Health Impact Assessment of Bridgend Local Transport Plan

October 2015

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Introduction

This Health Impact Assessment was requested by Bridgend County Borough Council as part of the development and consultation process of the Bridgend Local Transport Plan 2015-2030.

Bridgend Local Transport Plan 2015-2030

Vision

An effective, accessible, integrated and sustainable transport system that can meet the short, medium and long term needs of a changing population, the economy and society.

Key Priorities

KP1 – Support economic growth and safeguard jobs with a particular focus on City Regions, Enterprise Zones and local growth zones

- Improved access to jobs and services by sustainable and active travel.
- Reduced congestion, improved journey time reliability, greater network resilience.
- Maximise potential to use bus and/or rail to access key employment and other sites.
- Improved access for freight.

KP2 – Reduce economic inactivity by delivering safe and affordable access to employment sites

- Seamless journeys and integrated ticketing.
- Affordable access to jobs, services and education.

KP3 – Maximise the contribution that effective and affordable transport services can make to transport poverty and target investment to support improvements in accessibility for the most disadvantaged communities

- Support rural areas by improving access to key services;
- Bus services that enable communities to access employment / services

KP4 – Encourage safer, healthier and sustainable travel

- Increased take up of active and sustainable travel.
- Reduced number of personal injury accidents.
- Reduction in the negative impact of transport emissions on health and the environment.
- Increased number of journeys to tourism destinations being made by sustainable and active travel modes.

Relationship with other policies and strategies

This Local Transport Plan focuses on targeting investment in local transport to address local problems. This is a departure from the previous regional based transport planning mechanism.

The plan focuses on transport as a means to access economic growth and employment but also social connections and other resources and facilities that support people's wellbeing.

At the current time, none of the proposed schemes within the plan has funding. The focus of the plan is to prioritise schemes for applications to Welsh Government capital investment programmes. Activities such as promotional campaigns to promote active transport etc. do not form part of this plan.

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The objectives of the Local Transport Plan have the potential to support a range of local health improvement priorities. The Bridgend County Together Plan (Local Service Board Plan) 2013-18 includes the following priorities:

- Reducing child and adult obesity
- Increasing physical activity
- Increasing the number of older people helped to live independently
- Improving mental health and emotional wellbeing
- Increasing employment and average household income

In addition, the most recent report of the Director of Public Health for Abertawe Bro Morgannwg University Health Board (2015) highlights reducing obesity and increasing levels of physical activity as local health priorities. The objectives in the Local Transport Plan to increase active and sustainable travel have particular importance in contributing to these priorities.

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Methodology

The methodology for this Health Impact Assessment followed the approach recommended by the Welsh Health Impact Assessment Support Unit[1] as summarised in the diagram below.

A model of the Health Impact Assessment Process

Screening → Scoping → Appraisal → Reporting → Monitoring & evaluation

Underlying Principles
Openness
Participation
Democracy
Sustainability
Equity
Ethical use of evidence
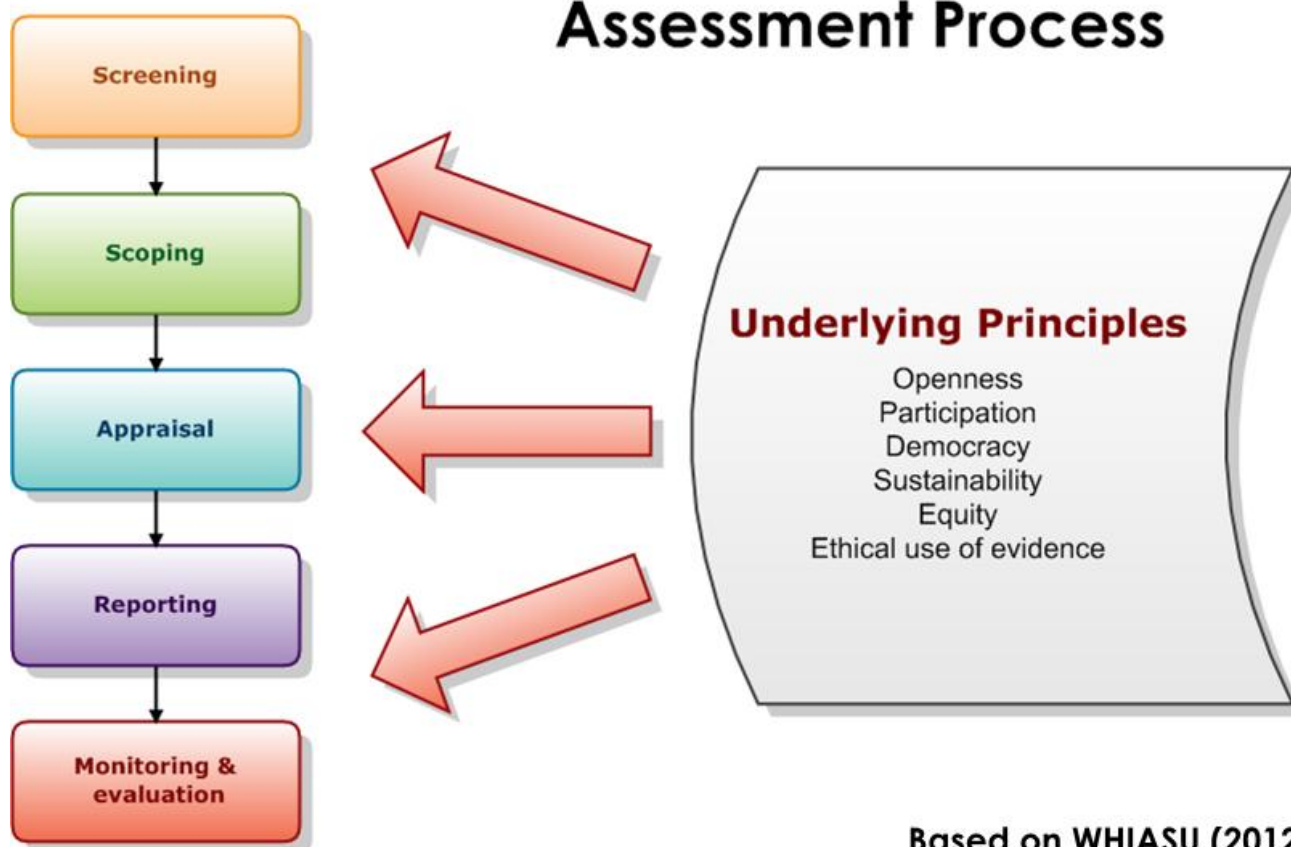
Based on WHIASU (2012)

"Health Impact Assessment (HIA) is a systematic, objective and yet flexible and practical way of assessing both the potential positive and negative impacts of a proposal on health and well-being and suggests ways in which opportunities for health gain can be maximized and risks to health minimised. HIA looks at health in its broadest sense, using the wider determinants of health as a framework. Importantly, HIA highlights the uneven way in which health impacts may be distributed across a population and seeks to address existing health inequalities and inequities as well as avoid the creation of new ones" (WHIASU 2012 p4). See Appendix 1 for the framework used for assessment in HIA.

HIAs use three key sources of evidence to make an assessment of potential health impact:

- Population profile
- Review of published evidence
- Local stakeholder views

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[1] Wales Health Impact Assessment Support Unit (WHIASU), "Health Impact Assessment: A Practical Guide," 2012, https://www.wales.nhs.uk/sites3/page.cfm?orgid=522&pid=63782.

Screening

Screening was conducted at a meeting of key stakeholders in April 2014 (screening report is included in Appendix 2 of this report). The screening concluded that:

♦ The Transport Plan has a **major potential to impact on the health of the population and both positive and negative impacts have been identified** in the Screening.

♦ However, at the current time none of the schemes have funding for implementation. Therefore, the participants in the screening agreed to develop this screening into a desktop HIA with a population profile and evidence review which will act as a baseline for the further use of HIA in the implementation of the plan. It was also agreed to establish a framework to ensure that key health impacts are monitored throughout the life time of the Plan by integrating health indicators into the monitoring and evaluation.

♦ This supports Section 5.4.1 of the Plan (p.72) which focuses on the role of Health Impact Assessment in developing the plan and states that: "The effectiveness of schemes in the draft LTP will be assessed on the basis of the contribution that they make to the health and well-being of residents of Bridgend".

♦ A number of actions were agreed as a result of the Screening to maximise the opportunities for positive health impacts and minimise potential negative impacts of the Plan (see below). The potential to use HIA in the planning and implementation of individual schemes once funding is obtained was also agreed. It was also agreed that some of the major schemes could benefit from a screening exercise in the funding application stage to enable the identification for positive and negative health impacts in order to strengthen applications.

Scoping

The agreed scope of this HIA was a desktop HIA, necessarily constrained to secondary literature and data available in the public domain, examined within the time available. Gathering evidence from community stakeholders and key informants is beyond the scope of a desktop HIA, but there was an opportunity to add richness with evidence gathered from a group of organisational stakeholders familiar with the policy proposal and population. This information was captured using the WHIASU screening checklist, and is included in the screening report in Appendix 2.

Collation of further evidence for impact appraisal

Baseline population profile

Extensive data on population health in Bridgend is already available via the Public Health Wales Observatory[2], Welsh Government Statistics[3] and other relevant sources. It is not proposed that these be replicated here in detail, but a summary is provided addressing the following:

♦ A brief summary of key statistics in Bridgend

♦ Deprivation in Bridgend

♦ Obesity in Bridgend – 'report cards' based on latest survey data

♦ Identification of particularly vulnerable groups in relation to this policy

The draft Bridgend Local Transport Plan also describes key factors influencing transport infrastructure and the choices people make about transportation, with supporting data. This discussion includes demography, healthcare services reconfiguration, road safety, economic activity, accessibility, environmental impact, and wider strategic developments.

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[2] http://www.publichealthwalesobservatory.wales.nhs.uk/

[3] http://gov.wales/statistics-and-research/?lang=en and https://statswales.wales.gov.uk/Catalogue

Literature review

The time and resources available did not permit a full systematic review of the published literature. A focussed review was undertaken based on existing summaries of the evidence, in particular:

♦ NHS Scotland: Health impacts of transport initiatives[4]

♦ Department of Health and Department for Transport: Transport for Health Resource[5]

♦ NHS South West: Soft measures–hard facts: The value for money of transport measures which change travel behaviour[6]

♦ Literature review evidence from published HIAs on draft local transport plans in Stoke-on-Trent[7] and Northumbria[8]

♦ A 2015 systematic review of quantitative health impact assessments of active transportation[9]

♦ A search of Cochrane Collaboration systematic reviews related to transport

♦ Specific focussed searches on issues identified in screening report where evidence was requested (effectiveness of cycle training for adults in increasing confidence, and the links between active travel and social interaction).

♦ Other literature identified serendipitously during the course of the review

[4] NHS Health Scotland, *Health Impact Assessment of Transport Initiatives: A Guide* (Edinburgh: Health Scotland, 2007).

[5] Department of Health and Department for Transport, "Transport and Health Resource: Delivering Healthy Local Transport Plans" (London: Department of Health, January 2011), https://www.gov.uk/government/publications/transport-and-health-resource-delivering-healthy-local-transport-plans.

[6] Peter Ashcroft et al., "Soft Measures – Hard Facts: The Value for Money of Transport Measures Which Change Travel Behaviour: A Review of the Evidence January 2011" (NHS South West, January 2011), http://www.erpho.org.uk/viewResource.aspx?id=21632.

[7] Eleanor Hothersall and Christopher Gidlow, "Stoke-on-Trent City Council Local Transport Plan 3: Health Impact Assessment Final Report" (Stoke-on-Trent: Stoke-on-Trent Primary Care Trust and Staffordshire University, February 2011), http://www.healthycity-stoke.co.uk/upload/docs/LTP3_HIA_Final%20report.pdf.

[8] Salim Vohra, Gifty Amo-Danso, and Ifeoma Elizabeth Dan-Ogosi, "Northumberland Local Transport Plan 3: Main HIA Report - Final Draft" (Centre for Health Impact Assessment, Institute of Occupational Medicine, March 2011), http://www.apho.org.uk/resource/view.aspx?RID=117618.

[9] Natalie Mueller et al., "Health Impact Assessment of Active Transportation: A Systematic Review," *Preventive Medicine* 76 (July 2015): 103–14, doi:10.1016/j.ypmed.2015.04.010.

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Population profile

Key statistics for Bridgend

The Welsh Government Statistics Division issue Local Area Summary Statistics releases for all local authorities in Wales, which provide a compendium of existing published statistics relating to the area updated in-line with updates to the source statistics. Almost all of the statistics included are official statistics published by the Welsh Government, the National Health Service, or other central government departments.

The following is a high level summary of the data for Bridgend based on the December 2014 report[10]. The data behind each of the following points is shown in charts in the main body of the report:

Economy

In 2013 the employment rate in Bridgend was 72.1 per cent. This was the fifth highest amongst the 22 Welsh local authorities. The rate rose both over the year and overall since 2001 (up 3.4 and 3.8 percentage points respectively). Between 2001 and 2004 the employment rate was above the Welsh average, moved below it between 2005 and 2009 and has moved back above since 2010.

Gross Value Added (GVA) per head in 2012 stood at £14,964 in Bridgend. This was below the Welsh average and the joint ninth highest amongst the 22 Welsh local authorities. Between 1999 and 2012 GVA per head in Bridgend has been below the Welsh average although the gap has narrowed quite considerably over this period. GVA measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom.

In 2012 Gross Disposable Household Income (GDHI) per head in Bridgend stood at £14,122 and was the joint eighth lowest amongst the 22 Welsh local authorities. Between 1999 and 2012 GDHI per head in Bridgend has fluctuated around the Welsh average. GDHI is the amount of money that households have available for spending or savings, hence disposable income. This is money left after expenditure associated with income, for example, taxes and social contributions, property ownership and provision for future pension income.

In 2013 average weekly earnings in Bridgend stood at £545. This was the eighth highest amongst the 22 Welsh local authorities. In 2003, 2008 and 2013 earnings in Bridgend were above the Welsh average.

In 2013 Bridgend had the sixth highest rate of children living in workless households amongst the Welsh local authorities. The rate rose since 2012 and rose since 2004. The gap between the Wales average has narrowed from being 4.8 percentage points below the Wales average in 2004 to being 3.5 percentage points above the Wales average in 2013.

Health and well-being

Life expectancy for 2011-13 was lower than the Welsh average for both males and females.

