

Visualising Neighbourhood Well Being: GIS in an urban environment

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1. Background

The *Neighbourhood Well Being Index* is a data visualisation tool currently being developed by OMBC's Corporate Research Team for natural neighbourhoods (agreed with Area Managers and elected Members) that mostly nest within ward boundaries.¹⁵ A partnership resource, the system will support the localism agenda and neighbourhood level work in particular. The visualisation tool will be adapted to display the Indices of Deprivation for Oldham SOAs¹⁶ and to enable comparison between those issued in 2004 and 2007.

Compiled largely from operational and managerial information systems currently in use¹⁷, the system provides a consistent view of population dynamics in the Borough, an ability to analyse change over time, and will complement existing focused operational and 'hot-spotting' systems. In essence, high and low rates mapped as a series of 'visual exception reports', will enable users to quickly identify issues of relevance. Data has been collated quarterly since May 2005.

Detailed analysis and examination of the data, involving Council Members, Area Managers, and Officers with local knowledge from OMBC and partner organisations will be an important part of the development process. By tapping into local knowledge and expertise, 'trigger' mechanisms can be refined. This will ensure that the intelligence provided remains relevant to Community Councils, for instance.

Whilst *well being* is a contested concept with a variety of definitions,¹⁸ long term issues such as sustainable consumption and ecological footprints were picked up by the Audit Commission¹⁹ and formed part of their Area Profiles. UK cities such as Sheffield, Salford and Newcastle have developed systems tracking neighbourhood change, as has the Borough of Sandwell mentioned in a study for the City of Toronto which looked at initiatives in the US, Europe and Canada.²⁰

2. Objectives:

- track neighbourhood change, identify trends and sudden change within neighbourhoods;
- identify neighbourhoods with particular vulnerabilities;
- inform discussions and enable precisely targeted interventions;
- provide intelligence to Community Councils and other local initiatives.

¹⁵ Apart from the Town Centre, the other 113 neighbourhoods have at least 200 households (some have near or above 1000)

¹⁶ For explanation of acronyms see the Glossary at the end of the abstract

¹⁷ Data sources - OMBC LLPG, CTAX/HBIS: vacancies, movers, benefit recipients; CSU/GMAC: domestic burglaries

¹⁸ Wellbeing Concepts & Challenges, Fiona McAllister, December 2005, SDRN

¹⁹ Local Quality of Life Indicators, August 2005, Audit Commission

²⁰ Measuring Neighbourhood Vitality http://www.urbancentre.utoronto.ca/pdfs/curp/SNTF_Neigh-Vitality_RP3.pdf

The *Neighbourhood Well Being Index* collates data into four **themes**

- ❖ households in receipt of CTAX benefits (CTB)²¹
- ❖ domestic burglaries supplied by Community Safety Unit (CSU) from GMAC
- ❖ movers (closed CTAX accounts)
- ❖ vacancies (CTAX linked to LLPG)

A quarterly snapshot is taken of occupied residential properties, vacancies and households in receipt of CTB and the total of movers and domestic burglaries during the quarter is accumulated. These data yield CTB recipients as percentage of occupied households and rates per 1000 households in each neighbourhood for domestic burglaries, movers, and vacancies.

The *Neighbourhood Well Being Index* **measures**

- ❖ trends (up or down) for three or more quarters
- ❖ sudden change (for better or worse)
- ❖ severity and persistency (highest and lowest rates)

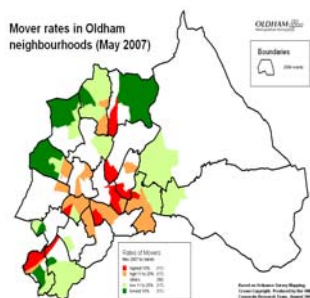
3. Headlines:

- volatility in numbers (and rates) of domestic burglaries across neighbourhoods are detected over time
- vacancies are highest in (or nearby) HMR intervention areas
- rates of movers have been falling during the last year
- rates of households in receipt of CTB are highest in Coldhurst
- an upward trend in the rates of households receiving CTB is only detected in neighbourhoods with low rates

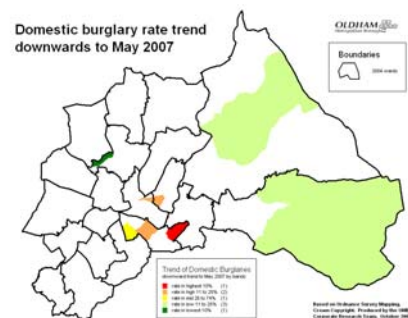
4. Trends²²:

CTB – rates of CTB recipients below 6.4% of all households in six neighbourhoods are ranked in the lowest three quintiles (compared to the Oldham average 7.1%) and show an upward trend over three quarters. Four have shown an upward trend for a year. Conversely thirteen neighbourhoods have shown a downward trend for three consecutive quarters. Of these, one in Coldhurst and another in an HMR intervention area in Werneth have rates of 13.2% and 11.7% respectively, ranked in the highest 10% band.

Domestic burglaries – four neighbourhoods show an upward trend including the two neighbourhoods with the highest ranked rates, located in St. James’ (19.9 per 1000) and Medlock Vale (18.0 per 1000). Yet there is a downward trend in rates of domestic



burglaries in eight neighbourhoods, including one in Alexandra (rate 12.7 per 1000) ranked in the highest 10% band. This is illustrated in the map opposite.²³



²¹ CTB here **excludes** households also in receipt of Income Support or Housing Benefit

²² Trends of rates for three or more consecutive quarters up or down to May 2007.

²³ A modified traffic light scheme is used in maps with red - indicating rates ranked in the highest 10% band, amber - the high 11-25% band, light green - the low 11-25% and dark green - indicating rates ranked in the lowest 10% . In maps displaying rates across the four themes, neighbourhoods with rates ranked in the 26-74% band are white, whereas in maps of trends and sudden changes, those neighbourhoods are shaded yellow, whilst those in white show no trend or sudden change. White is also used for neighbourhoods where no persistently high or low rates are detected.

Movers – no upward trend is present over three consecutive quarters. However, a downward trend in the rates of movers over the same period can be detected in thirty five neighbourhoods.

These rates vary from the third highest with 58.8 movers per 1000 occupied households in one neighbourhood of St. Mary’s (down from 100) to that ranked lowest with a rate of 6.5 (down from 55) in one neighbourhood of Shaw & Crompton. Bands of mover rates are illustrated in the map left.

Movers may be a measure of churn or of a healthy housing market, and therefore higher rates are not necessarily negative. However, the downward trend may indicate a slow down in the housing market.

5. Sudden change²⁴:

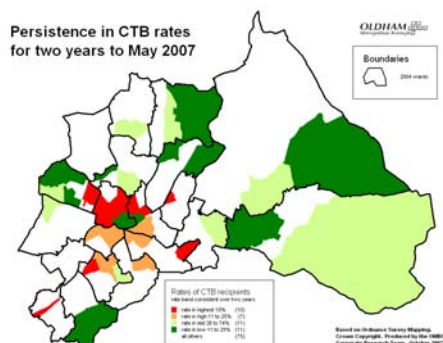
CTB – households in receipt of CTB increased in twenty one neighbourhoods across Oldham. Only two had rates ranked in the highest 25% (both in Hollinwood) and nine had rates ranked in the lowest 25%.

Domestic burglaries – a sudden increase of domestic burglaries was detected in thirty three neighbourhoods, nine of which had burglary rates ranked in the highest 10% band and another eleven ranked in the highest 25%. No sudden increase was found in neighbourhoods where burglary rates were ranked in the lowest 25%.

