CHANGE	£ ADULT ADMISSION
Aberconwy House	NW	20,383	25,276	-19.40%	-
Aberdulais Falls	SWW	23,767	26,472	-10.20%	-
Aberglasney Gardens	SWW	34,428	26,214	31.30%	-
Abertillery & District Museum	SEW	10,000*	10,000*	0.00%	-
Aberystwyth University, School of Art Gallery and Museum	MW	12,300*	14,000*	-12.10%	-
Amelia Farm Trust	SEW	28,000*	27,000*	3.70%	-
Bala Lake Railway	MW	19,647*	NP	-	£9.50

Beaumaris Castle	NW	83,823	86,864	-3.50%	-
Bellevue Park	NW	145,029	NP	-	-
Big Pit: National Coal Museum	SEW	147,980	153,749	-3.80%	-
Blaenavon Ironworks	SEW	18,601	19,899	-6.50%	-
Blaenavon World Heritage Centre	SEW	34,134	NP	-	-
Bodelwyddan Castle	NW	56,849	47,525*	19.60%	£6.30
Bodnant Garden	NW	178,102	152,439*	16.80%	-
Brecon Beacons Waterfalls Centre	SWW	22,634	20,357	11.20%	-
Brecon Cathedral and Heritage Centre	MW	124,624	NP	-	-
Brickfield Pond	NW	79,018	68,421*	15.50%	-
Caerleon Roman Baths and Amphitheatre	SEW	52,747	58,438	-9.70%	-
Caernarfon Castle	NW	163,394	176,454	-7.40%	-
Caerphilly Castle	SEW	110,687	120,273	-8.00%	-
Cardiff Museum Project	SEW	260,172	167,413*	55.40%	-
Carew Castle & Tidal Mill	SWW	33,961	27,530	23.40%	£4.75
Carmarthenshire County Museum	SWW	12,616	12,099	4.30%	-
Carreg Cennen Castle	SWW	18,822	13,799	36.40%	-

Castell Coch	SEW	74,021	70,276	5.30%	-
Castell Henllys Iron Age Fort	SWW	25,175	23,937	5.20%	£4.75
Chepstow Castle	SEW	52,163	54,596	-4.50%	-
Chirk Castle	NW	129,862	133,268	-2.60%	-
Colby Woodland Garden	SWW	33,263	31,289	6.30%	-
Conwy Castle	NW	174,920	162,665	7.50%	-
Conwy Nature Reserve	NW	76,649	72,837	5.20%	£3.00
Conwy Suspension Bridge	NW	15,055	21,606	-30.30%	-
Conwy Water Gardens	NW	65,000*	NP	-	-
Cosmeston Lakes Country Park	SEW	245,000*	250,000	-2.00%	-
Cosmeston Medieval Village	SEW	16,200*	NP	-	£2.50
Criccieth Castle	NW	41,096	40,540	1.40%	-
Cwmcarn Forest Drive & Visitor Centre	SEW	257,539	203,662	26.50%	-
Cyfarthfa Castle Museum	SEW	524,789	545,006	-3.70%	-
Denbigh Castle	NW	13,497	12,240	10.30%	-
Devil's Bridge Waterfalls	MW	38,791*	NP	-	£3.50
Dingle Local Nature	NW	68,256	58,410	16.90%	-

Reserve					
Dolaucothi Gold Mines	SWW	18,946	17,767	6.60%	-
Electric Mountain	NW	38,717	NP	-	£7.75
Erddig	NW	147,291	150,818	-2.30%	-
Folly Farm Adventure Park	SWW	419,614	NP	-	£9.50
Garwnant Visitor Centre	SEW	38,530	37,106*	3.80%	-
Glynn Vivian Art Gallery	SWW	22,467	40,974	-45.20%	-
Great Orme Tramway	NW	169,943	153,004	11.10%	£6.00
Greenfield Valley Heritage Park	NW	29,576	26,128	13.20%	£5.00
GreenWood Forest Park	NW	134,832	110,198	22.40%	£10.95
Gwili Steam Railway	SWW	28,508	NP	-	-
Gypsy Wood Park	NW	15,192	18,000	-15.60%	£6.99
Harlech Castle	MW	76,355	75,309	1.40%	-
Holyhead Breakwater Country Park	NW	116,593	63,188	84.50%	-
Inigo Jones Slateworks	NW	21,760*	24,830*	-12.40%	£5.00
Kenfig Nature Reserve	SEW	12,165	20,877	-41.70%	-
Kidwelly Castle	SWW	27,895	26,467	5.40%	-
Laugharne Castle	SWW	11,715	11,192	4.70%	-