The percentage of obese adults for 2012 & 2013 was not significantly different from the Welsh average. More detail on rates of obesity in children and adult can be found below. The percentage of adult smokers for 2012 & 2013 was not significantly different from the Welsh average.

Although Bridgend has seen a fall in its rate since 2005, more recently the under 18 conception rate has been higher than the Wales average.

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[10] http://gov.wales/docs/statistics/2014/141218-local-area-summary-bridgend-en.pdf

The mean mental component summary score for 2012 & 2013 was not significantly different from the Welsh average.

Bridgend's rate of older people supported in the community was just below the Wales average between 2005-06 and 2008-09. The rate has been above the Wales average since then.

Bridgend's percentage of looked after children with three or more placements in the year was close to the Wales average in 2013-14.

The proportion of low birth weight babies in Bridgend has fluctuated during the 2000s around the fairly stable Wales average.

The MMR (measles, mumps & rubella) vaccination coverage rate in Bridgend has increased 3.4 percentage points since 2012-13 to a rate of 97.7 per cent in 2013-14, which is above the Welsh average. The coverage rate in Bridgend is the second highest in Wales.

The average DMFT (decayed, missing and filled teeth) score for Bridgend was 1.13 in 2011-12. Bridgend has been below the Welsh average in the last two surveys.

Education and skills

The percentage of working age adults with no qualifications has fallen since 2001. In 2013 the rate was 2.5 percentage points higher than the Welsh average and was the fifth highest local authority rate in Wales.

The percentage of working age adults with qualifications at National Qualifications Framework level 4+ has risen since 2001. In 2013 the rate was 1.8 percentage points lower than the Welsh average and was the ninth lowest local authority rate in Wales.

The attendance rate has risen since 1999. It was 0.2 percentage points above the Welsh average of 93.6 percent in 2014, making it the ninth highest attendance rate.

The average wider points score has generally risen since 2004. It was below the Welsh average in 2013.

The percentage of pupils achieving the core subject indicator at key stage two has risen overall since 1999. It was 0.1 percentage points above the Welsh average of 86.1 per cent in 2014.

Housing

The rate of homelessness acceptances in Bridgend has generally followed the trend for Wales and remained well above the Wales average between 2001-02 and 2009-10. In 2010-11 however, the rate fell sharply to below the Wales average and continued to fall over the next two years. In 2013-14 the rate rose slightly but continued to stay below the Wales average.

There was a substantial decrease in the rate in Bridgend in 2012-13 bringing it below the Wales average. In contrast, in 2013-14, there was a substantial increase bringing it above the Wales average.

Transport

In 2010-11, in Bridgend, the proportion of A county roads in poor condition was broadly similar (within +1 or -1 percentage points) to the proportion for Wales as a whole and the proportion in poor condition is on a declining trend. There were 104 miles of these roads in Bridgend.

In 2009, the proportion of people living in Bridgend and travelling to work by car, van or minibus was much higher (over 5 percentage points) than the all-Wales average.

In Bridgend, the average rate (per head of population) between 2011-13 at which people were killed or seriously injured on roads was below the Wales average.

Crime and substance misuse

Bridgend has a crime rate 2.6 percentage points lower than the average for Wales. It has fallen 48 per cent since 2002-03. Due to variation in the collection system employed by this local authority, results are not comparable to other local authorities or the Wales average.

Environment

The cleanliness rate of highways and relevant land in Bridgend was the third lowest amongst Welsh local authorities in 2005-06. The rate has increased steadily since then, remaining above the Welsh average since 2007-08 and was among the highest of all local authorities in Wales in 2012-13 and 2013-14.

The ecological footprint in Bridgend was just below the Wales average in 2006.

Heritage

According to the 2011 Census the percentage of people age three and over who spoke Welsh in Bridgend was 9.7 per cent, and was one of the lowest ranked local authorities.

The percentage of pupils assessed in Welsh first language at key stage two has increased by 2.2 percentage points since 2013 and by 0.4 percentage points since 1999.

The percentage of pupils assessed in Welsh first language at key stage three has increased by 1.4 percentage points since 2013 and by 6.6 percentage points since 1999.

The number of visits to public libraries in Bridgend in 2012/13 was around 3,800 per thousand, which was lower than the Welsh average and was the lowest local authority rate.

The percentage of adults who regularly participated in sport and active recreation in Bridgend in 2008/09 was 53 per cent, around the same as 2004/05. Since 2002/03 the figures have been below the Welsh average but in 2008/09 the figure was above the Welsh average. The sampling method of the Active Adults Survey changed from a quota sample to a random probability sample in 2008/09, so care should be taken when making comparisons with previous years.
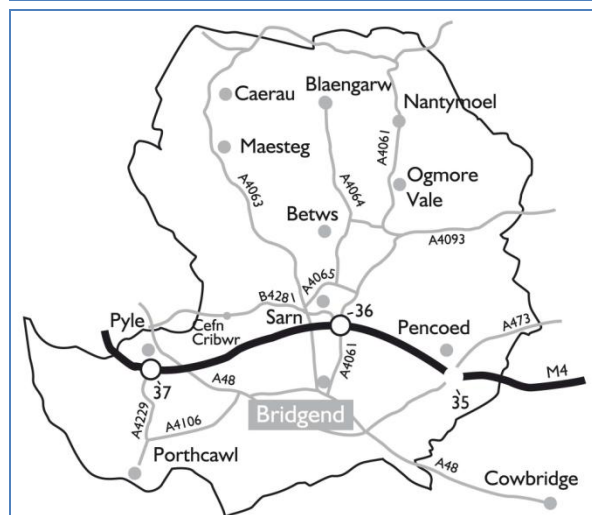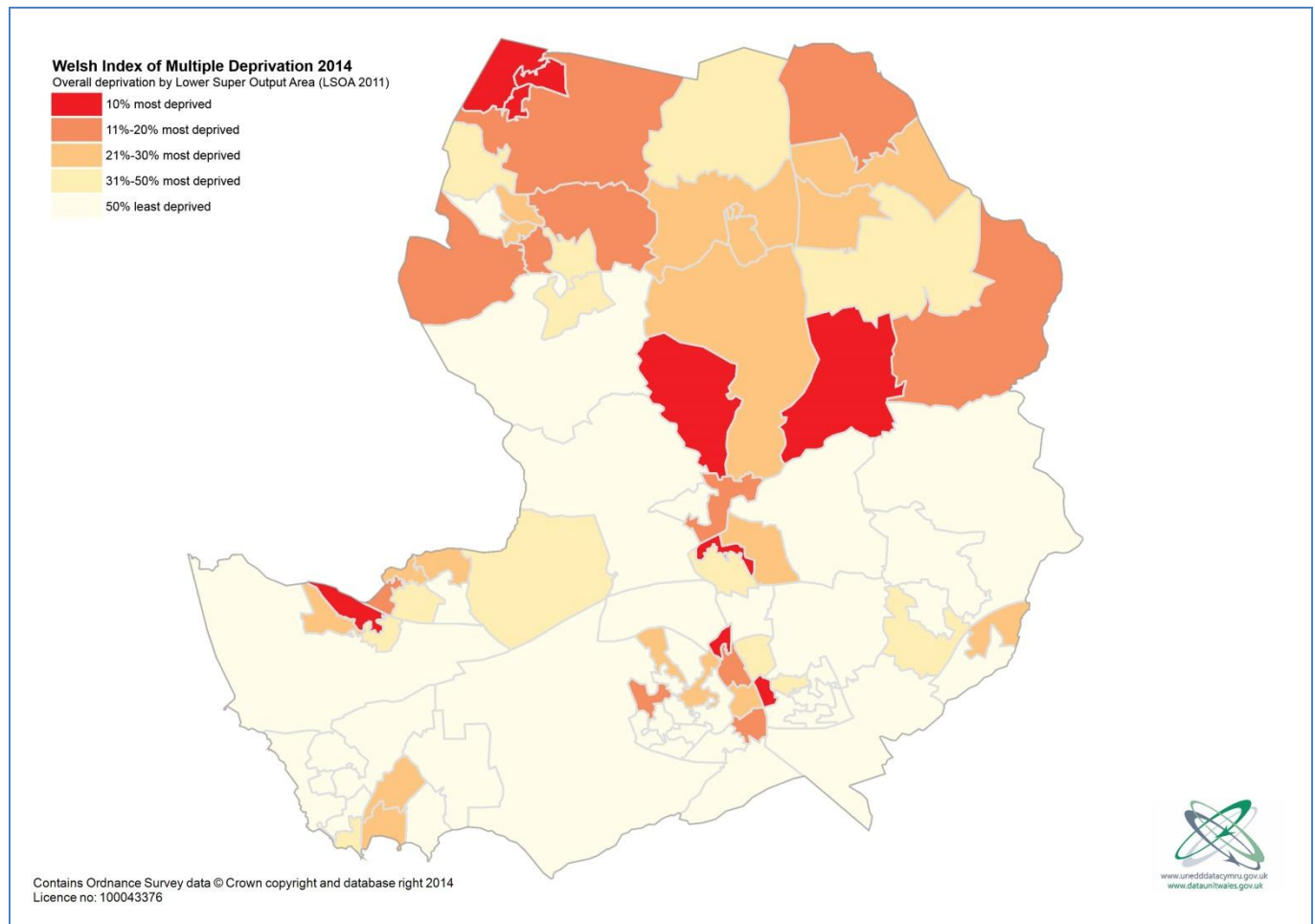
Deprivation in Bridgend

Deprivation is the lack of access to opportunities and resources which we might expect in our society. Material deprivation is having insufficient physical resources - food, shelter, and clothing – necessary to sustain a certain standard of life. Social deprivation refers to the ability of an individual to participate in the normal social life of the community.

Multiple Deprivation refers to more than one type of deprivation. An area is multiply deprived if, for more than one of these domains, the area has a concentration of people experiencing that type of deprivation. Generally speaking, the greater the number of domains for which there are high concentrations of deprivation then the greater the overall deprivation in an area. This does not necessarily mean that the same people suffer multiple types of deprivation in the area, although we would expect there to be significant overlap.

The Welsh Index of Multiple Deprivation (WIMD) is the Welsh Government's official measure of relative deprivation for small areas in Wales[11]. It is designed to identify those small areas where there are the highest concentrations of several different types of deprivation. The most recent index was produced in 2014.

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[11] http://www.wales.gov.uk/wimd & http://www.infobasecymru.net

The map below shows the WIMD overall deprivation levels for the Lower Super Output Areas of the Bridgend local authority area. Darkest areas are those in the 10% most deprived LSOAs in Wales, whilst the lightest coloured areas are those in the 50% least deprived LSOAs in Wales. To assist in the identification of specific areas, a simple map of the Bridgend county borough including major roads is also shown. A more detailed map of the borough is included in the LTP (Figure 1.1) which also shows the location of main and branch railway lines and stations.

Welsh Index of Multiple Deprivation 2014
Overall deprivation by Lower Super Output Area (LSOA 2011)

- 10% most deprived
- 11%-20% most deprived
- 21%-30% most deprived
- 31%-50% most deprived
- 50% least deprived

Contains Ordnance Survey data © Crown copyright and database right 2014
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www.uneddatacymru.gov.uk
www.dataunitwales.gov.uk

Access to services

The WIMD includes a domain that captures deprivation as a result of a household's inability to access a range of services considered necessary for day-to-day living. This covers both material deprivation (e.g. not being able to get food) and social aspects of deprivation (e.g. not being able to attend afterschool activities). Poor access to services is a factor that compounds other types of deprivation that exist within an area.

The access to services domain measures travel times to 8 services using public transport (on foot, train, bus, coach) and 9 services using private transport (car).

None of the LSOAs in Bridgend county borough are within the most deprived 10% in Wales for the access to services domain (which, generally speaking, are remote and sparsely populated areas in Mid and North Wales). However, 7 LSOAs in Bridgend county borough fall within the next 10%, i.e. the 10-20% range of most deprived LSOAs in Wales for the access to services domain. These are shown as the darkest areas in the annotated map below:

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13
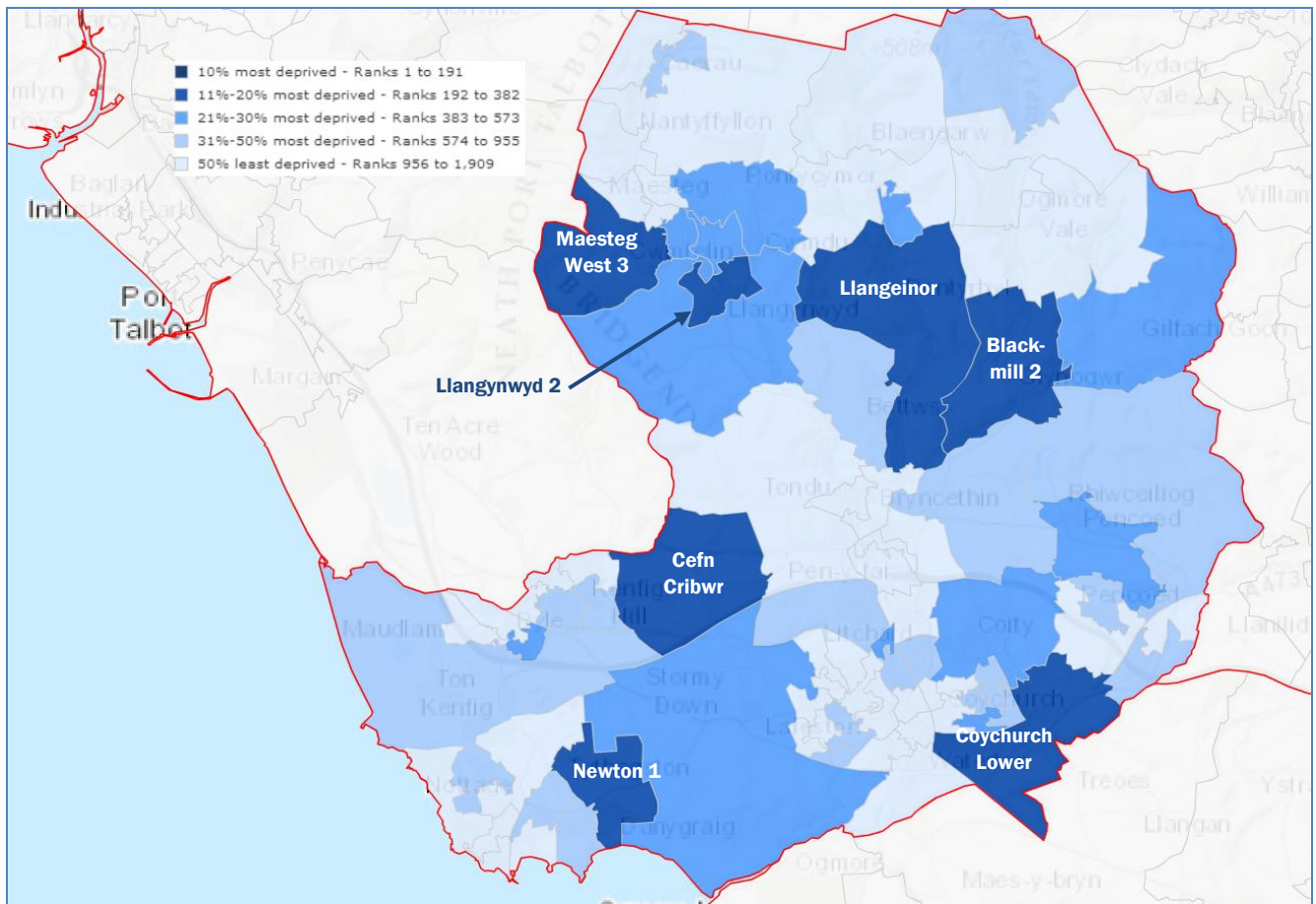
Although poor transport is only one aspect of deprivation, it may affect other important factors related to social exclusion and deprivation. This is explored further in the literature review element of this report.

