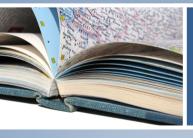


# Wider Determinants of Health



# Abertawe Bro Morgannwg University Health Board



#### **Contents**

1	INTRODUCTION	1
	1.1 Factors affecting health	1
	1.2 Purpose of this report	
	1.3 Content of this report	
	1.4 Fair Society, Healthy Lives	
2	INCOME	4
	2.1 Household poverty	4
3	HOUSING	7
	3.1 No central heating	7
4	EMPLOYMENT	11
	4.1 Employment related benefits	11
5	EDUCATION	15
	5.1 Educational attainment aged 16	15
	5.2 Not in education employment or training	19
6	COMMUNITY SAFETY	20
	6.1 Criminal damage incidents	20
7	REFERENCES	24
8	APPENDIX A: GLOSSARY	25
9	APPENDIX B: MAPS SHOWING MIDDLE SUPER OUTPUIN THE ABERTAWE BRO MORGANNWG UNIVERSITY HE	EALTH
	BOARD AREA	26

Contributors: Gareth Davies, Lloyd Evans, Ioan Francis, Deirdre Hickey, Rhian Hughes, Ciarán Humphreys, Tracy Price, Nathan Lester, Bethan Patterson.

#### © 2012 Public Health Wales NHS Trust.

Material contained in this document may be reproduced without prior permission provided it is done so accurately and is not used in a misleading context.

Acknowledgement to Public Health Wales NHS Trust to be stated.

Copyright in the typographical arrangement, design and layout belongs to Public Health Wales NHS Trust.

#### 1 Introduction

#### 1.1 Factors affecting health

Health is affected, positively and negatively, by many factors. At an individual level there are fixed biological factors, such as age, sex and genetic (or inherited) makeup, and potentially modifiable lifestyle factors, such as smoking, diet and exercise.

The society within which individuals live can influence their health, with involvement in social and community networks, including friendships, contact with relatives and supportive community interactions, playing an important role in maintaining health.

Then, at a higher level again, are the wider determinants of health, or the "causes of the causes", the environmental, social and economic contexts of lives. Factors such as education, employment, income and housing all influence health both directly and indirectly<sup>1</sup>.

Many of these wider determinants of health are both inter-related and beyond the direct control of individuals. For example, an individual with few qualifications is more likely to be unemployed or to have a low income, which in turn limits their housing choice. Similarly there is evidence of a link between unemployment and health whereby ill health may be caused by, or result from, unemployment<sup>2</sup>.

All of these circumstances may act to influence what is often wrongly perceived as solely a personal lifestyle choice. For example, whilst smoking may appear to an individual's lifestyle choice, it is possible that their decision to smoke is pushed by the effects of the context of their lives and is in effect a response to those stresses<sup>3</sup>.

It follows then that any attempt to tackle poor health must address the wider contextual factors, rather than simply looking to influence individuals and their specific behaviours in isolation. As such, "building health into all policies and all policies into health" is rightly the first of the seven action areas of "Fairer Health Outcomes For All", the Welsh Government's strategic action plan to reduce inequities in health<sup>4</sup>.

#### 1.2 Purpose of this report

The purpose of this brief report is not to establish associations between the wider determinants of health and health outcomes themselves, this has been done elsewhere<sup>1</sup>. Nor is the purpose of this report to prescribe actions to tackle the wider determinants of health.

Rather, this report simply describes a number of indicators of the wider determinants of health at a small area level for each of the health boards in Wales. It has been produced by the Public Health Wales Observatory specifically to illustrate the variation in such indicators at small area level within health boards and their constituent local authorities.

Although a purely descriptive report, it is hoped that it will be of interest and use to the local Director of Public Health, the local Public Health Team and their stakeholders.

#### 1.3 Content of this report

All bar one of the indicators are presented at middle super output area (MSOA). There are 413 MSOAs in Wales with an average population of approximately 7,000 people. Therefore MSOAs provide a reasonably sized population for analyses whilst retaining a local small area focus.

In part, the (un)availability of determinants of health data at small area level has dictated the selection of the indicators presented here. In some instances, such as community safety, there were multiple alternatives with no definitive single indicator. In such circumstances a pragmatic choice had to made, with the reality being that similar indicators will show a similar pattern. In other instances, such as housing, there was no up to date information available pending the release of 2011 Census data.

The indicators are presented under the following chapter headings: income, housing, employment, education and community safety. For most of the indicators, the following are presented:

- an overview of the meaning of the indicator and a description of the patterns observed within each area;
- a map of all the MSOAs by fifths of equal range within the health board area;
- a chart for each local authority within the health board;
- a chart of all local authorities across Wales.

In addition, an Indicator Guide is available providing further information on each indicator.

The one education indicator that was not available at MSOA level was the percentage of school leavers not in education, employment or training (NEET). This indicator is presented at local authority level only.

Where possible, confidence intervals are shown around the indicators. Confidence intervals are indications of the random variation that would be expected around these indicators. Unfortunately, in many instances it was not possible to provide confidence intervals due to the nature of the data. Confidence intervals and MSOAs are described in more detail in Appendix A.

Appendix B comprises a series of local authority area maps showing the MSOA boundaries for each local authority within the health board area.

Further information on health inequalities and the relationship of health to deprivation can be found in the Observatory topic page 'Inequalities and inequities' available: <a href="http://www.wales.nhs.uk/sitesplus/922/page/49811">http://www.wales.nhs.uk/sitesplus/922/page/49811</a>.

#### 1.4 Fair Society, Healthy Lives

The Marmot Review, Fair Society, Healthy Lives, published in 2010, suggested a number of indicators that would support the monitoring of work that aimed to tackle health inequalities, which arise largely from the wider determinants of health.

Joint work by the London Health Observatory and The Marmot Review Team led to the publication of 10 such indicators for England<sup>5</sup>, shown below with details of the equivalent indicators for Wales.

