



## **Food Mapping for Community Food Activity**

### **A Briefing Paper from the Scottish Community Diet Project Round Table Discussion**

**27 May 2004**

Food mapping has been defined as the process of finding out where people can buy and eat food, and finding out what the food needs of local people are. (Blair, 2003)<sup>1</sup> For many years, community food projects have created their own local food maps using shopping basket surveys and other participative techniques to build up a vivid picture of the barriers to local healthy food access at any one time. Examples include the Midlothian Community Food Survey (1999, 2003)<sup>2</sup> and the work of Sustain's Community Mapping Project across Brighton, Coventry and Leicester<sup>3</sup>.

Building on the success of these approaches, more sophisticated qualitative and quantitative research methods are being developed to help better define, describe and spatially map food access in deprived communities across the UK. This SCDP round table discussion aimed to bring together a range of people already involved in or interested in utilising food mapping techniques either in their own communities or across Scotland. The event attracted a wide range of participants, including representation from the Food Standards Agency for Scotland, the Scottish Executive Health Department, and practitioners working within the NHS, a Health Demonstration Project, a Healthy Living Centre and a variety of community food projects.

To help focus the discussion, Doctor Liz Dowler from the University of Warwick and Angela Blair from Rowley Regis and Tipton Primary Care Trust in the West Midlands shared their respective academic and community perspectives of food mapping, which afterwards led to general discussion. The following pages highlight the key themes raised over the course of the half-day session.

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<sup>1</sup> Developing a New Deal for Healthier Food in Greets Green. By Angela Blair for the Greets Green Partnership, 2003. For more information, contact the Food Policy Team, Sandwell Primary Care Trusts. Tel: 0121 500 1500.

<sup>2</sup> Are we the forgotten communities? Midlothian Community Food Survey 1999 and 2003. For more information, contact Midlothian Voluntary Action, Tel: 0131 663 9471

<sup>3</sup> *Reaching the parts...* Sustain and Oxfam, 2000. For more information, visit [www.sustainweb.org](http://www.sustainweb.org)

The presenters both reflected on the growing literature, which surrounds and supports the importance of food mapping from a range of stances including those of town planners, economic and regeneration programmes, retailers, the public health community and practitioners in community development.

As Liz explained, the process of food mapping is tied up with the concept of food security, which is described as the situation of having easy access to a choice of acceptable, affordable, healthy food without anxiety or fear (World Food Summit, 2002).

Food mapping is one method used to describe and measure a community's level of food security and is therefore not just about producing spatial maps describing physical and economic access to food. *'Food maps must also be able to describe how people feel about local food access – for example, how culturally acceptable and appropriate it is, how convenient it is to access, how appealing it is, how safe it is to eat, do people have the skills and confidence needed to prepare healthier food options if available?'*

The study *'Measuring access to healthy food in Sandwell'* (2001)<sup>4</sup>, an area of deprivation in the West Midlands, is one key example of community led food mapping research, which attempted to capture both these qualitative and quantitative aspects of food security. Both Liz and Angela worked closely with others on this piece of work. Using Geographic Information Software (GIS) and community participatory mapping, local baseline indicators of food access were identified and have since fed into the development of a local food access strategy for Sandwell.

Participants at the meeting were keen to know if there is a set of principles that they could replicate to food map their own area. While no such information in this form exists at present, the following is a basic template of the process undertaken in Sandwell based on Liz and Angela's presentation.

## **The Food Mapping Process**

### **Identifying the area to be studied**

A geographically defined area of deprivation was selected in Sandwell. Postcode areas are the smallest geographic areas that GIS can analyse and usually cover between ten and twelve houses. The area chosen to map should be considered carefully. Consider what the population density is for the area you want to study – for example, is it an urban or rural area? What are its DEPCAT scores (Index of deprivation category<sup>5</sup>)? What resources do you have available to carry out this

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<sup>4</sup> Measuring access to healthy food in Sandwell, August 2001. Dowler, Blair et al, University of Warwick. Email: [e.dowler@warwick.ac.uk](mailto:e.dowler@warwick.ac.uk) for a copy of research summary.

<sup>5</sup> Developed by Carstairs and Morris, 1991. Postcode codes can be classified by Deprivation Category (DEPCAT) - scores range from 1, the most affluent, to 7, the most deprived. They are

work - the bigger the area the more intensive will be the workload. Where do people live? Where are the natural geographic boundaries such as motorways, railway lines, town centers? Ensure all these factors are taken into consideration at this stage to save time later. Existing information about your area should also be taken into account at this stage too. For example, NHS Health Scotland has produced constituency health profiles across Scotland for 2004, which could provide a basis for food mapping work. For more information, please visit [www.phis.org.uk](http://www.phis.org.uk).

Scottish Neighbourhood Statistics ([www.sns.gov.uk/](http://www.sns.gov.uk/)) is another useful resource for food mapping, which is part of the Scottish Executive's on-going programme to improve the availability, consistency and accessibility of small area statistics in Scotland.

### **Identifying foods that are healthy and acceptable to the local population – community shopping lists**

Using participative research methods, a list of key, basic foodstuffs typically consumed by the main ethnic groups living in Sandwell were identified. These were also foods that met current healthy eating guidelines. Participative research methods or participatory appraisal (PA) techniques encompass a wide range of visual, oral and other innovative tools from drawing pictures, to making diagrams in order to record people's preferences, opinions and views in non-threatening ways within a wide range of settings. For more information about PA, please refer to the Sustain report about food mapping and PA<sup>3</sup>. The SCDP report on the 2003 PA residential can be downloaded from [www.dietproject.org.uk](http://www.dietproject.org.uk).