Obesity in Bridgend

Issues around transport and particularly active travel have potential implications for physical activity levels and therefore obesity. The following obesity report cards[12] have been produced by Public Health Wales and provide additional information for the Bridgend local authority area on trends and benchmarks for four key obesity-related indicators.

♦ Percentage of adults who are overweight or obese

♦ Percentage of adults who are obese

♦ Percentage of children (aged 4-5 years) who are overweight or obese

♦ Percentage of adults meeting physical activity guidelines

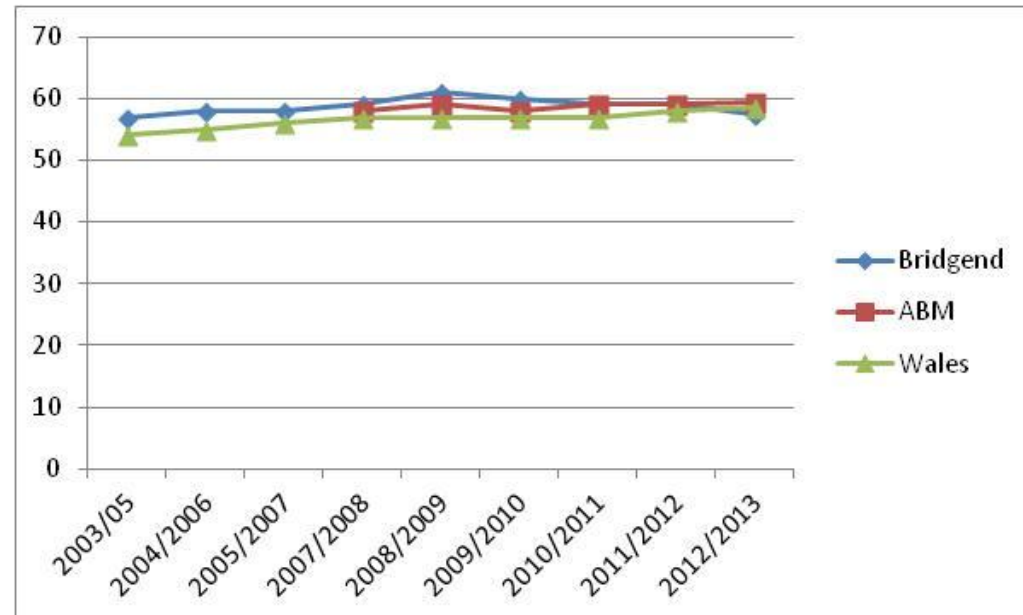These indicators are based on data from the Welsh Health Survey and the Public Health Wales Child Measurement Programme.

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[12] ABM Public Health Team (2014) ABM University Health Board Public Health Performance Framework Indicator Report Cards

Report card: Obesity
Indicator: Percentage of adults who are overweight or obese

Trend: 2003-5 to 2012-13

Why is it important?

Being overweight or obese is a significant risk factor for type 2 diabetes, coronary heart disease, dementia, knee osteoarthritis, mental health disorders and back pain. The prevalence of overweight and obesity is underpinned by diets and physical activity levels of children and adults not meeting guidelines for a healthy lifestyle. In particular, trends are showing low levels of initial breastfeeding at birth, increased consumption of energy dense processed food, not meeting recommendations for fruit and vegetable consumption and high levels of sedentary behaviour.

How are we doing?

Rates of overweight and obesity are high in ABM University Health Board area as in Wales and have shown an upward trend. Neath Port Talbot has consistently had the highest levels of overweight and obesity, with Swansea having the lowest. Bridgend and Neath Port Talbot have been consistently above the Welsh average. ABM University Health Board has the third highest level of overweight and obesity of the Health Boards.

Benchmark

Percentage 2012-2013

Local		Worst		Best		Wales
ABM	59.4	Cwm Taf HB	63.7	Cardiff & Vale HB	55.4	
Bridgend	57.5					58.6
NPT	61.3	Merthyr Tydfil	64.7	Monmouthshire	54.3	
Swansea	57.5					

Indicator notes:

This indicator is self-reported and likely to be an underestimate. The ABM and LA averages mask the variation between the most deprived and least deprived communities. These averages also mask variation by age group. The percentage who are overweight or obese peaks in the 45-64 year age band.

Source: Welsh Health Survey: http://wales.gov.uk/statistics-and-research/welsh-health-survey/?lang=en

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Report card: Obesity
Indicator: Percentage of adults who are obese

Trend: 2004-6 to 2012-13

Why is it important?

Rising levels of obesity are important as obesity is closely associated with the development of chronic conditions and disability. The direct cost of obesity to ABM University Health Board in terms of resource utilisation related to hospital admissions, outpatient visits, GP and practice nurse consultations and prescriptions is estimated to be 13 million per year. Modelled estimates predict that without investment and intervention, levels will continue to increase with a significant rise in obesity related diseases.

How are we doing?

Rates of obesity are high and are showing an upward trend. Overall, Bridgend and Neath Port Talbot have been consistently above the Welsh average with Swansea below the Welsh average.

Benchmark

Percentage: 2012-13

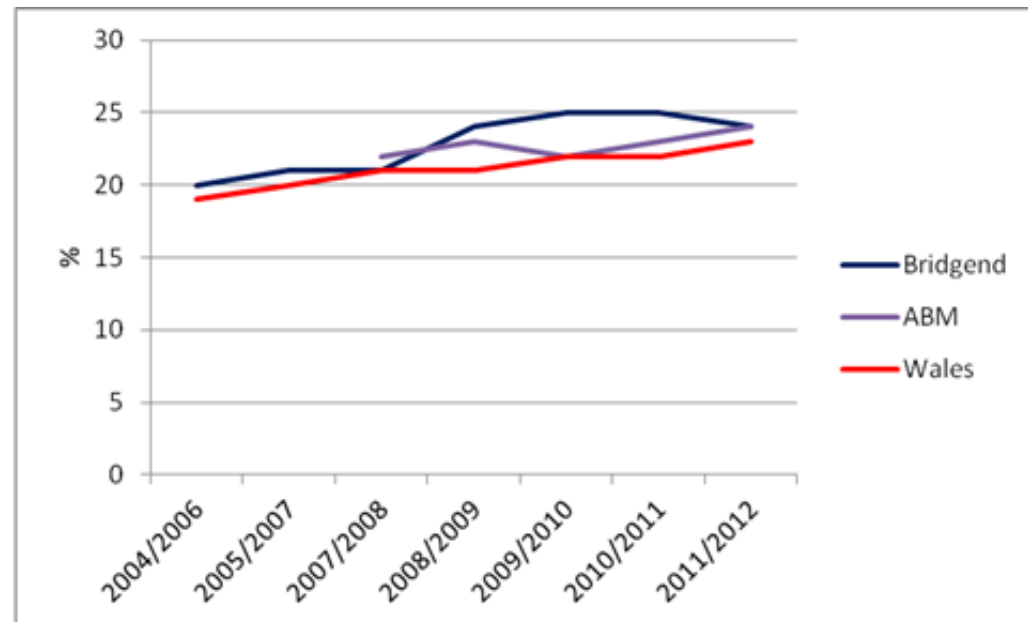| Local		Worst		Best		Wales
ABM	23.4	Cwm Taf HB	25.8	Powys HB	20.0	
Bridgend	21.9					
NPT	26.5	Torfaen	30.6	Gwynedd	18.0	22.8
Swansea	22.4					

Indicator notes:

This indicator is self-reported and likely to be an underestimate. The ABM and LA averages mask the variation between the most deprived and least deprived communities. These averages also mask variation by age group. The percentage who are overweight or obese peaks in the 45-64 year age band.

Source: Welsh Health Survey: http://wales.gov.uk/statistics-and-research/welsh-health-survey/?lang=en

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Report card: Obesity

Indicator: Percentage of children (aged 4-5 years) who are overweight or obese

2011-2012 – 2012-2013
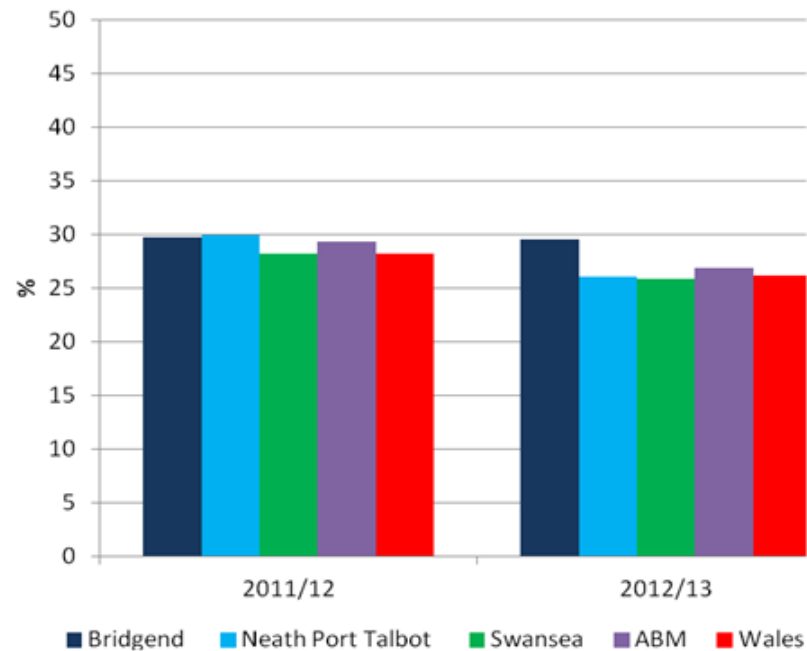
Why is it important?

Being overweight or obese in childhood has consequences for health in both the short term and the longer term. The emotional effects are often seen as the most immediate by children themselves. Although many of the serious physical health consequences are not seen until adulthood, some obesity related conditions such as type 2 diabetes can develop during childhood and young adulthood. Overweight and obese children are more likely to become obese adults, with the associated higher risks of morbidity, disability and premature mortality. Childhood obesity is largely preventable and early intervention is vital at this stage.

How are we doing?

ABMU HB had the second highest level of % of children (4-5 years) overweight or obese at 26.9%. This was higher than Wales (26%), England (22%), and the English region with the highest prevalence, the North East of England (24%). Over one in ten children (11.6%) in ABM University Health Board area are obese and this is higher than the Welsh average (11.3%). Boys are more likely to be obese than girls (11.9% and 11.4% respectively). In Wales obesity levels in children aged 4-5 years increase with levels of deprivation, this data is not available at the HB level.

Benchmark

| Percentage: 2012-13							
Local		**Worst**		**Best**		**Wales**
ABM	26.9	Cwm Taf HB	29.1	Powys THB	23.2	26.2
Bridgend	29.7	Merthyr Tydfil	32	Monmouthshire	21	
NPT	26.1					
Swansea	25.9					

Indicator notes:

The Child Measurement Programme was implemented in reception year across Wales for the first time during the 2011/12 academic year. While prevalence of obesity appears to have fallen from 13.2% in 2011/12.

Source: Public Health Wales Child Measurement Programme, 2011-12 and 2012-2013

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Report card: Obesity
Indicator: Physical activity: percentage of adults meeting physical activity guidelines

Trend: 2003-05 to 2012-13
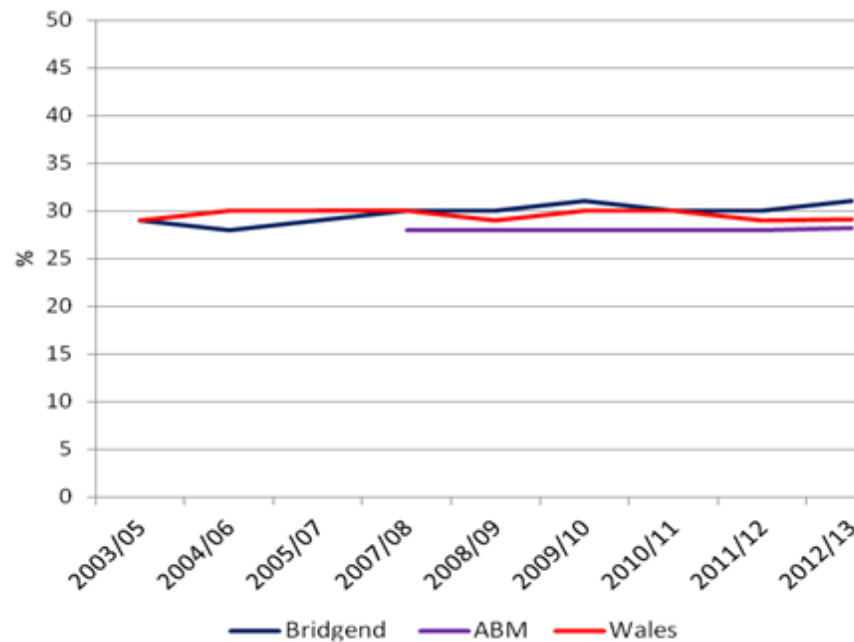
Why is it important?

Regular physical activity has many benefits to health, including mental health and well-being. People who are physically active have a reduced risk of developing major chronic diseases such as coronary heart disease, stroke, diabetes and some cancers and a 20-30% reduced risk of premature death. The latest data shows that only 28% of adults in ABM University Health Board area undertake sufficient activity to benefit their health. Evidence is emerging that not only increasing activity levels but reducing sedentary behaviour is important. It has been estimated that the cost of physical inactivity to Wales is about £650 million per year.