Marmot Indicators for Local Authorities in England	Equivalent indicators for Wales
1 Male life expectancy at birth	
2 Inequality in male life expectancy	Produced and published for Wales by the
3 Inequality in male disability free life expectancy	Public Health Observatory for Wales in the report 'Measuring Inequalities 2011: Trends in mortality and life expectancy in
4 Female life expectancy at birth	Wales', available at
5 Inequality in female life expectancy	http://www.wales.nhs.uk/sitesplus/922/pa
6 Inequality in female disability free life expectancy	ge/58379
7 Children achieving a good level of development at age 5	There is no current equivalent measure in Wales. A measure of achievement at the end of compulsory secondary education is presented here instead.
8 Young people not in employment, education or training (NEET)	Different recording systems in England and Wales mean the NEET data presented here are slightly different to those in England. However they are very similar so remain of use.
9 People in households in receipt of means tested benefit (%)	In England this is used as part of IMD. Here a similar measure is shown; percentage of working age population in receipt of employment related benefits, which itself is used in the WIMD.
10 Inequality in receipt of means-tested benefits	Not possible here as WIMD is based on LSOA whereas MSOA is the geographical level of this report.

#### 2 Income

#### 2.1 Household poverty

#### **Definition**

An experimental modelled estimate of the proportion of households living in poverty, after housing costs has been deducted. This is a relative measure of poverty as it is defined here as having less than 60% of the UK median net equivalised household income.

#### **About**

Low income and poor health are strongly associated, with low income leading to poor health and poor health leading to low income. A low income is likely to reduce the household's ability to access or maintain key aspects such as healthy food and warm accommodation. Low income is also likely to reduce societal participation and limit access to enabling resources and choices. Those on low incomes are more likely to engage in health damaging behaviours, such as smoking and eating high calorie foods, as coping mechanisms or short term fixes<sup>6</sup>.

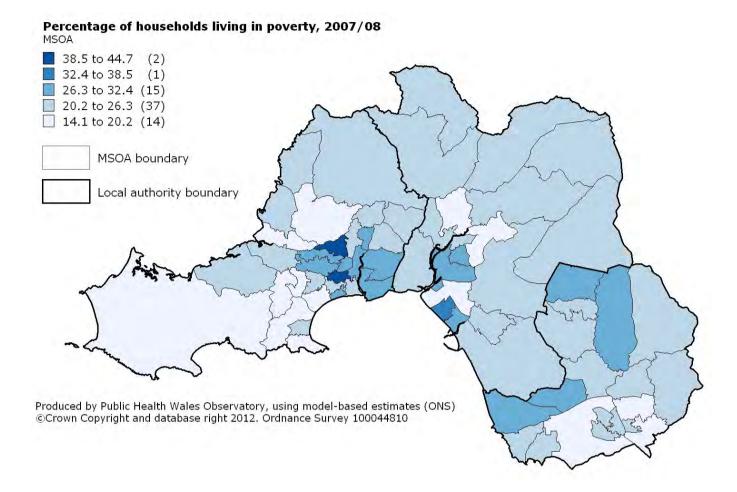
More detailed information on this indicator can be found in the Indicator Guide.

#### **Pattern**

Whilst it must be remembered that these are model based estimates, across the health board there was a three-fold difference in the proportion of households estimated to be living in poverty from 14.1% (Bridgend MSOA 015) to 44.7% (Swansea MSOA 011).

Estimates at the local authority level were not available but the median MSOA percentages suggest that of the three local authorities within the health board, Swansea has a slightly higher level of poverty and Bridgend has a slightly lower level of poverty.

The map suggests higher levels clustering in the south east of Swansea, in particular, Townhill, Mayhill, Portmead and Penlan. High levels of poverty are also found in the Briton Ferry and Sandfields areas of Neath Port Talbot; and the areas of Pyle, North and South Cornelly, Cefn Cribwr, Pontycymer and Nantyffyllon in Bridgend.



# Percentage of households living in poverty in Abertawe Bro Morgannwg University Health Board area, 2007/08

Produced by Public Health Wales Observatory, using model-based estimates (ONS)



Sv	vansea		N	leath Po	rt Talbot			
	011	44.7	-	016	32.9			
	019	40.8		012	28.8			
	016	32.1		017	28.2			
	014	30.7		013	27.5			
	013	30.0	-	011	26.1 ├──────			
	008	27.5		003	25.3			
	021	27.5		010	25.3			
	015	27.2		800	24.6			
	026	27.0	_	001	23.8			
	017	26.8	MSOA	005	23.8 ———			
	024	26.0		002	23.5 ———			
	005	25.6		004	23.2			
	022	25.3		014	23.1 ├────			
	029	25.2		019	22.9 ├───			
ℴ	001	24.4		007	21.7 ├────			
MSOA	009	23.9		018	21.5 ———			
Σ	006	23.1 ———		015	19.8 ├──────────────────			
	002	22.9		009	18.0 ├────			
	010	22.9		006	15.8 ├───			
	025	20.8			% of households			
	003	20.5 ├───						
	012	20.4 ├─────	В	Bridgend				
	018	20.4 ├─────		010				
	007	19.8 ├──────		010	30.7			
	027	19.4 ├────		001	28.1 — 0——			
	031	17.6 ├─────		800	28.1 — 0—			
	028	17.3 ├───	_	004	27.5			
	023	17.2 ├─────	_	003	25.6 ——О——			
	004	17.1 ├───		007	25.6			
	030	16.4 ├────	_	014	25.1			
	020	15.4 —○——	_	012	24.6 ├─────			
		% of households	٨	019	24.3			
			MSOA	006	23.6			
			2	018	23.3			
				002	23.0			
				016	22.7			
				005	22.5 ——0——1			
				009	22.3			
				017	20.9 ———			
				011	14.2 ├──			
				013	14.1 ├──			
				015	14.1			
					% of households			

#### 3 Housing

#### 3.1 No central heating

#### **Definition**

The percentage of all people living in households which had no central heating in any room or rooms.