Llanberis Lake Railway	NW	71,944*	64,823*	11.00%	£7.50
Llancaiach Fawr Manor	SEW	55,083	53,264	3.40%	£7.50
Llanerchaeron	MW	31,836	39,691	-19.80%	-
Llangollen Wharf	NW	109,323	128,791*	-15.10%	£12.50
Llyn Brenig Visitor Centre	NW	175,000*	NP	-	-
Loggerheads Country Park	NW	234,007	164,536*	42.20%	-
Margam Country Park	SWW	182,055*	105,329*	72.80%	-
Meirion Mill	MW	24,853*	NP	-	-
Moel Famau Country Park	NW	151,000*	140,000*	7.90%	-
Moelfre Seawatch	NW	35,616	NP	-	-
Museum of Speed	SWW	33,063	30,015	10.20%	-
National Assembly Debating Chamber	SEW	80,766	83,767	-3.60%	-
National Museum Wales	SEW	456,342	459,806	-0.80%	-
National Roman Legion Museum	SEW	65,706	73,130	-10.20%	-
National Slate Museum	NW	144,462	135,741	6.40%	-
National Waterfront Museum	SWW	253,708	267,362	-5.10%	-

National Wool Museum	SWW	35,626	34,212	4.10%	-
Newport Wetlands Environmental, Educational & Visitor Centre	SEW	96,332*	90,914*	6.00%	-
Newton House, Dinefwr Park & Castle	SWW	51,194	66,426	-22.90%	-
Norwegian Church	SEW	184,451	NP	-	-
Oriel Plas Glyn-y-Weddw	NW	146,601	180,548	-18.80%	-
Oriel Tegfryn Gallery	NW	10,000*	NP	-	-
Oriel y Parc	SWW	144,993	131,323	10.40%	-
Oriel Ynys Mon	NW	133,138*	NP	-	-
Pembrey Country Park	SWW	367,172	388,416*	-5.50%	-
Penderyn Distillery	SEW	20,448*	NP	-	£6.00
Penrhyn Castle	NW	87,928	97,719	-10.00%	-
Plas Mawr Elizabethan Town House	NW	21,372	22,877	-6.60%	-
Plas Newydd	NW	92,812	96,294	-3.60%	-
Plas Newydd	NW	92,752	NP	-	£8.90
Pontypool Museum	SEW	35,512	NP	-	£3.00
Pontypridd Museum	SEW	22,667	25,473*	-11.00%	-
Porthkerry Country Park	SEW	125,000*	150,000*	-16.70%	-

Portmeirion	MW	193,240	195,276	-1.00%	£10.00
Powis Castle & Garden	MW	113,411	111,438	1.80%	-
Quarry Hospital Visitor Centre	NW	13,918	NP	-	-
Raglan Castle	SEW	56,877	53,530	6.30%	-
Rhuddlan Castle	NW	18,936	19,384	-2.30%	-
Royal Regiment of Wales Museum of the Welsh Regiment	SEW	58,248	NP	-	£11.00
RSPB Lake Vyrnwy Nature Reserve	MW	14,778*	17,609*	-16.10%	-
Ruthin Craft Centre Gallery	NW	79,797	95,874	-16.80%	-
Snowdon Mountain Railway	NW	110,378	131,413	-16.00%	£27.00
South Stack Lighthouse	NW	19,478	98,155*	-80.20%	£4.90
St Davids Bishops Palace	SWW	32,509	25,044	29.80%	-
St Davids Cathedral	SWW	255,000	258,000*	-1.20%	-
St Fagans: National History Museum	SEW	544,966	615,855	-11.50%	-
Swansea Museum	SWW	142,734	139,159	2.60%	-
Swansea Museum - Floating Exhibits	SWW	16,153	12,334	31.00%	-
Talyllyn Railway	MW	48,642	41,920	16.00%	£14.50

The LC	SWW	712,616	736,949	-3.30%	NP
The Narrow Gauge Railway Museum	NW	16,659	NP	-	-
The Nelson Museum & Local History Centre	SEW	18,420	NP	-	-
The Oriel Myrddin Gallery	SWW	25,470	NP	-	-
The Tramshed	SWW	10,260	11,011	-6.80%	-
The Ugly House	NW	34,648	NP	-	-
Tintern Abbey	SEW	67,616	67,582	0.10%	-
Tredegar House	SEW	66,903	41,956	59.50%	-
Tretower Court & Castle	MW	13,758	14,939	-7.90%	-
Tudor Merchant's House	SWW	23,764	25,888	-8.20%	-
Vale of Rheidol Railway	MW	42,834*	40,273	6.40%	£16.00
Wales Millennium Centre	SEW	1,102,520*	1,144,628*	-3.70%	-
Welsh Mountain Zoo and Botanical Gardens	NW	135,729	NP	-	£10.95
WWT National Wetland Centre Wales	SWW	52,970	49,219	7.60%	£8.70

8 Annex C – Bus Advisory Group Recommendations

Building Blocks for Change

Stable, appropriate policies, funding and governance are essential pre-requisites for improving bus services. We recommend:

- Stability should be ensured by funding and governance arrangements having a life of at least three years.
- A consistent, all-Wales approach to bus policy should be established.
- Network partnership boards should be established, comprising local authorities, bus operators, bus users and key trip generators (e.g. retailers, health care providers), based on transport corridors not administrative boundaries.