How are we doing?

The % of adults meeting physical activity guidelines in ABM University Health Board area has remained static since 2007/08 at 28%.

Benchmark

Percentage: 2012-13

Local		Worst		Best		Wales
ABM	28.2	Cardiff & Vale HB	25.8	Powys HB	34.8	
Bridgend	31.0					29.1
NPT	28.0	Cardiff	24.8	Ceredigion	36.6	
Swansea	26.8					

Indicator notes:

This indicator is self-reported and likely to be an underestimate as it is influenced by the respondent's ability to accurately recall and assess their physical activity levels. The averages masks variation by age and gender as the proportion of adults meeting the recommended guidelines decreases with age and men are more likely than women to meet the recommendations.

Source: Welsh Health Survey: http://wales.gov.uk/statistics-and-research/welsh-health-survey/?lang=en

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Vulnerable groups

The screening process identified the following baseline information about potentially vulnerable groups in relation to the Bridgend Local Transport Plan:

Children and young people

♦ High local rates of childhood obesity

♦ Children and young people have a higher accident rate as pedestrians and cyclists and also that a higher rate of road accidents affect children in deprived areas.

♦ Young people Not in Education, Employment or Training (NEET) are a local priority

♦ Changes in Welsh Government free school travel criteria mean that fewer children will qualify for free bus transport and will need to find other means of transport to school.

♦ Consequences of other policy decisions (e.g. on school provision, primary/secondary care provision) can impact on parental and young people's transport decisions.

Older people

♦ Ageing population (24.4% over 60) with 41% of the over 65's having a limiting long term illness

♦ All over 60's in Wales get a free bus pass

♦ Social isolation is a major issue identified by the Local Service Board, which can be compounded by rural isolation

♦ Local bus services are commercially operated, leaving limited scope to influence services.

♦ Local authorities are cutting bus subsidies

♦ Reconfiguration of health and social care services

♦ Resources are a major issue

Income related groups

♦ Affordability of public transport. People with disabilities and single parent families have been hardest hit by welfare reform, losing a significant amount of income[13].

  ◊ Lone parent – one dependent child average financial loss per year £1,950

  ◊ Lone parent – two or more dependent children average financial loss per year £2,120

  ◊ Disability Living Allowance Average loss per claimant £ 2,600 per year

  ◊ Incapacity benefits Average loss per claimant £ 2,000 per year

♦ Some people with disabilities can obtain a free bus pass but there is no subsidy for those on out of work benefits.

♦ The cost of getting to work, particularly in the first few weeks of employment

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[13] Christina Beatty and Steve Fothergill, "The Impact of Welfare Reform on the Valleys" (Sheffield: Centre for Regional Economic and Social Research, Sheffield Hallam University, September 2014), http://www.shu.ac.uk/research/cresr/sites/shu.ac.uk/files/welsh-valleys-report-2014.pdf.

Groups who suffer discrimination or other social disadvantage

♦ All active travel routes are required to be DDA compliant

♦ Some people with disabilities can obtain a free bus pass

Geographical groups

♦ A local Rural Development Plan is in place and Transport Policy officers are linked into this work

♦ The transport team have worked closely with Communities First areas to improve transport access in these areas

♦ Key changes to health and social care services are highlighted in the plan

Evidence of impacts on health: stakeholders

As previously indicated, evidence was gathered from a group of organisational stakeholders familiar with the policy proposal and population, using the WHIASU screening checklist. A summary of the potential positive (✓) and negative (×) health impacts identified by the stakeholder group is provided below – further details can be found in the Screening Report in Appendix 2.

Summary of Potential Health Impacts Identified

Potential Positive Impacts

- ✓ Mental Wellbeing –potential to increase choice of transport options and therefore a sense of control.
- ✓ Mental wellbeing – increased access = increased opportunities to participate in community life, employment, education and activities for all – but especially vulnerable groups
- ✓ Lifestyles – increase in physical activity via improved active travel provision.
- ✓ Family and community relationships – improved opportunities for social connections due to more active travel. People talking and meeting on the way to school/work more
- ✓ Citizen power and influence – through community engagement in Community Access Plans and local Safer Routes schemes
- ✓ Divisions in communities – reduced as improved transport links
- ✓ Peer pressure – creating new positive group norms around active travel e.g. safer routes to school scheme
- ✓ Neighbourhood design – opportunities for communities to engage in designing schemes and Community Access Plans
- ✓ Air quality and noise levels - could improve if there is a rise in active travel.
- ✓ Green space – opportunities to increase access to green space and trees in the design of schemes
- ✓ Economic conditions – increased employment opportunities and affordable access to jobs
- ✓ Improved access to services

Potential Negative Impacts

- × Mental Wellbeing – reduced choice and opportunities to participate if schemes not funded
- × Lifestyles and Living Conditions – Active travel can lead to increased road injuries for pedestrians and cyclists
- × Divisions in communities – may be created if there is conflicting views over individual schemes
- × Fear of crime – may be a factor in the development of transport schemes. This needs to be addressed at the design stage.
- × Air Quality, Noise and Road Hazards and injury - Potential negative impacts if economic growth creates increased car usage.

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- × Air Quality, Noise and Road Hazards and injury - Potential negative impacts from KP1 of the Plan: "Improve access to freight".
- × Increased Carbon Dioxide/Climate Change – if car usage is not reduced, freight increases and there is no shift to active travel.

Impacts on Vulnerable groups

Significant potential impacts were identified on all vulnerable groups.

Children and young people

- ✓ Improved active travel opportunities between schools/colleges, connecting residential areas and access to employment sites for young people. Increased physical activity opportunities.
- ✓ Junction 36 of M4 is a collision hotspot, a significant % of which involve children. If schemes such as junction improvements reduce accidents then this will have a positive impact
- ✓ Positive impact of safer routes schemes
- ✓ Children and young people are currently consulted on school travel plans
- × Encouraging further walking and cycling by children and young people may put them at risk of higher rates of injury. Road safety education schemes, safe design of routes and access to bike safety equipment are key to preventing this impact.

Older people

Affordability of transport has been addressed through free bus passes, however availability remains an issue. Opportunities for positive impacts are:

- ✓ The focus on developing community transport options
- × No major negatives identified. However, given the context of the ageing population with chronic long term illness, transport accessibility is a key factor in addressing social isolation and ensuring people can access community services and therefore remain in independent living as long as possible.

Income related groups

- ✓ The plan has a focus on reducing economic inactivity and affordable and sustainable access to jobs, services and education as well as maximising access to key employment sites (KP1 and KP2)
- ✓ The focus on active travel (KP4) which can be low cost
  - × However the initial cost of obtaining a bike and bike equipment for taking advantage of new opportunities for active travel. This could act as a barrier.
- ✓ Developing lift sharing schemes
- ✓ Community transport initiatives like Wheels to Work

Groups who suffer discrimination or other social disadvantage

- ✓ All active travel routes are Disability Discrimination Act compliant, and significant improvements have been made to the physical infrastructure for disabled access to public transport.
- ✓ Extensive transport information is available online.
- × Affordability of public transport. People with disabilities and single parent families have been hardest hit by welfare reform, losing a significant amount of income.

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- ☓ Barriers to active travel exist, e.g. cost of bike and bike safety equipment. Families on low income could benefit from a low cost bike scheme noted above in order to be able to take up the opportunity of active travel.
- ☓ The experiences of people with disabilities in accessing public transport can be negative and a barrier: e.g. drivers not asking standing passengers to vacate wheelchair area on bus, drivers not aligning bus to kerb to allow wheelchair access.
- ☓ Depending solely on online transport information provides a barrier for some groups who may not have internet access/skills to use internet or who would benefit from face to face travel advice.

Geographical Groups

- ✓ The plan has a focus on improving access to services for rural areas and targeting investment on the most disadvantaged communities (KP3)
- ☓ Funding of schemes is not directly related to the LTP, and comes from a range of sources that have different aims and objectives. Although the plan prioritises which schemes should be funded first, there is a potential risk that funding to implement schemes does not follow the prioritisations. This could lead to increasing inequity where the schemes being implemented do not deliver benefits to the most isolated and/or disadvantaged areas.

Key issues for vulnerable groups overall

- ♦ Affordability – of public transport and active travel by bike
- ♦ Road safety – children are more likely to be involved in road accidents and collisions as pedestrians and cyclists
- ♦ Access to services – closer engagement with health services is needed to ensure integrated transport planning (and similarly with other service providers such as education)
- ♦ Access to travel information – ensuring that this is available in a range of formats and locations
- ♦ The important role of community transport in facilitating access

Evidence of impacts on health: published literature

The published evidence is reviewed below in three sections:

♦ health impacts associated with different modes of transport

♦ a thematic review of the different types of health impact

♦ health impacts of transport interventions

Health impacts associated with different modes of transport

This section of the review is summarised from the *Transport and Health Resource*[14] published jointly by the Department of Health and Department for Transport to support local transport planning in England. For each mode positive and negative health impacts are identified, together with information on barriers to accessing and/or key issues to consider.

Walking

✓ Increasing levels of walking promotes good health and reduces prevalence and treatment costs of important physical health issues such as obesity, cardiovascular disease, cancer, type 2 diabetes and osteoporosis.

✓ Walking also promotes social inclusion, and can reduce crime and perceptions of crime.

✓ Typically open to all ages and socioeconomic groups.

✗ The chief risks are those associated with collision with road vehicles; children are at increased risk and in particular those from some minority ethnic backgrounds and in disadvantaged areas.

Environmental barriers to walking include physical barriers, quality of urban environment, pedestrian safety. Behavioural barriers include general sedentary behaviour and lack of awareness of benefits of walking; (perceived) lack of supporting infrastructure; and (perceived) crime and safety.

Cycling

✓ Again promotes good health and reduces prevalence and treatment costs. Initial cost but then relatively cheap health transport mode. Open to most ages and socioeconomic groups.

✗ Risks are collisions with other road users. Some evidence that increasing numbers of cyclists decreases risk of casualties ('safety in numbers' hypothesis).

Barriers are associated with perception of danger, concerns about fitness, unrealistic expectations about speed of car vs bike journeys, initial cost, convenience, secure storage, limited opportunity to interchange with other modes of transport (e.g. bus/train).

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[14] Department of Health and Department for Transport, "Transport and Health Resource: Delivering Healthy Local Transport Plans."

Public transport

✓ Encourages environmental and health conscious behaviour, reducing overall vehicle movements.

✓ Associated with increased physical activity (walking to and from).

✕ Risks: Local air and noise emissions, community severance, injuries.

Public transport is not always a viable, cost effective or convenient option – especially in rural areas or for particular journey requirements (e.g. carrying belongings or goods). Key barriers include actual or perceived concerns about comfort, speed, reliability, convenience and cost. Concerns across age and gender groups about security and safety at train and bus stations.

Private transport (primarily the car)

✓ Enormous freedom and convenience to a range of socioeconomic groups – greater access to amenities, services, recreation and social networks. Linked to improved mental health independent of social class, self-esteem and income.[15]

✕ However, this has increased distance people are prepared to travel for everyday tasks – creating a positive reinforcement of the requirement for private vehicle ownership.

✕ Increased private vehicle ownership has contributed to sedentary lifestyles linked to increasing levels of obesity, type 2 diabetes, cancer and cardiovascular disease.

✕ Major source of noise and air pollution in urban areas (in particular disadvantaged communities); create environmental barriers leading to severance

✕ Key contributor to total greenhouse gas emissions.

✓ Decline in rates of fatal and serious injuries due to road traffic incidents …

✕ … but rates are not evenly distributed by age or socioeconomic group.

Freight transport

✓ Crucial in creating sustainable and vibrant communities – access to goods and employment

✕ Poorly perceived by general public

✕ Associated with increased risk of RTIs

✕ Increased emissions (local air quality and climate change) and congestion

✕ Community severance

Key issues: reduce cumulative impacts with other journey types (e.g. commuting to employment, school run) and vulnerable modes of transport (cyclists and pedestrians).

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[15] NHS Health Scotland, *Health Impact Assessment of Transport Initiatives*.

Thematic review of health impacts

This section explores the evidence thematically considering the issues associated with the various impacts that transport can have on health.

Physical activity

In the UK, the current Chief Medical Officers' recommendation for adults is to accumulate thirty minutes of moderate-intensity activity, such as brisk walking, on most days of the week (at least five days per week). This moderate-intensity activity can be accumulated in several bouts of at least ten minutes and is sufficient to bring health benefits. For example, as already discussed, physical activity has beneficial impacts on obesity, type 2 diabetes, CHD, and some cancers.

Some modes of transport involve more physical activity than others, and using physically active transport may lead to increased levels of physical activity overall. However, for some, walking or cycling as a form of transport may be used as a substitute for other forms of exercise.[16]

Overall levels of physical activity and physically active transport (i.e. walking and cycling – individually and as a means of accessing public transport) have been linked to characteristics of the local environment, in particular the urban built environment. Increasing the 'walkability' of an area improves perceptions of risk and safety, further encouraging walking and social networks particularly among vulnerable groups (older and infirm).

But not all commuter and community needs can be met through active & public transport (e.g. elderly people, people who are disabled and others with health problems can find it difficult to use public transport or to walk). The priority should be to seek modal shift away from private vehicles where that can be better served through active and public transport (i.e. commuting to employment, school run).[17]

Transport-related air pollution and health

Air pollution remains a public health problem associated with several adverse health outcomes. Although it has long been accepted that air pollution episodes lead to increased mortality and morbidity, more recent research has established that 'normal' levels of outdoor air pollution may also have adverse consequences. The main cause of poor health following exposure to increased air pollution is thought to be particulate matter less than 10μm (PM_{10}). Within this range, very small (fine - $PM_{2.5}$, or ultrafine - $PM_{0.1}$) particles are thought to be more dangerous than coarser ones.

Acute exposure

Some effects occur in the days immediately following air pollution. For over a decade it has been accepted that in the days following higher air pollution there are small but clear increases in:

♦ premature deaths from cardiorespiratory causes

♦ respiratory hospital admissions

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[16] Ibid.

[17] Department of Health and Department for Transport, "Transport and Health Resource: Delivering Healthy Local Transport Plans."

- ♦ exacerbations of pre-existing asthma
- ♦ respiratory symptoms, and
- ♦ reductions in lung function

Those at greatest risk are people whose health is already impaired, in particular those with existing cardiorespiratory disease. However, small increases in risks across a large population may have significant public health impacts.