#### About

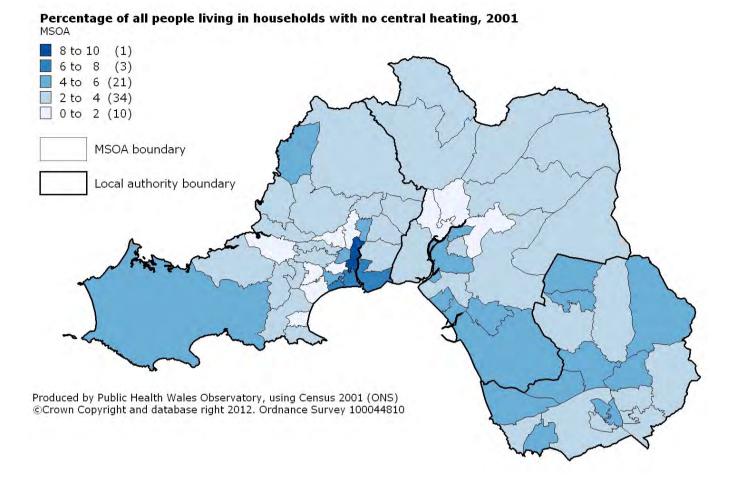
The inability to adequately heat a house can have major health consequences. The cold itself can exacerbate many respiratory and circulatory problems, especially in the elderly, and is likely to contribute to excess winter deaths. Inadequate heating causes dampness and condensation within a house. Dust mites and fungal spores proliferate in such conditions, which then exacerbate respiratory problems such as asthma, wheezing and other lung inflammations<sup>7</sup>.

This indicator is taken from the 2001 Census and is hence out of date. However, in the absence of any other national housing data, and pending the release of the 2011 Census data, it is the most up to date source of housing data. More detailed information on this indicator can be found in the Indicator Guide.

#### **Pattern**

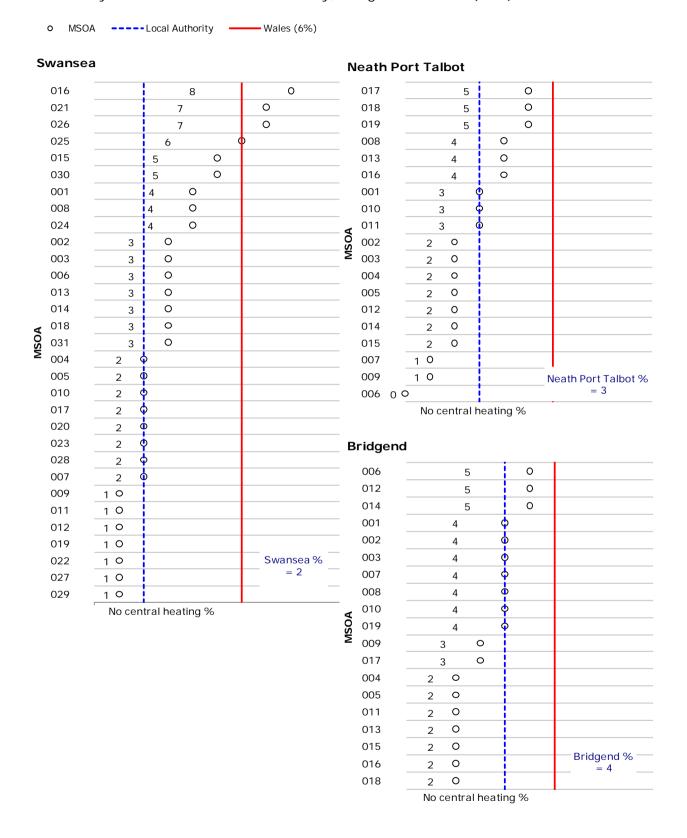
The percentage of people living in households with no central heating was lower than the Welsh average in all local authorities within this health board. The MSOA with the highest percentage was Swansea 016 which is the Landore area. There was one MSOA around the Cadoxton and Gilfach area of Neath Port Talbot where the percentage of people living in households with no central heating was zero. Across Wales as whole the highest percentages were seen in the more rural local authorities of the north and west.

The map shows that there is a concentration of higher levels of the population living in households without central heating around the city centre of Swansea. The lowest levels are found in the areas of West Cross, Sketty, Gowerton, Townhill, Mayhill, Penlan and Tirdeunaw in Swansea and Bryn Coch, Gilfach, Cadoxton and Tonna areas of Neath Port Talbot.



# Percentage of all people living in houses which had no central heating in any room or rooms in Abertawe Bro Morgannwg University Health Board area, 2001

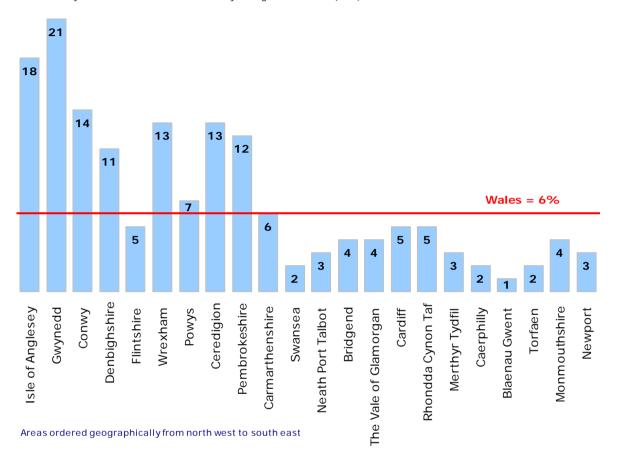
Produced by Public Health Wales Observatory, using Census 2001 (ONS)



#### Local authorities

# Percentage of all people living in households with no central heating by local authority, 2001

Produced by Public Health Wales Observatory, using Census 2001 (ONS)



#### 4 Employment

#### 4.1 Employment related benefits

#### **Definition**

The percentage of the working age population claiming one or more (un)employment related benefits.

#### **About**

The lack, or loss, of employment will limit, or reduce, income. Unemployment can result in poverty, with all of its attendant negative health effects. Unemployment may also adversely affect psychological wellbeing which in turn may reduce societal participation<sup>8</sup>. It is likely that poor health may contribute to the loss of employment and may also limit the chances of gaining employment<sup>2</sup>. Living in communities where unemployment levels are high, and therefore the expectation of finding work is low, can cause anxiety and depression as well as leading some to turn to drugs, alcohol and crime<sup>11</sup>. Children growing up in such communities are similarly affected.