Attracting Fare Paying Passengers and Improving Quality

Attracting passengers requires the development of networks, affordable fares, good information and quality. We recommend:

Network Development

- Networks of commercial and subsidised services should be reviewed to ensure they provide what passengers want for commercial and subsidised services alike. There should be incentives to undertake such reviews.
- Network partnerships should identify key pinch-points for bus reliability and punctuality, and ensure that solutions are integrated into wider highway improvements.
- Tendered services should allow operators flexibility to maximise efficient use of their fleet, e.g. they should avoid specifying service timings and focus on frequency, start and end times and any integration required.
- Networks should include integrating community transport services to increase accessibility.
- Kick-start funding should be available to provide short-term support for the pilot phases of new commercial services, new fares initiatives and other innovations.
- Investment in infrastructure and road improvements should take full account of the importance of reliability of bus services.

Fares

Further work – under the provisionally-entitled the 'Fair Fares' project – should be undertaken to determine the action needed to:

- encourage operators to streamline and rationalise their fare structures and local authorities to simplify and co-ordinate local schemes;
- establish an all-Wales ticketing system (including the possibility of a smart card) with inter-availability between bus operators and with rail network;
- explore the links between patronage and pricing – including the potential for a pilot project on lower fares;

- develop digital information and ticketing systems, including enhancing Traveline Cymru's fares database, the need for investment in ticketing equipment and back-office functions.

Information

We recommend that an information task group be established comprising Traveline Cymru, bus operators, local authorities and passenger representatives to undertake further work to improve the availability of information. This would include:

- establishing the feasibility and cost of equipping all buses in Wales with wi-fi as a cheaper alternative to real time or 'talking bus' systems
- exploring the feasibility of establishing a hierarchy of bus stops / interchanges with different levels of information provision; providing wi-fi at key stops.
- pilot the proactive provision of information, travel planning and market research at least one major destination.

Quality

To improve the quality of bus services, we recommend that:

- early consultation takes place on the creation of an All Wales Bus Quality Standard based on the south east Wales standard for implementation from 2015/16.
- Operators should be incentivised and rewarded for compliance with the standard through grant payments. Those that do not reach a minimum should not receive public funding.
- Kick-start investment is available to help bus operators, local authorities and operators of major trip origins / destinations achieve the necessary standards.

Youth Concessionary Fares

We recommend that:

- A working group be tasked with further developing a concessionary fares policy. Its remit should include:
- Informing a national consultation process to understand the barriers young people face in accessing public transport, relating to cost and other factors.
- Studying the impact that existing concessionary schemes have had in Wales and in an international context. This could be extended to exploring other, innovative means of promoting access to public transport, and increasing patronage, amongst young people.

Integration

We recommend that:

- Reviews and development of networks recommended earlier specifically take into account health and education-related transport.
- Pump-priming investment recommended earlier is available to support new services.
- Local authorities be encouraged to locate their transport functions in a single directorate.
- Health boards and education and training providers be encouraged to integrate their commissioning of transport services with those of the relevant local authority.

- Co-ordination of health and education-related transport with commercial and subsidised services should be encouraged, including two pilot projects to identify good practice.

Disability

We recommend:

- The introduction of an all Wales standard 'orange wallet'-type scheme as soon as practicable, capturing existing best practice in smaller schemes around Wales.
- Further work to introduce a Welsh DCPC module on disability awareness be undertaken.
- A project to explore increased use of low cost digital technology to assist disabled people's use of public transport be established.
- Operators and groups representing disabled passengers have regular dialogue.

9   Annex D – Freight Advisory Group Recommendations

The full report is available at: http://wales.gov.uk/topics/transport/freight/wales-freight-group/?lang=en

The groups 24 recommendations are summarised below:

A. The Welsh Government ensures that the need to take into account the role of freight when considering all significant development in Wales is integrated more effectively in the planning system in Wales.
B. The Welsh Government ensures that the need to take into account the potential for effective inter-modal freight networks when developing land use plans, and the value added processes inter-modal interchanges can attract, is integrated more effectively in the planning system in Wales.
C. The Welsh Government asks the UK Government to issue guidance for ports to take into account when drawing up master plans and disposing of port land, the potential role of the port in inter-modal freight networks, and the opportunities for freight processing activities on port land.
D. The Welsh Government delivers as quickly as possible all the commitments it has made to improving and enhancing the A55 expressway in North Wales.
E. The Welsh Government delivers as quickly as possible the commitments it has made to improving the A494/A483 in North East Wales.
F. The Welsh Government delivers as quickly as possible all the commitments it has made to improving the A40 and the A477 in South West Wales and reviews the business case for making additional improvements.
G. The Welsh Government delivers as quickly as possible all the commitments it has made to dualling the A465 'Heads of the Valleys' road in South Wales.
H. The Welsh Government takes forward as quickly as possible its commitment to Phase 1 of the Cardiff Bay Eastern Link, and undertakes to develop a business case for further phases to extend the link to the A48(M) within the overall framework of planning for the City Region.
I. The Welsh Government continues to proceed as quickly as possible and in accordance with due process in order to provide a motorway to the South of Newport to address transport related problems on the M4.
J. The Welsh Government liaises further with Holyhead port on the need to improve the 'import road' from the A55 expressway for freight traffic, taking into account potential flows in the future, and considers reviewing the business case for improving the road as a result.
K. The Welsh Government continues to do everything in its power to persuade the UK Government to remove the tolls on the Severn Crossings

when the current Concession ends.
L. The Welsh Government requests the UK Government to look at the case for installing free flow tolling technology on the Severn Crossings, if the UK Government decides not to remove the tolls when the current Concession ends.
M. The Welsh Government liaises with the Freight Transport Association and the Road Haulage Association in order to review the evidence on the need for more designated truck stops and that, depending on the outcome, considers the need for any intervention.
N. The Welsh Government continues to work with all partners on maximising the potential for rail freight under Network Rail's Route Modernisation Plans in the Long Term Planning Process
O. The Welsh Government works with all partners to encourage the retention of existing rail infrastructure, especially near ports, where there is potential for rail freight in the future - for example the sidings near the port of Swansea.
P. The Welsh Government works with all partners to ensure that the opportunities presented by the electrification of the South Wales Main Line and Valley Lines, take account of the potential to grow rail freight, and especially containers, through gauge clearance and inclusion of relief lines in the scheme .
Q. The Welsh Government explores with Network Rail, as part of the latter's Long Term Planning Process, the potential for an appropriately gauged diversionary rail route for freight into South Wales via Gloucester.
R. The Welsh Government explores with partners the opportunities for enhancing freight connectivity on the North Wales line via both Crewe and Warrington once capacity on the West Coast Main Line is released through the construction of HS2.
S. The Welsh Government works with all partners to ensure that the development of the case for North Wales rail electrification takes account of the potential to grow rail freight, and especially containers, through gauge clearance.
T. The Welsh Government explores further the role of public grant in supporting modal shifts from road to rail in Wales and the environmental and social benefits for Wales specifically.
U. The Welsh Government liaises with business, especially the retail sector and the supermarkets, to review the potential for increasing the flow of goods on rail via Wentloog in South Wales.

V. The Welsh Government explores with Network Rail, as part of the latter's Long Term Planning Process, the potential for enhancements to the line west of Swansea.

W. The Welsh Government supports marketing by ports in Wales which reflects their competitiveness for short sea shipping routes, including it as an integral part of the offer to relevant inward investment to Wales.

X. The Welsh Government supports a re-introduction of Load on - Load off (Lo-Lo) container freight via Holyhead port if opportunities were to arise in the future and they were in line with the Welsh Government's priorities for economic growth and jobs.

10 Annex E – National Transport Plan 2010 road schemes to be investigated under this Plan

We will test whether work on the following is required as a result of intervention R29:

- A4042 between Pontypool and Abergavenny
- Longer term interventions on the A470 and A483 through Builth Wells
- A470 Alltmawr (as known as A470 Erwood to Glanwye)
- A470 Pentrefelin to Bodnant West Lodge
- A470 Rhayader
- A470 Plas Maenan and Bodhyfryd

11   Annex F – National Transport Plan 2010 rail proposals to be investigated under this Plan

This list below sets out the rail service improvement commitments in the National Transport Plan 2010 that will roll into the new National Transport Plan period:

- Additional carriages to peak time services to Caerphilly following completion of Cardiff Area Signalling Renewal (CASR) in 2015

- Introduce additional services on the lines from Pontypridd and Caerphilly to Cardiff following completion of CASR in 2015

- Introduce additional services on the Vale of Glamorgan line following completion of CASR in 2015

- Extend the half-hourly service from Maesteg to Cardiff and Brackla Station following completion of CASR in 2015

name and address not to be published, that is an important fact we would take into account. However, there might sometimes be important reasons why we would have to reveal someone's name and address, even though they have asked for them not to be published. We would get in touch with the person and ask their views before we finally decided to reveal the information.