Chronic exposure

Much more importantly for public health, there are adverse consequences of longer term exposure to outdoor air pollution, especially to ambient particulate matter, even at 'normal' levels. In the UK, the reduction in life expectancy from transport-related air pollution is estimated to be of the same order as the reduction from passive smoking.

Road transport is responsible for 30% of the emissions of $PM_{2.5}$, and about 50% of the emissions of $PM_{0.1}$. It is estimated that overall there is a 6% change in mortality per 10 µg/m^3 change in annual average $PM_{2.5}$. For many pollutants, concentrations in vehicles are higher than background and general roadside concentrations – magnitudes vary in particular circumstances according to traffic and weather conditions and characteristics of the vehicle. Exposure to air pollution is also influenced by time spent in various micro-environments (home, work, travelling) and breathing patterns (which are in turn influenced by levels of physical activity).[18]

Transport-related noise pollution and health

Motorised forms of transport can provide a source of noise pollution, with road traffic being the most widespread. Transport is a predominant source of noise exposure in urban areas, and is associated with non-auditory health outcomes including annoyance, stress and anxiety, and sleep disturbance.[19]

Locations exposed to raised levels of transport noise tend also to be exposed to higher levels of transport-related air pollution, with both exposures being associated with increased risk of cardiovascular disease – it is unclear how these exposures interact or confound one another.[20]

Rail and air traffic noise are less common but may be a serious cause of noise pollution for those living/working near to a rail or air network. Walking and cycling are not a source of noise pollution. Living in an area with high levels of aircraft noise is associated with high levels of annoyance and irritation, and potential disturbance and reduced quality of sleep. Overall the links between transport noise and health are inconclusive.[21]

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[18] NHS Health Scotland, *Health Impact Assessment of Transport Initiatives*.

[19] Department of Health and Department for Transport, "Transport and Health Resource: Delivering Healthy Local Transport Plans."

[20] Mueller et al., "Health Impact Assessment of Active Transportation."

[21] NHS Health Scotland, *Health Impact Assessment of Transport Initiatives*.

Transport-related injuries

Travel by rail and aeroplane has the lowest rate of fatality or serious injury. Despite increased volumes of road traffic there have been major improvements in road safety over the years – but relative magnitude and likelihood of risk varies between modes – motorcyclists, pedestrians and bicyclists having rates of death/serious injury several times higher than those of cars and public transport.[22]

Cyclists and pedestrians are the road users most vulnerable to being killed or seriously injured in a road crash, because of their lack of protection against the speed and weight of a motor vehicle. Rates of crashes involving cyclists are lower in countries where cycling is common.[23] The most commonly cited cause of a road crash is excess speed - the survival rate of a pedestrian involved in a road traffic incident increases from 15% if hit by a vehicle at 40mph to 95% if hit at 20mph. A 1mph change in overall average speed results in a 5% change in accidents and a 7% change in fatalities.[24]

Personal safety and perceptions of risk

Trips and slips due to poorly maintained/designed pedestrian amenities (particularly in older and infirm people) – perceptions of these risks reduce accessibility and limit opportunities for physical activity. Crime: fear of threats to personal safety is a key barrier to active and public transport use across groups, and particularly impacts on older and infirm people.

Impacts of congestion

Congestion leading to delay has potential to increase stress to both commuters and the communities where the congestion and disruption occurs. It can further compound community severance and isolation of community groups, and can influence physical activity levels due to poor perceptions about the quality and safety of the urban environment.[25]

Social exclusion

Certain groups within the community (women, the unemployed, older people, those with health problems and those in low-income groups) are more likely to experience transport-related social exclusion. Excluded groups are heavily reliant on walking, public transport and lifts from family/friends. Those without a car report finding it harder to travel to get to shops, employment, healthcare and other services.

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[22] Ibid.

[23] NHS Health Scotland, *Health Impact Assessment of Transport Initiatives*.

[24] Vohra, Amo-Danso, and Dan-Ogosi, "Northumberland Local Transport Plan 3: Main HIA Report - Final Draft."

[25] Department of Health and Department for Transport, "Transport and Health Resource: Delivering Healthy Local Transport Plans."

Community severance

Construction of new transport routes through an existing community may lead to community severance, where the routes bisects the community, providing a physical and social barrier reducing access to local amenities and disruption of local social networks. The precise health impacts of community severance are not known and are likely to be influenced by local context, i.e. the reliance of the affected population on the services and networks 'severed'.[26]

Significant increases in traffic flow on a road may also lead to community severance, creating a barrier that was not previously the case – a busy road can reduce the number of social interactions and relationships across it. This can affect social support, particularly for the elderly and infirm, which could lead to mental health problems such as depression.[27]

Climate change

There is wide scientific consensus that the global climate is changing and that most of this change is attributable to human activity since the pre-industrial era. Motorised transport accounts for 22% of CO_2 emissions in the UK. Transport is the only sector in the UK in which carbon emissions are still increasing. The health impacts of climate change differ from the other impacts discussed in that their effects are global and will arise over a longer time interval. Transport decisions made in one area can cause impacts across the world, such that the cumulative effects of local decisions need to be considered. Although any individual decision may have a very small impact, an accumulation of many similar small changes may together have serious environmental, social, economic and health impacts at a global level. Lower income populations, predominantly within tropical/subtropical countries, are the most likely to be seriously affected.[28]

Transport and health inequalities

The relationships between transport and health are socio-economically patterned; there is a clear social gradient in access to work and services – greater freedom to travel as income increases (linked to increased car ownership).

There is a disproportionate risk of death or serious injury to children and children from socio-economic deprived and minority ethnic communities in particular. In Wales, inequalities exist with hospital admission rates for pedestrian injuries in children being over three times higher in the most deprived areas compared with the least deprived (see overleaf).

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[26] NHS Health Scotland, *Health Impact Assessment of Transport Initiatives.*

[27] Vohra, Amo-Danso, and Dan-Ogosi, "Northumberland Local Transport Plan 3: Main HIA Report - Final Draft."

[28] NHS Health Scotland, *Health Impact Assessment of Transport Initiatives.*

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Admissions for pedestrian injuries by fifth of deprivation, children aged 5-14, Wales, rate per 100,000, 2006-2010 (Data source: PEDW (NWIS), MYE (ONS) & WIMD 2011 (WG) in Public Health Wales Observatory (2013) Health of Children and Young people in Wales

Wales = 31.7

Least deprived	15.1
Next least deprived	20.9
Middle	28.8
Next most deprived	38.8
Most deprived	51.0
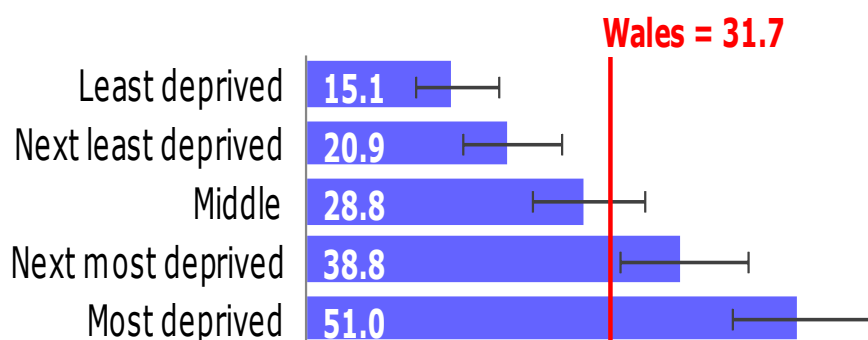
Such risk is thought to be due to a combination of factors including, a higher likelihood of such communities residing in proximity to main and busy roads, lower quality urban areas without open and green space for recreation, and a lower appreciation as to the relative risks.

Disadvantaged groups are also more likely to be subject to higher ambient concentrations of air pollution (due to living close to main roads, areas of congestion and industrial sources), and are less likely to have access to private vehicles. They are therefore more likely to bear the brunt of multiple harmful exposures and are less likely to receive the convenience and health benefits associated with increased mobility.[29]

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[29] Department of Health and Department for Transport, "Transport and Health Resource: Delivering Healthy Local Transport Plans."

Health impacts of transport interventions

This section considers how various transport policy interventions may have impacts on health.

Reducing health inequalities associated with transport

The Marmot Review of health inequalities in England[30] recommends 'proportional universalism', providing services across society according to the differing needs of different population groups – an approach also endorsed by the Welsh Government.[31] The Marmot review supports increasing active travel and public transport use both for direct health benefits of increased physical activity and for role in developing more sustainable communities. Improving active travel across the social gradient requires incentives to increase active travel, as well as initiatives to improve safety.

Diderichsen et al[32] developed a framework for studying the pathways from the social context to health outcomes, and for introducing policy interventions. This model identifies the main mechanisms by which health inequities are generated, as shown in the diagram below:

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[30] Michael Marmot, "Fair Society Healthy Lives: The Marmot Review. Strategic Review of Health Inequalities in England Post-2010," February 2010, http://www.instituteofhealthequity.org/Content/FileManager/pdf/fairsocietyhealthylives.pdf.

[31] Welsh Government, "Fairer Health Outcomes for All: Reducing Inequities in Health Strategic Action Plan" (Cardiff: Welsh Government, March 2011), http://gov.wales/docs/phhs/publications/110329working2en.pdf.

[32] Finn Diderichsen, Timothy Evans, and Margaret Whitehead, "The Social Basis of Disparities in Health," in *Challenging Inequities in Health*, by Timothy Evans et al. (New York: Oxford University Press, 2001).
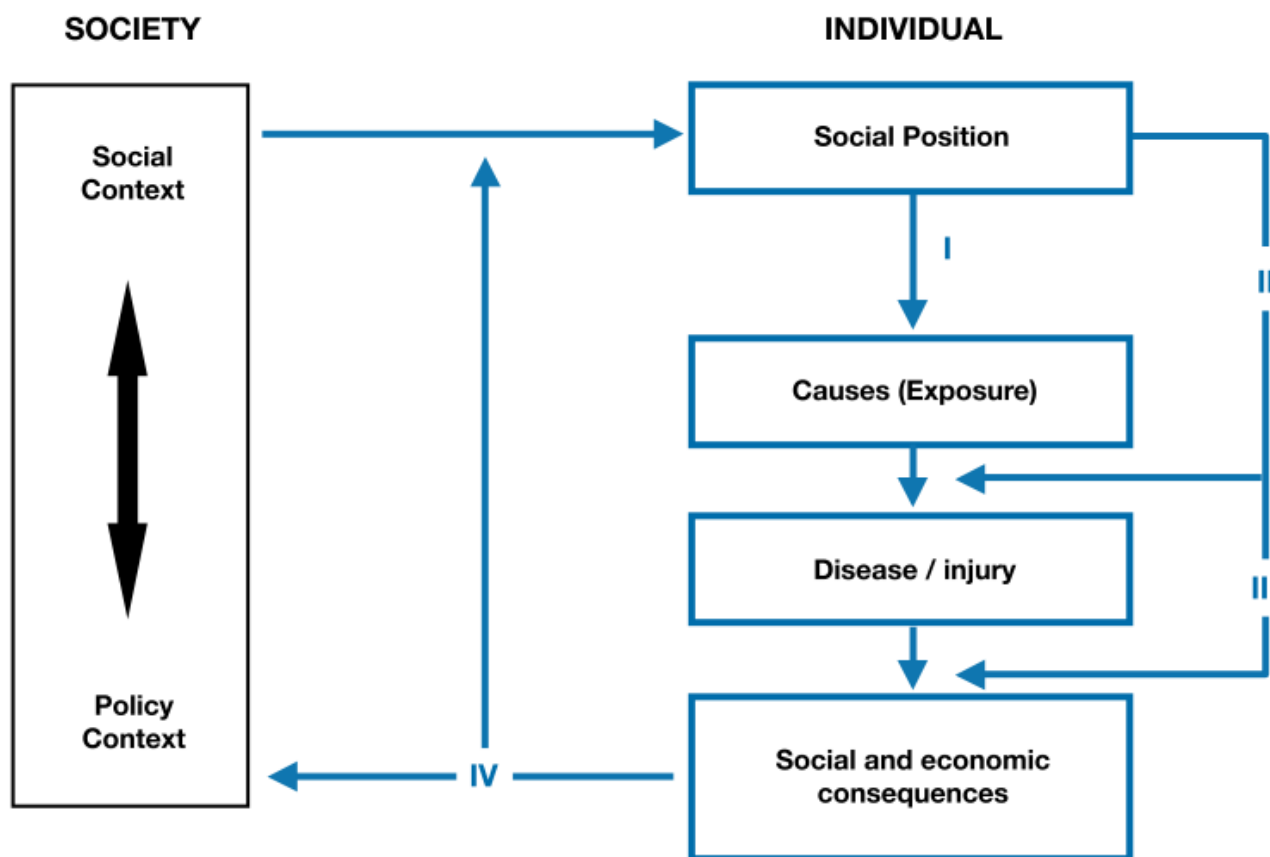
Evidence presented in this impact assessment can be considered against this framework to identify how transport can contribute to social inequities in health:

I.   Social stratification: Population is sorted into different social positions, allocating different power and resources to different social positions. Groups that are better off typically have more power and opportunities to live a healthy life than groups that are less privileged – for example through access to private vehicles, by living in areas where levels of air and noise pollution are less likely to occur, and lobbying for action where transport-related harms (or perceived harms) occur.

II. Differential exposure: disadvantaged groups are more likely to be exposed to the harmful impacts of transport, and at higher intensity/frequency. They are less likely to receive the social and health benefits of transport.

III. Differential vulnerability: individuals in lower social positions are often exposed to many different risk factors (environmental and personal), which may interact, and as a result they are more vulnerable than those in higher social positions.

IV. Differential consequences: The social and economic consequences of illness are not only dependent on the health problem suffered by the person, but also on the effects on that person's ability to stay employed, live independently and participate in their community. In general, those in wealthier groups are better able to absorb the impacts and costs of these consequences. Those in more disadvantaged groups may be less able to cope with the consequences of becoming ill or losing employment, and the implications that may have for their ability to access and use various modes of transport. This can create a vicious spiral – e.g. physical activity

reduces, leading to increased levels of obesity, worsening health, and further limiting ability to access active travel and/or public transport.

The Diderichsen model therefore also provides a framework for successful intervention to reduce inequities, and the design and implementation of transport policies and interventions should consider how these mechanisms can be disrupted in order to have greatest impact on health inequities. Equally, failing to consider how policies and interventions are targeted and implemented to address health inequities (both individually and in combination) can lead to intervention-generated inequity, where the benefits of the intervention are accrued by healthier and less deprived populations.