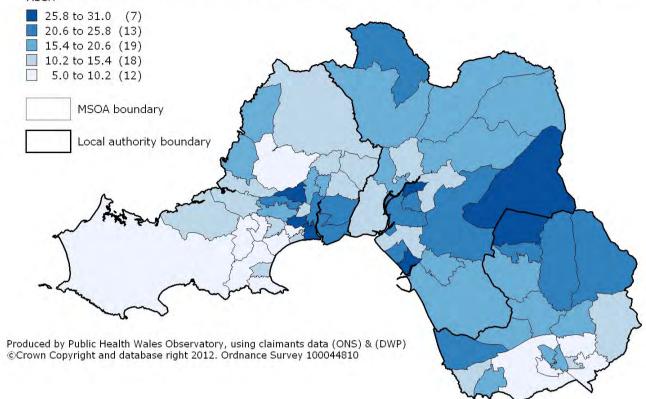
This indicator is the de-duplicated total number of working age people claiming one or more employment benefits, including Job Seeker's Allowance, Employment and Support Allowance and Incapacity Benefit. People claiming more than one such benefit are only counted once. More detailed information on this indicator can be found in the Indicator Guide.

#### **Pattern**

All three local authority averages in this health board area were above the Welsh average, ranging from being slightly above at 15% in Swansea to 19.5% in Neath Port Talbot.

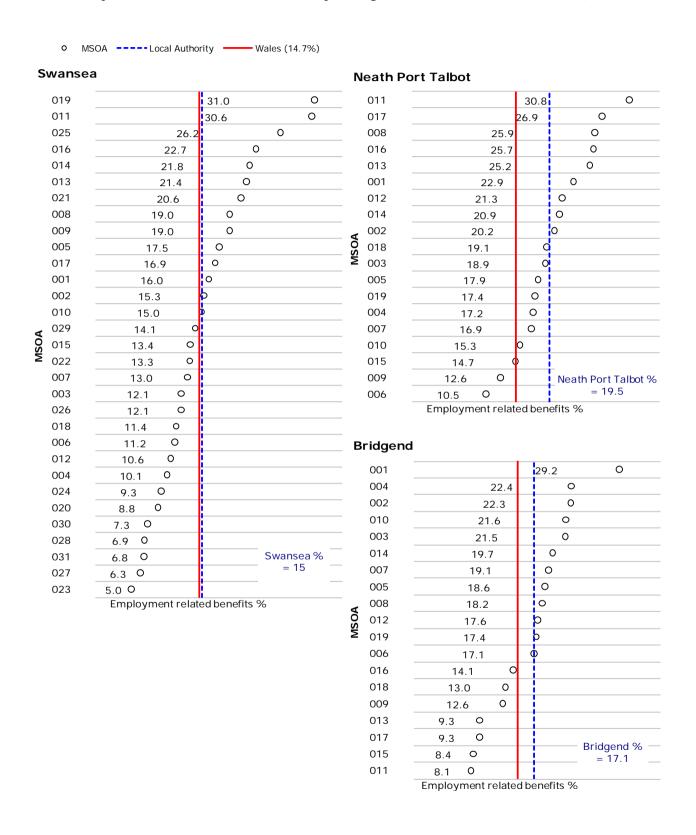
There was considerable variation at the MSOA level within the health board and in this instance, both the highest and lowest levels of unemployment related benefit claims were found within Swansea from just 5% (Swansea 023) to 31% (Swansea 019). The areas with the highest percentages were found in the areas of Portmead, Penlan, Townhill, Mayhill and extending down to the maritime quarter in Swansea; the Llantwit, Glyncorrwg, Croeserw and Aberavon areas of Neath Port Talbot and the area to the north of Bridgend, particularly Mynydd Caerau and Nantyffyllon.





# Percentage of the working-age population claiming one or more employment related benefits in Abertawe Bro Morgannwg University Health Board area, November 2009 – August 2010

Produced by Public Health Wales Observatory, using claimants data (ONS) & (DWP)



#### Local authorities

# Percentage of working-age population claiming employment-related benefits, November 2009 - August 2010

Produced by Public Health Wales Observatory, using claimants data (ONS) & (DWP)



#### 5 Education

#### 5.1 Educational attainment aged 16

#### **Definition**

Key stage 4 educational attainment at the end of compulsory education.

#### **About**

Educational attainment is a critical indicator of future education and employment opportunities. These opportunities in turn are critical indicators of income which, as discussed earlier, has a major effect on health $^8$ .

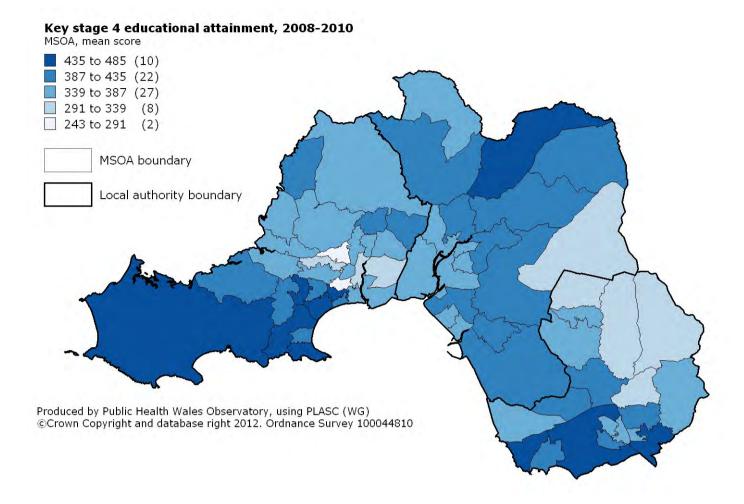
Unlike all of the other indicators, here a higher value is better. The widely used school performance tables are, by design, based on the school's pupils irrespective of where they live. Hence school based performance indicators are not amenable to a small area of residence analysis. The indicator presented here is based on the area of residence of pupils irrespective of their school, though that of course means that it is possible for more than one school to draw pupils from any single MSOA. The wider average points scores presented here represent the absolute achievement of resident school pupils with regards to all approved qualifications taken up to the age of 16 including GCSEs, NVQs, City & Guilds and other vocational qualifications. To understand more about the complex composition of this score it is best to view the more detailed information on this indicator that can be found in the Indicator Guide. Notwithstanding that, scores at the extreme ends of the scale represent substantial differences in educational achievement.