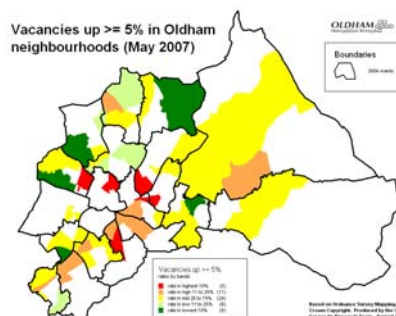
Movers – despite the downward trend overall in rates of movers, a sudden increase in the number of movers was detected in twenty two neighbourhoods. Five had rates of movers ranked in the highest 25% and two had rates in the lowest 25%.

Vacancies – numbers of vacancies increased by over 5% in more than fifty neighbourhoods across Oldham. Sixteen of these had rates ranked in the highest 25% as well as twelve ranked in the lowest 25%. This is illustrated in the map opposite.

Persistent rates:



CTB – four of the five



Coldhurst neighbourhoods outside the Town Centre have had rates of households in receipt of CTB ranked in the highest 10% of neighbourhoods across Oldham over the last two years, with two of these neighbourhoods sharing highest rankings. One Chadderton neighbourhood has a rate that is also consistently ranked in the highest 10%, and three in Hollinwood are ranked in the high 11 to 25% band.

Conversely, another Hollinwood neighbourhood and four in Chadderton have CTB rates that have been consistently ranked in the lowest 25%. Broadly in keeping with the known pattern of deprivation in the Borough, nearly half the neighbourhoods in Shaw & Crompton, and in Saddleworth & Lees have CTB rates that have been consistently ranked in the lowest 25% over the two years up to May 2007. The pattern of persistent CTB rates is illustrated in the map above.

Domestic burglaries – due to the volatile incidence of domestic burglaries there are no neighbourhoods that have exhibited high or low rates consistently over the last two years. Yet one neighbourhood in the south of Waterhead had a rate of domestic burglary ranked in the highest three for over a year up to November 2006. Conversely, one neighbourhood in Royton and one in Chadderton had rates of domestic burglaries that were ranked in the lowest 25% across Oldham for three or more quarters during the two years up to May 2007.

Movers – the neighbourhood in Waterhead suffering a high rate of domestic burglaries also exhibited a rate of movers that was consistently ranked in the highest 10% over the last two years across

²⁴ Sudden increase in **numbers** by over 5% between February and May 2007

Oldham. Neighbourhoods nearby HMR intervention areas and the NDC area along with one in St. Mary's and another in Saddleworth & Lees also had rates of movers that were consistently in the high 11 to 25% band over the two years up to May 2007. The Chadderton neighbourhood with a low rate of domestic burglaries along with another in Royton, also had rates of movers consistently ranked in the lowest 10% for the last two years.

Vacancies – vacancy rates have been consistently ranked in the highest 10% in the HMR intervention areas and in the Waterhead neighbourhood where there is also a high rate of domestic burglaries and movers. Neighbourhoods in Alexandra, Medlock Vale, St. Mary's and one in Shaw & Crompton all have vacancy rates that have been consistently ranked in the high 11 to 25% band over the last two years. This contrasts with one neighbourhood in each of Failsworth, Hollinwood, St. James' and Saddleworth & Lees, and more in Chadderton, Royton and Shaw & Crompton, where rates of vacancies have been ranked in the lowest 25% for the last two years.

6. Other issues:

Whether links may be detected between different themes such as burglaries, movers and vacancies, and issues such as data quality and using the LLPG to link and reconcile data from independent operational systems will be explored.

7. Glossary:

CSU	Community Safety Unit
CTAX	Council Tax System
CTB	Council Tax Benefit
GMAC	Greater Manchester Against Crime
HBIS	Housing Benefit Information System
HMR	Housing Market Renewal
LLPG	Local Land and Property Gazetteer
NDC	New Deal for Communities
OMBC	Oldham Metropolitan Borough Council
SOAs	Super Output Areas