Active travel schemes

De Nazelle et al[33] reviewed available literature regarding health impacts from policies that encourage active travel, in the context of developing health impact assessment (HIA) models to help decision-makers propose better solutions for healthy environments. Policies that increase active travel are likely to generate large individual health benefits through increases in physical activity for active travellers. Smaller, but population-wide benefits could accrue through reductions in air and noise pollution. Depending on conditions of policy implementations, risk tradeoffs are possible for some individuals who shift to active travel and consequently increase inhalation of air pollutants and exposure to traffic injuries. Well-designed policies may enhance health benefits through indirect outcomes such as improved social capital and diet, but these synergies are not sufficiently well understood to allow quantification at this time.
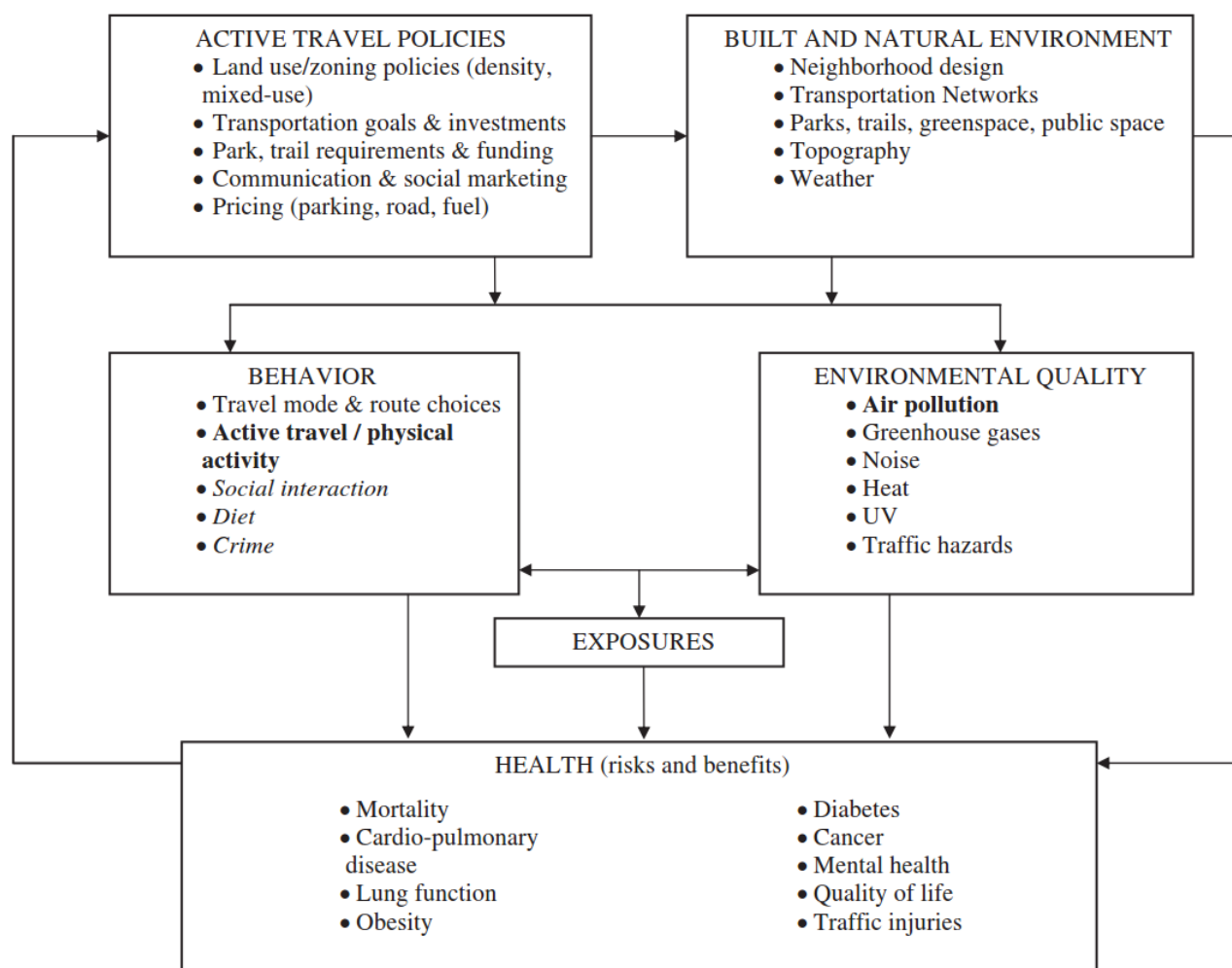
The review contributes to the case for more integrative approaches to decision-making, in particular considering possible unintended consequences of policies and solutions to mitigate risks, and integrating synergies and impacts that are not classically considered but could be important predictors of quality of life. The goal of an urban transport policy impact assessment could thus be to identify promising opportunities for simultaneously meeting society's transportation and public health objectives.

As part of their review, de Nazelle et al developed a conceptual framework of the health impacts of active travel policies, shown in the diagram below. In **bold** are shown behavioural and environmental quality variables recognised as having strongest exposure-health quantifications available, while variables in *italics* are the most uncertain to quantify.

[33] Audrey de Nazelle et al., "Improving Health through Policies That Promote Active Travel: A Review of Evidence to Support Integrated Health Impact Assessment," *Environment International* 37, no. 4 (May 2011): 766–77, doi:10.1016/j.envint.2011.02.003.

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Conceptual model of health impacts of active travel policies

ACTIVE TRAVEL POLICIES
- Land use/zoning policies (density, mixed-use)
- Transportation goals & investments
- Park, trail requirements & funding
- Communication & social marketing
- Pricing (parking, road, fuel)

BUILT AND NATURAL ENVIRONMENT
- Neighborhood design
- Transportation Networks
- Parks, trails, greenspace, public space
- Topography
- Weather

BEHAVIOR
- Travel mode & route choices
- **Active travel / physical activity**
- *Social interaction*
- *Diet*
- *Crime*

ENVIRONMENTAL QUALITY
- **Air pollution**
- Greenhouse gases
- Noise
- Heat
- UV
- Traffic hazards

EXPOSURES

HEALTH (risks and benefits)
- Mortality
- Cardio-pulmonary disease
- Lung function
- Obesity
- Diabetes
- Cancer
- Mental health
- Quality of life
- Traffic injuries

More recently, Mueller et al[34] conducted a systematic review of studies quantifying the health benefits and risks of active transport. They found that consistently, the vast majority of the 30 reviewed studies estimated *substantial net health benefits accruing from a mode shift to active transportation* – primarily due to increases in physical activity. *Estimated health risks from traffic incidents are minor compared with these health benefits*. Air pollution exposure was estimated to have small health impacts – small benefits to the general population and small risks to the active traveller.

Jones[35] investigated the localised effects of traffic-free path interventions on cycling for everyday travel. Providing urban traffic-free routes alone is insufficient to encourage a shift from car travel to cycling for everyday journeys (as they are often not the most direct route) – but they do facilitate near-to-home recreational cycling, which may act as a gateway to increasing physical activity, and for some users may build cycling confidence and competence that subsequently leads to them cycling more regularly.

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[34] Mueller et al., "Health Impact Assessment of Active Transportation."

[35] Tim Jones, "Getting the British Back on bicycles—The Effects of Urban Traffic-Free Paths on Everyday Cycling," *Transport Policy* 20 (March 2012): 138–49, doi:10.1016/j.tranpol.2012.01.014.

A systematic review of the environmental factors associated with increased cycling[36] identified that policies promoting cycle lane construction appear promising but that the sociodemographic distribution of effects on physical activity is unclear, and many other types of environmental policies and interventions have yet to be rigorously evaluated.

New transport infrastructure

This category includes schemes such as road bypasses and dualling of existing roads. Out-of-town bypasses decrease injuries on main roads through or around towns, although more robust evidence is needed to assess the impacts on secondary roads. New major urban roads have little effect on incidence of injury, whilst new major roads between towns decrease injuries. There is no available research evidence about the impacts of new roads on respiratory health, mental health, physical activity and access to health services. Out-of-town bypasses reduce disturbance and community severance in towns but may increase them elsewhere. Major urban roads increase disturbance and community severance. Changes in traffic levels and traffic fumes may lead to an impact on respiratory health. However, there is no conclusive research evidence that respiratory symptoms are affected by increases or decreases in traffic linked to the building of new roads and bypasses.[37]

Increasing existing highway capacity

Increasing highway capacity creates the potential for an increased number of vehicles and hence greater traffic, noise and air pollution. If the increase leads to slow-moving traffic then congestion can result; on the other hand if traffic is free flowing then congestion and pollution effects may be reduced. Removing peak-time congestion by increasing capacity can be very difficult – drivers who previously used alternative routes may use the expanded highway, and those travelling at other times may shift their travel to peak times.

Public transport users may shift to driving their vehicles, which can create a vicious spiral as the public transport operator may see a reduction in income, leading to increases in fares and/or reductions in service frequencies – leading more users to switch to using cars. In the end this leads to congestion on the expanded road that was worse than before.[38]

Such effects are also most likely to impact on disadvantaged communities, who are less likely to have access to a car and are therefore most vulnerable to increased costs or reduced frequencies of public transport services.

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[36] Simon D. S. Fraser and Karen Lock, "Cycling for Transport and Public Health: A Systematic Review of the Effect of the Environment on Cycling," *The European Journal of Public Health* 21, no. 6 (December 1, 2011): 738–43, doi:10.1093/eurpub/ckq145.

[37] NHS Health Scotland, *Health Impact Assessment of Transport Initiatives*.

[38] Vohra, Amo-Danso, and Dan-Ogosi, "Northumberland Local Transport Plan 3: Main HIA Report - Final Draft."

Road safety schemes

Traffic light cameras and speed cameras

Road crashes are a prime cause of death and disability and red-light running is a common cause of crashes at signalised intersections. Red-light cameras are increasingly used to promote compliance with traffic signals. Manual enforcement methods are resource intensive and high risk, whereas red-light cameras can operate 24 hours a day and do not involve high-speed pursuits. A Cochrane systematic review found that red-light cameras are effective in reducing total casualty crashes. The evidence is less conclusive on total collisions, specific casualty collision types and violations, where reductions achieved could be explained by the play of chance. Larger and better controlled studies are needed.[39]

Measures aimed at reducing traffic speed are considered essential to preventing road injuries; the use of speed cameras is one such measure. A Cochrane systematic review concluded that the consistency of reported reductions in speed and crash outcomes across all studies show that speed cameras are a worthwhile intervention for reducing the number of road traffic injuries and deaths. However, whilst the evidence base clearly demonstrates a positive direction in the effect, an overall magnitude of this effect is currently not deducible – again, larger and more rigorous studies are required.[40]

Street lighting

Street lighting has been suggested as a relatively low-cost intervention with the potential to prevent traffic crashes. A Cochrane systematic review assessed the effects of street lighting on injuries caused by road traffic crashes, and suggests that street lighting may prevent road traffic crashes, injuries and fatalities, based on evidence from studies in high-income countries – though the studies identified were considered to have a high risk of bias. Further well designed studies are needed to determine the effectiveness of street lighting in reducing road traffic injuries.[41]

Financial and carbon reduction incentives have prompted many local authorities to reduce street lighting at night. Green et al[42] undertook a qualitative study to investigate public views of the relationship between reduced street lighting and health. Public concern focused on road safety, fear of crime, mobility and seeing the night sky but, for the majority in areas with interventions, reductions went unnoticed. However, more private concerns tapped into deep-seated anxieties about darkness, modernity 'going backwards', and local governance. Pathways linking lighting reductions and health are mediated by place, expectations of how localities should be lit, and trust in local authorities to act in the best interests of local communities.

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[39] Amy Aeron-Thomas and Stephane Hess, "Red-Light Cameras for the Prevention of Road Traffic Crashes," *Cochrane Database of Systematic Reviews*, April 20, 2005, http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003862.pub2/abstract.

[40] Cecilia Wilson et al., "Speed Cameras for the Prevention of Road Traffic Injuries and Deaths," *Cochrane Database of Systematic Reviews*, November 10, 2010, http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD004607.pub4/abstract.

[41] Fiona R Beyer and Katharine Ker, "Street Lighting for Preventing Road Traffic Injuries," *Cochrane Database of Systematic Reviews*, January 21, 2009, http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD004728.pub2/abstract.

[42] Judith Green et al., "Reduced Street Lighting at Night and Health: A Rapid Appraisal of Public Views in England and Wales," *Health & Place* 34 (July 2015): 171–80, doi:10.1016/j.healthplace.2015.05.011.

Area-wide traffic calming

In urban areas many road traffic crashes are scattered widely, and in such situations traditional treatments for high-risk sites are not appropriate. In high income countries, area-wide traffic calming schemes, including the treatment of both main roads and residential roads, have been proposed as one strategy for reducing scattered crashes. Such schemes aim to discourage through traffic on residential roads and make the roads safer, particularly for vulnerable road users such as pedestrians and cyclists.

The results of a systematic review of controlled before-after studies in high-income countries show that area-wide traffic calming schemes may have the potential to reduce road traffic deaths and injuries. Although the effect on road traffic injury deaths alone was in the same direction and of a similar magnitude, the number of road deaths in the included studies was low. As very few studies reported the number of deaths and injuries for the different categories of road user (pedestrians, cyclists and vehicle occupants) it was not possible to examine the effect of traffic calming by road user category. Although there was no evidence that traffic calming schemes prevent pedestrian-motor collisions, the possibility that they might reduce the occurrence of pedestrian injury cannot be excluded.

An important effect of traffic calming schemes is to reduce the speed of traffic, in which case traffic calming might still reduce the likelihood of injury in the event of a collision. Compared to educationally based road safety interventions, area-wide traffic calming appears to be a more promising intervention for reducing traffic injuries and deaths in towns and cities. However, further rigorous evaluation is needed to provide a conclusive answer. [43]

20mph zones

Due to the relatively high cost of implementing self-enforcing area-wide traffic calming schemes more emphasis has been given to signs-only in recent years (i.e. without additional traffic calming measures). A systematic review of 20mph zones and limits concluded that they are an effective means of improving public health via reduced accidents and injuries. Whilst there was no direct evidence on the effects of interventions on health inequalities, targeting such interventions in deprived areas may be beneficial. Further controlled evaluations that specifically examine SES effects are required.[44]

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[43] Frances Bunn et al., "Area-Wide Traffic Calming for Preventing Traffic Related Injuries," *Cochrane Database of Systematic Reviews*, January 20, 2003, http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003110/abstract.