#### **Pattern**

The average points score for key stage 4 pupils was just below the all Wales average for all three local authorities. At local authority level, Neath Port Talbot and Bridgend were equal in terms of average score and were slightly higher than Swansea.

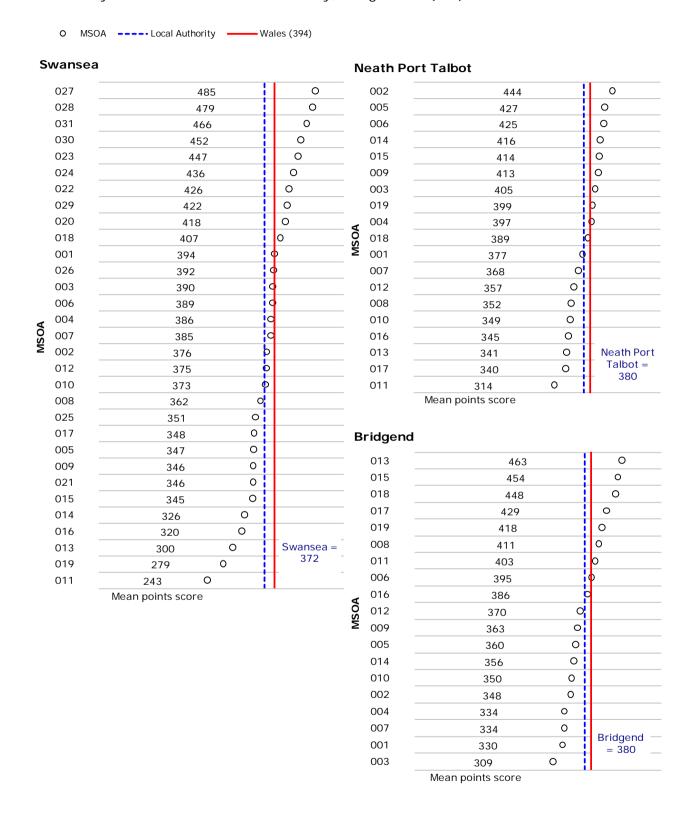
There was a doubling in the range of average scores at MSOA level and both the highest and lowest scores were seen in Swansea Local Authority from 243 in the area around Portmead and Penlan (Swansea 011) to 485 in Sketty (Swansea 027). There was also a considerable variation in average scores in the other two local authorities in the health board although this was not quite so marked.

The map shows that the highest average scores were seen in along the southern part of Swansea, in particular the Gower area; in the southern part of Bridgend; and in the area around Seven Sisters and Crynant in Neath Port Talbot. Two MSOAs had an average score of less than 300 and are found in the areas of Townhill and Mayhill, and Portmead and Penlan.



# Key stage 4 educational attainment mean scores in Abertawe Bro Morgannwg University Health Board area, 2008-10

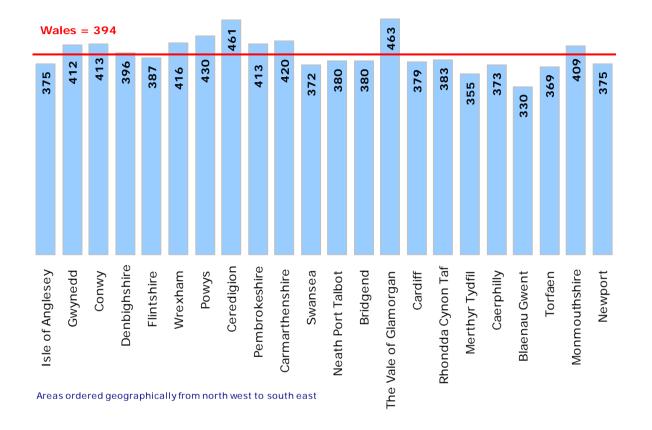
Produced by Public Health Wales Observatory, using PLASC (WG)



#### Local authorities

## Key stage 4 educational attainment mean scores by local authority, 2008-10

Produced by Public Health Wales Observatory, using PLASC (WG)



#### 5.2 Not in education employment or training

#### **Definition**

The percentage of year 11 school leavers who left school in the summer and who, by the end of October, were not known to be in full or part time education, employment or training (NEET).

#### **About**

The non-participation in education, employment or training after compulsory education is associated with subsequent unemployment, low income, mental illness and criminal activity<sup>9</sup>. More detailed information on this indicator can be found in the Indicator Guide.

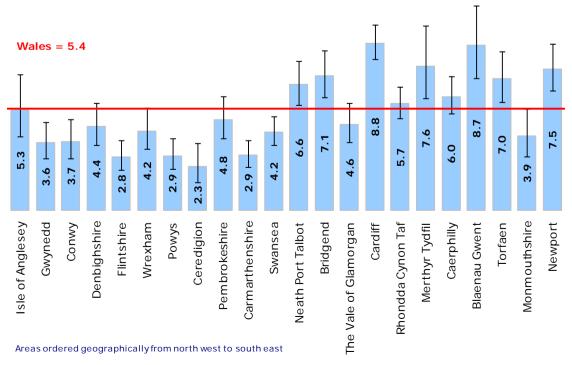
#### **Pattern**

At local authority level within the health board, Swansea had the lowest percentage of year 11 school leavers who were not known to be in education, employment or training when coming into the next academic year. The percentage for Swansea was less than the average for Wales. Both Neath Port Talbot and Bridgend had higher levels of school leavers not in education, employment or training than Wales.

Percentage of year 11 school leavers known not to be in education, employment or training (NEET), 2010

95% confidence interval

Produced by Public Health Wales Observatory, using data from Careers Wales



#### 6 Community Safety

#### 6.1 Criminal damage incidents

#### **Definition**

The rate of incidents of criminal damage per 1,000 day time population.

