



Welsh Index of Multiple Deprivation Access to Services Domain

2005 Indicator Results

6 February 2008



*26 Palmerston Place, Edinburgh, EH12 5AL
Tel 0870 350 4200, Fax 0871 250 4200
email info@dhc1.co.uk, web www.dhc1.co.uk*

In association with: Automatica Ltd

Contents

1.0	Introduction	1
	<i>Approach</i>	1
2.0	Parameters.....	2
3.0	Results.....	3
	<i>Quality checks</i>	3

1.0 Introduction

- 1.1 The Welsh Index of Multiple Deprivation (WIMD) access to services domain shows levels of access to a range of services which are considered necessary for day-to-day living. The domain shows areas where people may have difficulty accessing services. The number of people who actually experience difficulty is not known.
- 1.2 The WIMD2005 utilised Accession by CityLabs to produce information about the time it would take any household to access each of a basket of services, considered necessary for day to day living. The WIMD2005 work produced an indicator which looked at the proportion of households in a “lower super output area” (LSAO) that could access services within a predetermined journey time, by walk and/or bus travel.
- 1.3 Lessons have been learned from the calculation of the 2005 indices. For the 2008 indicators it is required that there should be compatibility with the 2005 indicators but also that improvements should be explored. To obtain this greater flexibility a new computational approach is being used which matches the approach in England for DfT and in Scotland for the Scottish index of Multiple Deprivation.
- 1.4 However, it is necessary to understand what “churn” in the results is brought by the change in methodology. This report therefore describes the results of analysis to run the same data as used in 2005 using the new approach.

Approach

- 1.5 The Wales Data Unit supplied:
 - Data for the bus network in ATCO CIF format for Wales and the borders,
 - Address point data.
 - Service destination locations within Wales and borders for eight types of facility – primary schools, secondary schools, leisure centres, food stores, dentists, post offices, GPs and libraries.
- 1.6 By analysing the data the travel time between each address point and the nearest 10 destinations of each category have been calculated. This report describes the assumptions used and the format of the reported data.

2.0 Parameters

2.1 The maximum walk distances and journey lengths are shown in Table 2.1

Table 2.1

Trip element	Maximum
From residence to stop	800 metres
Between stops (for interchange)	800 metres
Total acceptable journey time	60 minutes
Total walk only trip	20 minutes

2.2 The destination types are:

- Food shop
- GP surgery
- Primary school
- Post office
- Public library
- Leisure centre
- NHS dentist
- Secondary school

2.3 Walking is not allowed along motorways and walk speeds on the road network are 4.8km/h.

2.4 The analysis shows:

2.5 The journey times to the 10 nearest services for each of the eight defined destination types for a time window where journeys start after 7am and are complete by 10am.

- Only journeys taking less than 60 minutes are included.

3.0 Results

3.1 The format for the results is eight separate CSV files showing:

- Origin address identity
- “Nth” service reference number,
- “Nth” service travel time,

3.2 Where “N” is between 1 and 10.

Quality checks

3.3 Quality checks were undertaken as follows:

- 18,813 address points from the 1,201,644 could not be connected to a bus stop. This is 1.6% of the total.
- 969 of the 11,632 destinations could not be connected. This is a surprisingly high number accounting for 8.3% of destinations. These destinations were therefore plotted and they are all in rural and remoter parts of Wales. In these locations there may well be unidentified bus stops e.g. hail and ride meaning that in practice public transport users can access these destinations. However no analysis of this has been undertaken at this stage.