[44] Jo Cairns et al., "Go Slow: An Umbrella Review of the Effects of 20 Mph Zones and Limits on Health and Health Inequalities," *Journal of Public Health* 37, no. 3 (September 1, 2015): 515–20, doi:10.1093/pubmed/fdu067.

Impact of traffic-calming and 20mph zones on air quality

Schemes to reduce traffic speeds or "traffic calming" schemes may result in a significant change in the operational factors which influence vehicle emission rates. The rate of emission of a pollutant is significantly influenced by the speed of the vehicle and emission rates are often expressed as a function of average vehicle speed. Owen[45] investigated the impact of 6 schemes in the North West of England on ambient air quality, all involving both 20mph limits and traffic calming measures, using before-and-after monitoring and dispersion modelling based on traffic survey data.

The measurements of nitrogen dioxide and benzene at various sites within the 20mph zones generally followed similar patterns to the concentrations recorded at the control sites outside the zone. Changes observed between before and after implementation of the 20mph zones were generally within the error of margin of the measurement techniques used and therefore not significant. Traffic data suggest that average speeds of traffic within the zones have tended to decrease after implementation, as has the total volume of traffic entering and leaving the zones. The study concludes that, in the relatively small scale traffic reduction schemes considered in this study, ambient pollutant concentrations are not significantly influenced by implementation of the zones.

Public transport

Increased investment in and use of public transport has been linked with increased physical activity, reduced vehicle emissions, and improved access to services, amenities and opportunities. Proximity to public transport stops and stations is linked to increased use of public transport and therefore increased levels of physical activity.[46]

Community transport schemes

These schemes have the potential to promote social inclusion and equality of opportunity by offering accessible and affordable transport solutions to those who would otherwise be unable to access conventional public transport.[47]

Behaviour change measures

Whilst most behaviour change measures lie outside the scope of the schemes within the Local Transport Plan, evidence is considered here to support the planning of integrated strategies to promote active travel and reductions in congestion and carbon emissions.

Ashcroft et al[48] undertook a review of the evidence of value for money of 16 measures aimed at changing travel behaviour of individuals and within schools, primary care, workplaces, and area-wide. Each summary describes the extent of modal shift, value for money in congestion savings, carbon savings from reductions in care use, changes in physical activity and an overall assessment.

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[45] Bethan Owen, "Air Quality Impacts of Speed-Restriction Zones for Road Traffic," *Science of The Total Environment* 340, no. 1–3 (March 20, 2005): 13–22, doi:10.1016/j.scitotenv.2004.08.011.

[46] Vohra, Amo-Danso, and Dan-Ogosi, "Northumberland Local Transport Plan 3: Main HIA Report - Final Draft."

[47] Ibid.

[48] Ashcroft et al., "Soft Measures – Hard Facts."

Organisational travel plans

Travel plans are interventions that aim to reduce single-occupant car use and increase the use of alternatives such as walking, cycling and public transport, with a variety of behavioural and structural components. The main reasons for using travel plans are to reduce congestion and to be environmentally friendly, but travel plans are also commonly claimed to improve health. A Cochrane systematic review concentrated on organisational travel plans for schools, tertiary education institutes and workplaces, and included 17 studies. One study found that promoting walking in a workplace improved some aspects of health, including mental health, but no other studies directly measured health effects. All studies looked at changes in travel: although some found that travel plans increased walking, others did not. Overall, there is not enough evidence to know whether travel plans are effective at changing the way people travel, or whether they improve health. Currently, organisational travel plans should be put in place as part of well-designed research studies.[49]

Active travel to school promotions

Active transportation to school is an important contributor to the total physical activity of children and adolescents. However, active school travel has declined over time, and interventions are needed to reverse this trend. Chillón et al[50] reviewed intervention studies related to active school transportation and identified 14 interventions that focused on active transportation to school. These interventions mainly focused on primary school children in the United States, Australia, and the United Kingdom. Almost all the studies reported an increase in the percentage of active transportation to school following the interventions; however, the degree of change varied widely (3% to 64%). The wide variation in size, scope and focus of the intervention studies, coupled with the overall weaknesses in the quality of the study protocols, limited the ability to draw clear conclusions about which intervention strategies might be most effective. Again, promotion initiatives aimed at increasing active travel to school should be implemented as part of well-designed research studies.

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[49] Jamie Hosking et al., "Organisational Travel Plans for Improving Health," *Cochrane Database of Systematic Reviews*, March 17, 2010, http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD005575.pub3/abstract.

[50] Palma Chillón et al., "A Systematic Review of Interventions for Promoting Active Transportation to School," *International Journal of Behavioral Nutrition and Physical Activity* 8, no. 1 (February 14, 2011): 10, doi:10.1186/1479-5868-8-10.

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Recommendations

The following recommendations are made to Bridgend County Borough Council and its partners in delivering the Local Transport Plan:

1. Closer engagement, coordination and joint planning with the Local Health Board regarding transport access to health services.

2. Develop a bike reclamation and refurbishment scheme, which could offer low cost bikes to those on low incomes as well as offer possible training opportunities for NEETs and other unemployed groups. The idea of a Bike Amnesty project has been discussed locally and is being explored.

3. Highlighting in corporate travel plans and work with local employers what support local companies could offer to people to support them in paying for transport in the first few weeks of a new job.

4. Continue to monitor the experience of local people with disabilities in accessing public transport.

5. Ensure effective communication of active travel routes and maps, including (but not limited to):

   (a) Joint work with the Local Public Health Team and local health services to promote active travel maps to partner organisations.

   (b) Local health services should promote to their clients how to get to them by active travel and could stock active travel maps.

6. Advocate for active travel to be integrated into all new developments.

7. Identify indicators to monitor the impact of the Local Transport Plan on health, including key impacts identified here. Monitoring should include consideration of potential impact on health inequities, to ensure that scheme implementation does not just make already healthy populations healthier (intervention generated inequity).

   ◊ Examples of issues requiring monitoring: Air Quality, Road Traffic Incidents, Noise, access to employment, levels of physical activity in the population, use of active travel routes, walking and cycling rates, number of people accessing key services by active travel.

   ◊ These should be routinely reported on as part of the plan monitoring. Final indicators to be agreed, informed by population profile in this report.

8. Further HIA screening of priority transport schemes within the Local Transport Plan at the pre application phase and targeted HIAs of funded schemes. See Appendix 3 for the list of schemes identified for pre application screening.

A further analysis of the objectives of the Local Transport Plan using the evidence of health impact of different transport modes and interventions provided in this report will be completed by Alastair Tomlinson.

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Appendix 1: HIA Assessment Framework (WHIASU 2012)

Vulnerable groups impacted on by the proposal:

Age related groups
• Children and young people
• Older people

Income related groups
• People on low income
• Economically inactive
• Unemployed/workless
• People who are unable to work due to ill health

Groups who suffer discrimination or other social disadvantage
• People with physical or learning disabilities/difficulties
• Refugee groups
• People seeking asylum
• Travellers
• Single parent families
• Lesbian and gay and transgender people
• Black and minority ethnic groups**
• Religious groups**

Geographical groups
• People living in areas known to exhibit poor economic and/or health indicators
• People living in isolated/over-populated areas
• People unable to access services and facilities

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Health and Well-Being Determinants Checklist

1. Lifestyles
Diet
Physical activity
Use of alcohol, cigarettes, non-prescribed drugs

Sexual activity
Other risk-taking activity

2. Social and community influences on health
Family organisation and roles
Citizen power and influence
Social support and social networks
Neighbourliness
Sense of belonging
Local pride
Divisions in community

Social isolation
Peer pressure
Community identity
Cultural and spiritual ethos
Racism
Other social exclusion

3. Living/ environmental conditions affecting health
Built environment
Neighbourhood design
Housing
Indoor environment
Noise
Air and water quality
Attractiveness of area

Green space
Community safety
Smell/odour
Waste disposal
Road hazards
Injury hazards
Quality and safety of play areas

4. Economic conditions affecting health
Unemployment
Income
Economic inactivity

Type of employment
Workplace conditions

5. Access and quality of services
Medical services
Other caring services
Careers advice
Shops and commercial services

Public amenities
Transport including parking
Education and training
Information technology

6. Macro-economic, environmental and sustainability factor

Government policies
Gross Domestic Product
Economic development

Biological diversity
Climate

Health Impact Assessment Screening Record Sheet
(DRAFT 1 completed by NE 20/04/2015.
DRAFT 2 with AT additional comments, 29/04/2015)

Date: 14/04/2014

Conducted by:

Nerys Edmonds – Wales Health Impact Assessment Support Unit, Public Health Wales
Beth Preece - Abertawe Bro Morgannwg UHB Public Health Team, Public Health Wales
Kwaku Opoku-Addo, Transport Policy Team, Bridgend County Borough Council
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Judith Jones, Local Service Board, Bridgend County Borough Council
Alastair Tomlinson, Senior Lecturer in Environmental and Public Health, Cardiff Metropolitan University

Title of programme, policy or project

Bridgend Local Transport Plan 2015-2030

Description (including key aims and objectives)

Bridgend Local Transport Plan 2015-2030
Vision
An effective, accessible, integrated and sustainable transport system that can meet the short, medium and long term needs of a changing population, the economy and society.

KP1 - To support economic growth and safeguard jobs with a particular focus on City
Regions, Enterprise Zones and local growth zones
· Improved access to jobs and services by sustainable and active travel.
· Reduced congestion, improved journey time reliability, greater network resilience.
· Maximise potential to use bus and/or rail to access key employment and other sites.
· Improved access for freight.
KP2 - To reduce economic inactivity by delivering safe and affordable access to employment sites
· Seamless journeys and integrated ticketing.
· Affordable access to jobs, services and education.
KP3 - To maximise the contribution that effective and affordable transport services can
make to transport poverty and target investment to support improvements in accessibility for the most disadvantaged communities
· Support rural areas by improving access to key services;
· Bus services that enable communities to access employment / services

KP4 - Encourage safer, healthier and sustainable travel

· Increased take up of active and sustainable travel.

· Reduced number of personal injury accidents.

· Reduction in the negative impact of transport emissions on health and the environment.

· Increased number of journeys to tourism destinations being made by sustainable and active travel modes.

This Local Transport Plan focuses on targeting investment in local transport to address local problems. This is a departure from the previous regional based transport planning mechanism.

The plan focuses on transport as a means to access economic growth and employment but also social connections and other resources and facilities that support people's wellbeing.

Noted that at the current time, none of the proposed schemes within the plan has funding. Focus of the plan is to prioritise schemes for applications to Welsh Government capital investment programmes. Activities such as promotional campaigns to promote active transport etc. do not form part of this plan.

Nature of Evidence considered/to be used (including baseline data, technical and qualitative research, expert and community knowledge)

Local expert knowledge
Local Transport Plan data

1. **Key population groups affected by the programme, policy or project.**

Using the list of **vulnerable and disadvantaged groups** included, assess which groups amongst the general population will potentially be affected by the proposal

<u>**Vulnerable groups affected**</u>:

1. **Children and Young People**

Some key issues:

- High local rates of childhood obesity
- Noted that children and young people have a higher accident rate as pedestrians and cyclists and also that a higher rate of road accidents affect children in deprived areas.
- Young people Not in Education, Employment or Training (NEET) are a local priority
- There is a change in Welsh Government free school travel criteria meaning that fewer children will qualify for free bus transport and therefore will need to find other means of transport to school.
- Consequences of other policy decisions (e.g. on school provision, primary/secondary care provision) can impact on parental and young people's transport decisions.

Potential Positive Impacts

- Improved active travel opportunities between schools/colleges, connecting residential areas and access to employment sites for young people. Increased physical activity opportunities.
- Junction 36 of M4 is a collision hotspot, a significant % of which involve children. If schemes such as junction improvements reduce accidents then this will have a positive impact
- Positive impact of safer routes schemes
- Children and young people are currently consulted on school travel plans

Potential Negatives

- Encouraging further walking and cycling by children and young people may put them at risk of higher rates of injury. Road safety education schemes, safe design of routes and access to bike safety equipment are key to preventing this impact.

2. Older people

Some key issues:

- Ageing population (24.4% over 60) with 41% of the over 65's having a limiting long term illness
- All over 60's in Wales get a free bus pass
- Social isolation is major issue identified by the Local Service Board
- Local bus services are commercially operated, leaving limited scope to influence services
- Local authorities are cutting bus subsidies
- Rural isolation
- Reconfiguration of health and social care services
- Resources are a major issue

Affordability of transport has been addressed through free bus passes, however availability remains an issue.

Opportunities for positive impacts are:

- The focus on developing community transport options

- **ACTION:** Closer engagement, coordination and joint planning with the Local Health Board regarding transport access to health services

No major negatives identified, however, given the context of the ageing population with chronic long term illness, transport accessibility is a key factor in addressing social isolation and ensuring people can access community services and therefore remain in independent living as long as possible.

3. Income related groups

Key issues

- Affordability of public transport
- Some people with disabilities can obtain a free bus pass but there is no subsidy for those on out of work benefits.
- The cost of getting to work, particularly in the first few weeks of employment

Potential positive impacts

- The plan has a focus on reducing economic inactivity and affordable and sustainable access to jobs, services and education as well as maximising access to key employment sites (KP1 and KP2)
- The focus on active travel (KP4) which can be low cost – noted however the cost of obtaining a bike and bike equipment for taking advantage of new opportunities for active travel. This could act as a barrier. Possible **ACTION:** Develop a bike reclamation and refurbishment scheme, which could offer low cost bikes to those on low incomes as well as offer possible training opportunities for NEETS and other unemployed groups. The idea of a Bike Amnesty project has been discussed locally and is being explored
- Developing lift sharing schemes
- Community transport initiatives like Wheels to Work

ACTION: Highlighting in corporate travel plans and work with local employers what support local companies could offer to people to support them in paying for transport in the first few weeks of a new job

4. Groups who suffer discrimination or other social disadvantage

Issues noted:

- Affordability of public transport. People with disabilities and single parent families have been hardest hit by welfare reform, losing a significant amount of income.

    - Lone parent – one dependent child average financial loss per year £1,950
    - Lone parent – two or more dependent children average financial loss per year £2,120
    - Disability Living Allowance Average loss per claimant £ 2,600 per year
    - Incapacity benefits Average loss per claimant £ 2,000 per year
      Source: Sheffield Hallam University

- All active travel routes are DDA compliant

- Barriers to active travel exist, e.g. cost of bike and bike safety equipment. Families on low income could benefit from a low cost bike scheme noted above in order to be able to take up the opportunity of active travel.