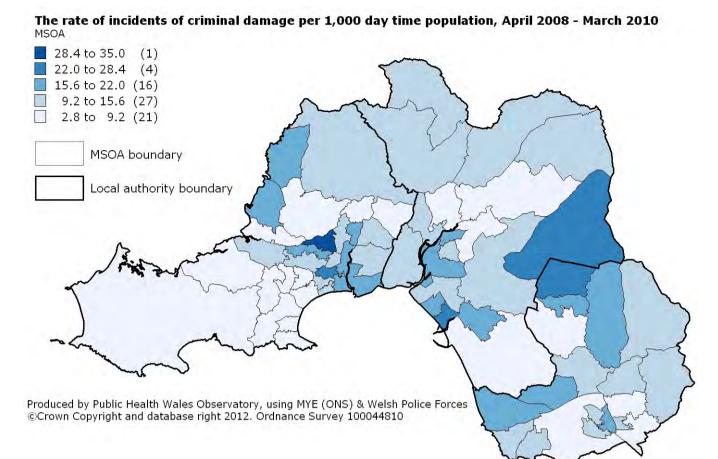
#### **About**

Criminal damage relates to unlawful damage or destruction of property. As well as the immediate effects of criminal damage to property, this, and all crime, can adversely affect mental wellbeing. The development of a fear of crime can lead to decreased social interactions. There are strong associations between all levels of criminal activity and also with drug and alcohol misuse<sup>10</sup>. More detailed information on this indicator can be found in the <u>Indicator Guide</u>.

#### **Pattern**

The number of incidents of criminal damage per 1000 day time population in all three local authorities in the health board is very similar to the all Wales level.

At MSOA level both the highest and lowest levels are again found within Swansea Local Authority; the highest level was 35 in Swansea 011 and the lowest level was 2.8 in Swansea 030. The map shows that there are concentrations of higher levels of criminal damage in the Penlan, Portmead, Townhill and Mayhill areas of Swansea; Aberavon and Glyncorrwg areas of Neath Port Talbot; and Nantyffyllon and Caerau areas of Bridgend.



## The rate of incidents of criminal damage per 1,000 day time population in Abertawe Bro Morgannwg University Health Board area, April 2008 – March 2010 Produced by Public Health Wales Observatory, using data from Welsh Police Forces & MYE (ONS)

Swansea					Neath Port Talbot						
011		35.0	0		011			25.7		0	
019		26.0	0		017		23.	1		0	
016	19.4	0			016		21.2		0		
021	18.5	0			800		19.1		0		
013	18.2	0			013		18.9		0		
800	17.9	0			018		18.9		0		
025	17.0	0			001	12.4		0			
001	16.3	0			003	11.2	0				
005	15.7	0		_ <	012	10.9	0				
015	15.3	0		MSOA	004	10.7	0				
014	14.5	0		_ ≥	014	10.7	0				
017	14.1	0			010	10.5	0				
026	13.8	Þ			015	10.4	0				
009	13.6	Þ			002	9.9	0				
<b>∢</b> 012	13.5	ф			007	9.3	0				
012	11.4 0				019	8.7	0				
<b>≥</b> 010	9.7 O				005	7.1 0			Neath	Port Talbot	
002	9.3 0				006	5.7 0			= 13.		
	8.7 O			_	009	5.2 O					
031	8.7 0				007	5.2					
031 006	8.7 0				007	Criminal da	amage i	ncidence ra	ate		
					007		amage i	ncidence ra	ate		
006	8.5 0			_ _ _ _ B		Criminal da	amage i	ncidence ra	ate		
006 018	8.5 O 7.9 O			_ _ _ B	Bridgend	Criminal da	amage i		ate		
006 018 007	8.5 O 7.9 O 7.3 O				Bridgend	Criminal da		27.7		0	
006 018 007 023	8.5 O 7.9 O 7.3 O 7.1 O			B	Bridgend 001 010	Criminal da	20.9	27.7	0	0	
006 018 007 023 003	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O				<b>Bridgend</b> 001 010 014	Criminal da	20.9 9.9	27.7	0	0	
006 018 007 023 003 020	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O				001 010 014 002	Criminal da	20.9 9.9	27.7 O	0	0	
006 018 007 023 003 020 022	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.8 O			B	001 010 014 002 004	Criminal da	20.9 9.9 .9	27.7 0 0	0	0	
006 018 007 023 003 020 022 004	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.8 O 5.6 O		Swansea = 12		001 010 014 002 004 008	Criminal da	20.9 9.9 .9	27.7 O	0	0	
006 018 007 023 003 020 022 004 029	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.8 O 5.6 O 4.1 O		Swansea = 12.		001 010 014 002 004	Criminal da 1 1 17 16.0	20.9 9.9 .9	27.7 0 0	0	0	
006 018 007 023 003 020 022 004 029 027	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.6 O 4.1 O 3.7 O		Swansea = 12.		001 010 014 002 004 008	Criminal da 1 17 16.0 15.8	20.9 9.9 .9	27.7 0 0 0	0	0	
006 018 007 023 003 020 022 004 029 027 028	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.6 O 4.1 O 3.7 O 3.0 O	nage incidenc		7	001 010 014 002 004 008 003 018	Criminal da 1 17 16.0 15.8 14.8	20.9 9.9 .9 )	27.7 0 0 0	0	0	
006 018 007 023 003 020 022 004 029 027 028	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.6 O 4.1 O 3.7 O 3.0 O 2.8 O	nage incidend			001 010 014 002 004 008 003 018 016 012	Criminal da 1 17 16.0 15.8 14.8 13.7	20.9 9.9 .9	27.7 0 0 0	0	0	
006 018 007 023 003 020 022 004 029 027 028	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.6 O 4.1 O 3.7 O 3.0 O 2.8 O	nage incidend		7	001 010 014 002 004 008 003 018 016	Criminal da 1 17 16.0 15.8 14.8 13.7	20.9	27.7 0 0 0	0	0	
006 018 007 023 003 020 022 004 029 027 028	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.6 O 4.1 O 3.7 O 3.0 O 2.8 O	age incidend			001 010 014 002 004 008 003 018 016 012	Criminal da 1 17 16.0 15.8 14.8 13.7 13.1 12.8	20.9 9.9 .9	27.7 0 0 0	0	0	
006 018 007 023 003 020 022 004 029 027 028	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.6 O 4.1 O 3.7 O 3.0 O 2.8 O	nage incidend			001 010 014 002 004 008 003 018 016 012 019	Criminal da 1 17 16.0 15.8 14.8 13.7 13.1 12.8 12.2	20.9 9.9 .9 )	27.7 0 0 0	0	0	
006 018 007 023 003 020 022 004 029 027 028	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.6 O 4.1 O 3.7 O 3.0 O 2.8 O	nage incidend			001 010 014 002 004 008 003 018 016 012 019	Criminal da  1 17 16.0 15.8 14.8 13.7 13.1 12.8 12.2 11.9	20.9 9.9 .9 )	27.7 0 0 0	0	0	
006 018 007 023 003 020 022 004 029 027 028	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.6 O 4.1 O 3.7 O 3.0 O 2.8 O	nage incidend			001 010 014 002 004 008 003 018 016 012 019 009	Criminal da  1 17 16.0 15.8 14.8 13.7 13.1 12.8 12.2 11.9 11.5 11.2	20.9 9.9 .9 )	27.7 0 0 0	0	0	
006 018 007 023 003 020 022 004 029 027 028	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.6 O 4.1 O 3.7 O 3.0 O 2.8 O	nage incidend			001 010 014 002 004 008 003 018 016 012 019 009 006 007	Criminal da  1 17 16.0 15.8 14.8 13.7 13.1 12.8 12.2 11.9 11.5 11.2	20.9 9.9 .9 ) 3	27.7 0 0 0	0	0	
006 018 007 023 003 020 022 004 029 027 028	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.6 O 4.1 O 3.7 O 3.0 O 2.8 O	age incidend			001 010 014 002 004 008 003 018 016 012 019 009 006 007 017	Criminal da  1 17 16.0 15.8 14.8 13.7 13.1 12.8 12.2 11.9 11.5 11.2 9.6 7.7 O	20.9 9.9 .9 ) 3	27.7 0 0 0	0	0	
006 018 007 023 003 020 022 004 029 027 028	8.5 O 7.9 O 7.3 O 7.1 O 6.7 O 5.8 O 5.6 O 4.1 O 3.7 O 3.0 O 2.8 O	nage incidend			001 010 014 002 004 008 003 018 016 012 019 009 006 007 017	Criminal da  1 17 16.0 15.8 14.8 13.7 13.1 12.8 12.2 11.9 11.5 11.2 9.6 7.7 O	20.9 9.9 .9 ) 3	27.7 0 0 0	0	o end = 13.1	