### **Identifying the local retail availability of community shopping lists**

Where are these foods available locally? What kinds of shops exist? Where are these shops? Are they near a bus route or pedestrian access? Are they accessible to people in wheel chairs or have mobility problems? Are they only reachable by car? Are there busy roads to cross? What quality and freshness of food is sold? To capture this range of information, a full census of all retail outlets selling food, including garage forecourts and off-licenses was then carried out over 12 weeks. Angela Blair in her capacity of Food Access Worker visited every retail outlet in the geographically defined area and conducted a systematic survey of availability (112 items), full range (14 items) and price (46 items) of the identified foods. This information was manually recorded with shop postcode,

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derived from socio-economic data from the 1991 Population Census and provide a useful way of examining the impact of social deprivation on the development and implementation of food policies. For more information,

<sup>3</sup> Reaching the parts... Sustain and Oxfam, 2000. For more information, visit [www.sustain.org.uk](http://www.sustain.org.uk)

address, and information on food quality and shop conditions. In addition to recording this quantitative information, Angela also conducted in-depth, semi-structured interviews with each shopkeeper to capture the experience of working and business conditions, as well as help identify problems and potential solutions to food access from the perspective of local retailers. Clearly this is a labour and time intensive process. Adequate resources must therefore be built into the project from the outset.

### **Recording Quantitative data**

Quantitative data were entered into SPSS v 10, and shop-based indices of availability and Mean Cost Price for items on the healthy food list and fresh fruit and vegetables were calculated. More detailed information on this process is described in the research reports listed.

### **Generating Maps of Quantitative Data**

Using this data and GIS, maps were produced to illustrate the availability and price for items on the 'community shopping lists', including fruit and vegetables; roads within 500m (approx. ten minutes walk with shopping bags) of postcodes containing one or more shops selling items on the shopping lists, or at least eight items of fresh fruit and/or vegetables; and roads within 500m postcodes containing one or more shop selling food at lower than the average or Mean Cost Price.

### **Analysis of Qualitative Data from Retailers**

Qualitative data were entered into a word processing package and examined by hand for key themes and issues. These were then summarised under the headings of supply, crime, competition, and other problems faced by retailers.

### **Community Participative Activities**

#### *'Maps need the story too'*

Quantitative mapping is very different from qualitative mapping as it is about building a far more complex and meaningful picture of what it is really like to live and shop in an area. For example, what is like to shop and eat in the area for shift workers or for ethnic minority groups? Participatory appraisal (PA) techniques were utilized in the Sandwell work to successfully engage large and diverse groups of people, especially those people who are the most hard to reach and would not usually take part in traditional consultation processes.

## **Dissemination and Action**

*“Undertaking community food mapping requires commitment to take action, especially if the local community has been actively involved in contributing information, as expectations will have been raised.”*

*“Food mapping should empower and involve communities and consequently build better links with the community in local decision-making. After maps are produced, action must follow.”*

If the motivation to map food access is to identify problems so that they can be tackled through changes in policy and practice at both local and national levels, then it is essential that the findings be shared with all involved. Dissemination is only part of the process. After dissemination, there will be an expectation that the mapping process will help lead to action. This is one of food mapping's key challenges as action is rarely instant and communities have to be kept informed of timescales to prevent frustration.

## **The benefits and challenges of food mapping**

The process of food mapping is complex and is seldom about finding quick fixes. There are many other issues to consider, some of which include:

### **Frequency**

As identified in earlier food mapping work conducted in London in 1999 <sup>6</sup>, *‘the relationship between the cost of food available and household income and expenditure on food over time, is an essential element in interpreting data on economic food access.’* Food mapping therefore has to be an ongoing activity in order that progress can also be mapped and measured. This is another challenge, as resources have to be in place for this to happen on a regular basis.

### **Mapping for Change**

*‘Food mapping has to be good for business – is it not like a carrot that can be dangled at retailers for them to improve healthier food access?’*

*‘Shops are important too for building community’.*

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<sup>6</sup> Mapping access to food at a local level. Donkin et al, 1999. British Food Journal Vol. 101, No. 7 pp.554-564

Shopkeepers and retailers also have a role to play within the community and food mapping can help foster better relationships with local business. As one participant commented *'it takes more than a shop to bring about a change in food culture, but without a shop that change will never happen.'*

Food mapping can also be a very useful tool to promote dialogue with retailers, planners and policy makers, particularly spatial maps as they are in a language and style that is often more familiar to them. However, as one participant commented from experience, the time and effort involved in producing meaningful food maps is intensive and should not be underestimated. However, Liz explained that any map is a useful starting point and its value should not be underestimated either. *"Sophisticated maps are not necessary to get the process of people talking about food access off the ground."*

### **Food mapping for local and national food strategy development**

*'We need to know that communities have access to health giving foods that they can prepare, cook, handle and enjoy – not just foods that they can afford to buy'*

Food mapping is an opportunity for policy makers at local and national levels to work with others to develop an evidence base for assessing need, developing action plans and monitoring progress. In doing so, food mapping could help bring about positive change and effectively tackle the interlinking barriers to healthy food access in Scotland.

As illustrated by the work in Sandwell, food mapping, when used wisely and with care, can help inform an appropriate, joined-up and supportive policy framework for improving food access over time. If adequately resourced, food mapping could be one tool that communities across Scotland could access in the future to help measure changes in its shopping and eating patterns over time.

Having coordinated this meeting, the SCDP remains committed to sharing the findings of food mapping work with community groups, practitioners and policy makers across Scotland so that the dialogue and discussion initiated at this meeting can continue.