- Despite the physical infrastructure being improved for disabled access the experience of people with disabilities in accessing public transport can be negative and a barrier: e.g. drivers not asking standing passengers to vacate wheelchair area on bus, drivers not aligning bus to kerb to allow wheelchair access. Bridgend Coalition of Disabled People have delivered training with local transport operators. **ACTION:** that this is an area that continues to be monitored

- Access to transport information. Most information is now available online. This can be a barrier for some groups who may not have internet access/skills to use internet or who would benefit from face to face travel advice.

5. Geographical Groups

Notes

- A local Rural Development Plan is in place and Transport Policy offers are linked into this work
- The transport team have worked closely with Communities First areas to improve transport access in these areas
- Key changes to health and social care services are highlighted in the plan

Potential positive impacts

The plan has a focus on improving access to services for rural areas and targeting investment on the most disadvantaged communities (KP3)

Determinants of Health

Mental Wellbeing Including: • Sense of control • Ability to participate in community and economic life • Emotional wellbeing and resilience		Vulnerable Groups Affected
Positive Impacts	Negative Impacts	
Aim is to increased choice and transport options which should enhance sense of control. ACTION: in order to achieve this positive impact people need to be aware of the choices therefore community engagement and communications are key. There is a forthcoming opportunity to promote the Active Travel Maps. These will be available both electronically and on paper. Potential for using local information points such as bus stops, community centres etc for local display of Active Travel Maps. ACTION: Joint work with the Local Public health team and local health services would be useful to promote the maps to vulnerable groups ACTION: Local health services could promote to their clients how to get to them by active travel and could stock the maps. Affordable access to key services, employment and education is a priority in the plan (KP2). The importance of opportunities to access leisure and social contacts is also noted (2.2.5 and 2.2.14)	If the schemes in the plan are not implemented then this will reduce choices and opportunities to participate	

Lifestyles		Vulnerable Groups Affected
Positive Impacts	Negative Impacts	
Focus on Active Travel could impact on rates of physical activity. Road safety education schemes and Safe Routes to School and Communities could impact on levels of active travel in the population. Cycle training for adults is also important in increasing the confidence of adults to take up cycling. **NOTE** earlier action regarding increasing access to affordable bikes.	Possible higher rates of road traffic accidents involving pedestrians and cyclists	
Social and Community Influences on Health		**Vulnerable Groups Affected**
Positive Impacts	Negative Impacts	
Family and community relationships: Increasing active travel could increase opportunities for social interaction between families and communities Citizen power and influence – community engagement in developing Community Access Plans and local Safer Routes schemes have developed community champions. Sense of belonging and community identity Divisions in Communities – can be reduced through better transport links Peer pressure /influence – can be developed positively through developing new group norms towards active	Divisions in communities can be caused by conflict over travel schemes. Fear of Crime - Consideration needs to be given to community safety in the design of new travel schemes to recue fear of crime and potential of anti social behaviour.	

travel. Example: safe routes to schools – families influencing each other to walk to school New developments have the potential to encourage active travel and sense of community through the layout of new estates. **ACTION:** new developments should prioritise active travel		
Living and Environmental Conditions affecting health		**Vulnerable Groups Affected**
Positive Impacts	Negative Impacts	
Neighbourhood design. Local examples of neighbourhood engagement in re-designing road layouts and transport routes in Communities First area. Local approach to Community Access Plans If active travel opportunities increase, air quality and noise levels may improve. There are opportunities to have positive impact on green spaces through improving access to green spaces and creating new travel routes with green corridors, increasing tree planting etc. KP4 Reduced number of personal injury accidents. KP4 Reduction in the negative impact of transport emissions on health and the environment.	Potential negative impacts on air quality, noise and road hazards and injury if economic growth creates increased car usage. KP1 of the Plan has the objective to "Improve access to freight". This has the potential for negative impact on air quality, noise and road hazards and injury. Active travel can lead to increased road injuries for pedestrians and cyclists	

Economic Conditions Affecting health		Vulnerable Groups Affected
Positive Impacts	Negative Impacts	
KP1 and KP2 of the plan aim to support economic growth and safeguard jobs and reduce economic inactivity through improved affordable transport options. Local contractors used in implementing schemes Potential positive with Bike Amnesty scheme – would increase access to affordable transport for those on low wage/benefits and may help with travel to work Corporate travel plans for new developments	Increases in inequities if vulnerable groups (e.g. deprived and/or rural communities) are unable to access employment opportunities.	
Access and quality of services		Vulnerable Groups Affected
Positive Impacts	Negative Impacts	
KP1, KP2, KP3 of the plan all focus on improving access to services, including education. Question -How to ensure that access to health care is maximised? A Standing group with the University Health Board and Social Services is being established as part of the implementation of the Social Services and Wellbeing Act. Transport Policy Officers will sit on this group. The Transport Policy officers work with communities on micro transport plans which can address local access to services issues	Purely IT-reliant approach to providing information may lead to inequities e.g. for those without reliable internet/mobile access.	

Macro economic, Environmental and sustainability Factors		Vulnerable Groups Affected
Positive Impacts	Negative Impacts	
KP1 and KP2 of the plan aim to support economic growth and safeguard jobs. Biological diversity is addressed by the Countryside Team when each scheme is being planned There are opportunities for integrating environmental and biodiversity improvements into new schemes	Potential negative impacts on CO_2 and climate if economic growth creates increased car usage and freight. Potential negative impacts on CO_2 and climate if no shift to active travel.	

Summary of Potential Health Impacts Identified

    1. <u>Positive Impacts</u>

Mental Wellbeing –potential to increase choice of transport options and therefore a sense of control.

Mental wellbeing – increased access = increased opportunities to participate in community life, employment, education and activities for all – but especially vulnerable groups

Lifestyles – increase in physical activity via improved active travel provision.

Family and community relationships – improved opportunities for social connections due to more active travel. People talking and meeting on the way to school/work more

Citizen power and influence – through community engagement in Community Access Plans and local Safer Routes schemes

Divisions in communities – reduced as improved transport links

Peer pressure – creating new positive group norms around active travel e.g. safer routes to school scheme

Neighbourhood design – opportunities for communities to engage in designing schemes and Community Access Plans

Air quality and noise levels - could improve if there is a rise in active travel.

Green space – opportunities to increase access to green space and trees in the design of schemes

Economic Conditions – increased employment opportunities and affordable access to jobs

Access to services

    2. <u>Negatives Impacts</u>

Mental Wellbeing – reduced choice and opportunities to participate if schemes not funded

Lifestyles and Living Conditions – Active travel can lead to increased road injuries for pedestrians and cyclists

Divisions in communities – may be created if there is conflicting views over individual schemes

Fear of crime – may be a factor in the development of transport schemes. This needs to be addressed at the design stage.

Air Quality, Noise and Road Hazards and injury - Potential negative impacts if economic growth creates increased car usage.

Air Quality, Noise and Road Hazards and injury - Potential negative impacts from KP1 of the Plan : "Improve access to freight".

Increased Carbon Dioxide/Climate Change – if car usage is not reduced, freight increases and there is no shift to active travel.

    3. Impacts on Vulnerable groups

Significant impacts were identified on all vulnerable groups.

- Children and young people

- Older people

- Income related groups

- Groups who suffer discrimination or other social disadvantage

- Geographical Groups

Key issues were:

- Affordability - of public transport and active travel by bike
- Road safety – children are more likely to be involved in road accidents and collisions as pedestrians and cyclists
- Access to services – closer engagement with health services is needed to ensure integrated transport planning
- Access to travel information – ensuring that this is available in a range of formats and locations
- The important role of community transport in facilitating access

Recommendations

Are the impacts that have been identified above enough to warrant a more comprehensive health impact assessment?

Yes

If No, what are the reasons for not conducting an assessment

The Transport Plan has a **major potential** to impact on the health of the population and both positive and negative impacts have been identified in the Screening.

However, at the current time none of the schemes have funding for implementation. Therefore, the participants in the screening agreed to develop this screening into a desktop HIA with a population profile and evidence review which will act as a baseline for the further use of HIA in the implementation of the plan. It was also agreed to establish a framework to ensure that key health impacts are monitored throughout the life time of the Plan by integrating health indicators into the monitoring and evaluation.

This supports Section 5.4.1 of the Plan (p.72) which focuses on the role of Health Impact Assessment in developing the plan and states that: "The effectiveness of schemes in the draft LTP will be assessed on the basis of the contribution that they make to the health and well-being of residents of Bridgend".

A number of actions were agreed as a result of the Screening to maximise the opportunities for positive health impacts and minimise potential negative impacts of the Plan (See below). The potential to use HIA in the planning and implementation of individual schemes once funding is obtained was also agreed. It was also agreed that some of the major schemes could benefit from a screening exercise in the funding application stage to enable the identification for positive and negative health impacts in order to strengthen applications.

Do any additional actions need to be taken as a result of this HIA process?

Yes

If Yes, please outline (list recommendations and/or mitigation/enhancement here)

Recommended Actions

1. Closer engagement, coordination and joint planning with the Local Health Board regarding transport access to health services

2. Develop a bike reclamation and refurbishment scheme, which could offer low cost bikes to those on low incomes as well as offer possible training opportunities for NEETS and other unemployed groups. The idea of a Bike Amnesty project has been discussed locally and is being explored

3. Highlighting in corporate travel plans and work with local employers what support local companies could offer to people to support them in paying for transport in the first few weeks of a new job

4. Continue to monitor the experience of local people with disabilities in accessing public transport.

5. Ensure effective communication of active travel routes and maps

6. Joint work with the Local Public Health Team and local health services would be useful to promote active travel maps to partner organisations

7. Local health services could promote to their clients how to get to them by active travel and could stock the maps.

8. New developments should prioritise active travel

9. Identify indicators for the impact of the Local Transport Plan on health, including key impacts identified here. For example: Air Quality, Road Traffic Accidents, Noise, access to employment, levels of physical activity in the population, use of active travel routes, levels of cycling, number of people accessing key services by active travel. These should be routinely reported on as part of the plan monitoring. Final indicators to be agreed. Lead: Beth Preece

If a further HIA is required, outline next steps (E.g. Date and time of scoping meeting)

- Complete a Desktop HIA based on this Screening of the Local Transport Plan.

- Identify major schemes for pre-application Screening exercises.

- Other schemes that may benefit from a specific HIA to be identified for screening as funding comes on stream.

Have there or will there be other impact assessments conducted? ie Equality Impact Assessment, Environmental Impact Assessment. Or will this form part of one?

- Sustainability Appraisal

- Equality Impact Assessment

- Rural Impact Assessment

- Competition Assessment

- Children and Young People's Rights

Appendix 3: Further potential HIAs on Schemes in LTP

Local Transport Plan (2015-2030)
Health Impact Assessment Requirements

As part of the development of the Health Impact Assessment (HIA) for the Local Transport Plan (LTP), a need was identified to undertake a HIA for each of the major schemes included within the LTP programme. This would provide a more detailed assessment of the impact that each individual scheme will have on the health, fitness and well-being of the population of Bridgend, in addition to the overall impact of the whole plan.

In view of the aspirational nature of the medium and long-term programmes within the LTP and the lack of certainty regarding funding for the schemes contained therein, it was concluded that limiting HIAs to the schemes in the short-term programme would be more practical and effective.

A screening exercise was therefore carried out to determine which schemes would require a HIA, at what stage the HIA should be undertaken, and what priority should be allocated to completing the HIA. Due to the significant resources required to undertake a HIA for each scheme within the LTP, only those contained within the short-term LTP programme have been assessed at this stage of the plan period.

Where it was determined that a HIA was required, given the scale of or catchment for a scheme, further consideration was given as to whether the HIA should be carried out prior to seeking funding for the scheme (in order to ensure that any issues can be addressed within the early stages of development), or subsequent to allocation or award of funding.

In order to determine the stage at which a HIA should be undertaken and their relative priority where a HIA was deemed necessary, each scheme was assessed in terms of whether funding was already awarded/available, the level of certainty relating to the delivery of the scheme within the short-term programme. For example, there are schemes contained within the LTP programme which are currently linked to the Network Rail electrification project, but which may not be contained within the final electrification programme. As a result, it has been determined that these schemes do not require a HIA at this stage.

Table 1 below indicates the HIA requirements for each of the schemes within the LTP short-term programme.

Table 1 – LTP Short-term Programme HIA Requirements

LTP Ref.	Scheme Name	Pre-funding application HIA	Post-funding award HIA	No HIA required at this stage
1	NCN 885 to Bridgend		√	
2	Bridgend and Pencoed		√	
3	Bridgend and Bridgend Designer Outlet at J36 of M4	√		
4	Coychurch Road railway bridge (south)	√		
5	Coychurch Road railway bridge (north)	√		
6	Improvements to A4063 between Sarn and Maesteg	√		
7	ATN Route 12 - North Bridgend to Bridgend college link	√		
8	Brackla Street railway bridge, Bridgend			√
9	Bus corridor improvements along strategic road corridors from Bridgend to Blaengarw; Maesteg; Ogmore Vale; Talbot Green and Cowbridge.	√		
10	Improved Links to the NCN in the VoG	√		
11	Porthcawl and Rest Bay		√	
12	Penprysg Road Bridge,Pencoed	√		
13	A48 railway bridge, Pyle			√
14	St. George's Avenue footbridge, Wildmill			√
15	Marlas footbridge, Pyle	√		
16	ATN Route 50 - Bryntirion Comprehensive Link	√		
17	ATN Route 30 - Ewenny Road Link	√		
18	Hendre Road footbridge, Pencoed	√		
19	Heol Ty Draw footbridge, Pyle	√		
20	ATN Route 25 - Pencoed to Penprysg	√		
21	ATN Route 31 - Bypass Link	√		
22	Ewenny Road Industrial Estate Bridge, Maesteg			√
23	Access to land east of A4065, Abergarw	√		
24	Litchard Cross active travel improvements	√		
25	Bryncethin A4061/Heol Canola Junction	√		
26	Ty Merchant footbridge, Pencoed	√		
27	Station Road bridge, Llangynwyd			√
28	Pencoed railway footbridge	√		
29	A48-A473 Link Road		√	
30	Shwt bridge, A4063 lower Llangynwyd			√
31	Roger's Lane, Laleston/Cefn Cribwr			√

Priority: High | Medium | Low

Cardiff Metropolitan University | Prifysgol Metropolitan Caerdydd