#### Local authorities

# The rate of incidents of criminal damage per 1,000 day time population by local authority, April 2008 - March 2010

Produced by Public Health Wales Observatory, using data from Welsh Police Forces & ONS (MYE)



#### 7 References

- 1 Benzeval M, Judge K Whitehead M, eds. *Tackling inequalities in health: an agenda for action*. London: Kings Fund; 1995.
- 2 Bambra C. et al. Tackling the wider social determinants of health and health inequalities: evidence from systematic reviews. *J Epidemiol Community Health* 2010; 64:284-91.
- 3 Layte R, Whelan C. *Explaining social class differentials in smoking: the role of education.* Working Paper No. 12. Dublin: Economic and Social research Institute, University College Dublin: 2004. Available at:
- http://www.esri.ie/pdf/OPEA043 Explaining%20Social%20Class%20Differentials%20in%20S moking.pdf [Accessed 16<sup>th</sup> Apr 2012]
- 4 Welsh Assembly Government. Fairer health outcomes for all: reducing inequalities in health strategic action plan. Cardiff: Welsh Assembly Government; 2011. Available at: <a href="http://wales.gov.uk/docs/phhs/publications/110329working2en.pdf">http://wales.gov.uk/docs/phhs/publications/110329working2en.pdf</a> [Accessed 16<sup>th</sup> Apr 2012]
- 5 London Health Observatory Marmot Indicators for local authorities in England, 2012. [Online] Available at:
- http://www.lho.org.uk/LHO\_Topics/national\_lead\_areas/marmot/marmotindicators.aspx. [Accessed 16<sup>th</sup> Apr 2012]
- 6 Benzeval M. & Webb S. Family poverty and poor health. In Benzeval M, Judge K Whitehead M, eds. *Tackling inequalities in health: an agenda for action.* London: Kings Fund; 1995. p:69-81
- 7 Best R. The housing dimension. In Benzeval M, Judge K Whitehead M, eds. *Tackling inequalities in health: an agenda for action.* London: Kings Fund; 1995. p:53-68.
- 8 Benzeval M, Judge K, Whitehead M. Unfinished business. In Benzeval M, Judge K Whitehead M, eds. *Tackling inequalities in health: an agenda for action.* London: Kings Fund; 1995. p:122-140
- 9 Marmot M. Fair society, healthy lives: The Marmot Review. London: University College London; 2010. Available at: <a href="http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review">http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review</a> [Accessed 16<sup>th</sup> Apr 2012]
- 10 Pantazic, C. Crime, 'disorder', insecurity and social exclusion. In: Pantazis, C, Gordon D, Levitas R, eds. *Poverty and social exclusion in Britain: the millennium survey*. Bristol: The Policy Press; 2006. p.249-283.
- 11 Prince's Trust (2010) Destined for the dole? Breaking the cycle of worklessness in the UK. London: Prince's Trust; 2010. Available at: <a href="http://www.princes-trust.org.uk/about-the-trust/what-we-do/research/destined-for-the-dole.aspx">http://www.princes-trust.org.uk/about-the-trust/what-we-do/research/destined-for-the-dole.aspx</a> [Accessed

#### 8 Appendix A: Glossary

#### Middle Super Output Areas

Middle super output areas (MSOAs) were released by the Office for National Statistics (ONS) in 2004. In contrast with administrative boundaries such as electoral divisions (wards), super output areas were created for the purpose of showing statistical data.

MSOAs have a mean population of 7,500 and a minimum of 5,000. There are 413 MSOAs in Wales and 69 MSOAs in the Abertawe Bro Morgannwg University Health Board area. These are shown on the maps in Appendix B.

The ONS have stated that super output area geographies will be fixed for at least 10 years. The advantage of using these statistical geographies is stability and homogeneity. However, the main drawback is that they do not conform to known administrative boundaries such as electoral divisions (wards); this makes them less amenable to the public and local government.

# Confidence intervals

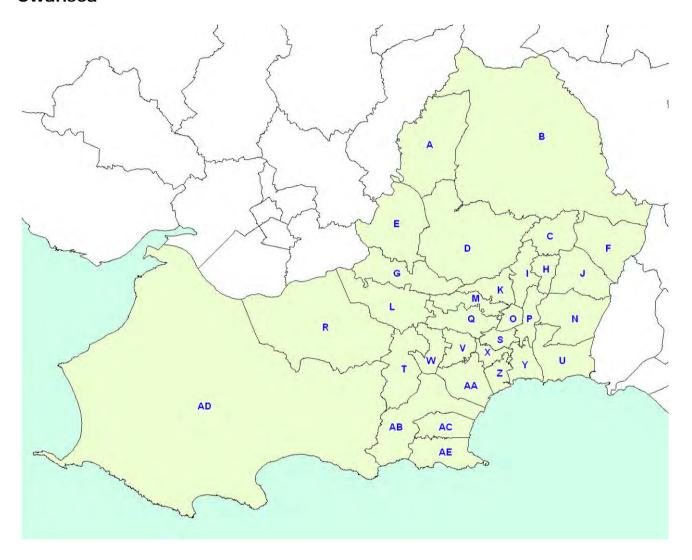
Confidence intervals are indications of the random variation that would be expected around a rate. Confidence intervals must be considered when assessing or interpreting a rate. The 95% confidence interval represents a range which has a 95% probability of including the underlying population rate.

The range of the confidence interval is dependent on the size of the population from which the events came. Rates based on small populations are likely to have wider confidence intervals and rates based on large populations are likely to have narrower confidence intervals.

### 9 Appendix B: Maps showing Middle Super Output Areas in the Abertawe Bro Morgannwg University Health Board area

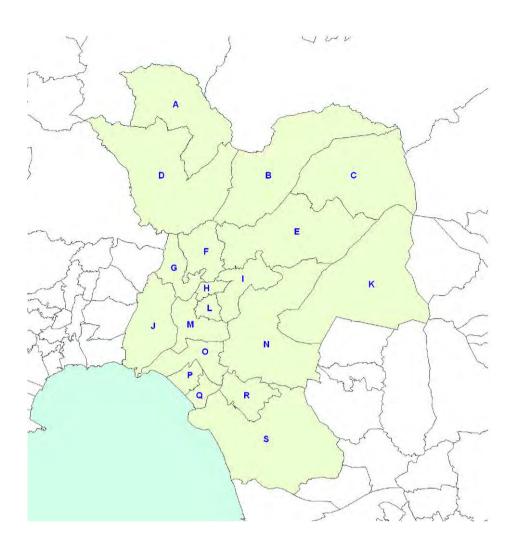
The Public Health Wales Observatory has also produced a web-based interactive map showing MSOA boundaries, with the added facility of background Ordnance Survey mapping. Follow this link: <a href="http://www2.nphs.wales.nhs.uk/InstantAtlas/GeographyTool/atlas.html">http://www2.nphs.wales.nhs.uk/InstantAtlas/GeographyTool/atlas.html</a>

#### **Swansea**



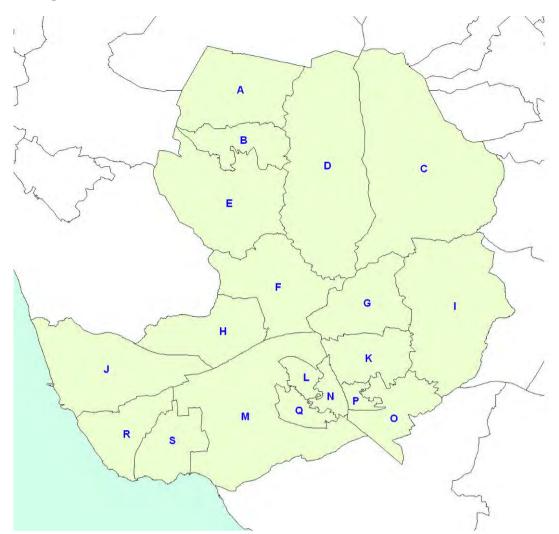
Α	Swansea 001	L	Swansea 012	W	Swansea 023
В	Swansea 002	М	Swansea 013	Χ	Swansea 024
С	Swansea 003	N	Swansea 014	Υ	Swansea 025
D	Swansea 004	Ο	Swansea 015	Z	Swansea 026
Ε	Swansea 005	Р	Swansea 016	AA	Swansea 027
F	Swansea 006	Q	Swansea 017	AB	Swansea 028
G	Swansea 007	R	Swansea 018	AC	Swansea 029
Н	Swansea 008	S	Swansea 019	AD	Swansea 030
ı	Swansea 009	Т	Swansea 020	AE	Swansea 031
J	Swansea 010	U	Swansea 021		
Κ	Swansea 011	V	Swansea 022		

#### **Neath Port Talbot**



- A Neath Port Talbot 001
- B Neath Port Talbot 002
- C Neath Port Talbot 003
- D Neath Port Talbot 004
- E Neath Port Talbot 005
- F Neath Port Talbot 006
- G Neath Port Talbot 007
- H Neath Port Talbot 008
- I Neath Port Talbot 009
- J Neath Port Talbot 010
- K Neath Port Talbot 011
- L Neath Port Talbot 012M Neath Port Talbot 013
- M Neath Port Talbot 013N Neath Port Talbot 014
- O Neath Port Talbot 015
- P Neath Port Talbot 016
- Q Neath Port Talbot 017
- R Neath Port Talbot 018
- S Neath Port Talbot 019

#### Bridgend



- A Bridgend 001
- B Bridgend 002
- C Bridgend 003
- D Bridgend 004
- E Bridgend 005
- F Bridgend 006
- G Bridgend 007
- H Bridgend 008
- I Bridgend 009
- J Bridgend 010
- K Bridgend 011
- L Bridgend 012
- M Bridgend 013 N Bridgend 014
- O Bridgend 015
- P Bridgend 016
- Q Bridgend 017
- R Bridgend 018
- S Bridgend 019