Health impact assessment for regeneration projects

Volume I
A Practical Guide

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BREAKING THE CYCLE
East London & The City Health Action Zone

Queen Mary
University of London

I am pleased to introduce this guide to health impact assessment. This is part of a programme of work to build capacity for health impact assessment of urban regeneration schemes in East London.

Health impact assessment has a major part to play in enabling NHS organisations to work with partners beyond the NHS to tackle inequalities and to address the root causes of ill health. The processes described in the guide emphasise the importance of involving community groups in the planning and implementation of major public projects; health impact assessment can improve the quality and openness of public policy decision-making.

The guide provides practical approaches to health impact assessment. It is intended as the first stage in developing local guidelines for good practice in this field. It is not meant to be applied rigidly in every situation. Other approaches may also be useful. The team working on this document are keen to receive comments or suggestions from those reading or using this guide.

The work to produce this guide is part of the East London and City Health Action Zone. A wide range of partners contributed time and funding: these partners include the Health Action Zone Partnership, Queen Mary University of London, the Draper's Fund and the London Boroughs of Hackney, Tower Hamlets and Newham and the Corporation of London. The work was also supported by the Department of Health to develop HIA toolkits for London.

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Acknowledgements

We would like to thank the many people and organisations who provided us with a great deal of help and support, contributing both time and energy and shaping the HIAs as we developed this guide.

We are very interested in reactions to the guide and to the approach we describe. Health impact assessment methodologies continue to develop and different groups will use HIA in different ways.

If you have any comments on this guide we would be very pleased to hear from you.

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Current information about this guide is available at http://www.geog.qmul/health/guide.html

Health impact assessment (HIA) is a way of identifying how to ensure health gain while achieving project outcomes. It can help partnership working and can be carried out as part of the planning and development of regeneration projects.

This is the first of three volumes looking at health impact assessment and regeneration: this volume provides practical examples to guide organisations through an HIA; Volume II (source 1) provides an evidence base to focus discussion around the likely health effects of projects and Volume III (source 2) looks at the principle behind urban regeneration, health change and HIA. HIAs use a range of techniques, many of which are used in other forms of impact assessment to identify both positive and negative side-effects. HIA estimates the effect a specified action might have on the health of a defined population[3]. On the basis of this estimate stakeholders recommend ways to adapt project activities. The aim is to maximise positive health effects and minimise negative health effects.

The 'health' in 'health impact assessment' usually refers to a social definition of health. This recognises the importance of housing, employment and a range of other factors for population health. This is clearly important for regeneration projects and for the health services both of which deal with people who are experiencing the effects of poor housing, poor employment etc HIA is a way of addressing the root causes of illness and health inequality[4].

It is currently recommended that all public policies and projects, not only those in the health sector, should be assessed for their impact on health[5;6]. The Mayor of London describes HIA as 'a vital tool in helping to ensure that health is a central element to all our strategies'[4].

The Department of Health are also working at regional and local levels to ensure HIA becomes a routine part of policy development[7].

HIA can inform monitoring and evaluation (see Figure 1 overleaf).

This guide describes examples of rapid prospective HIA. This type of HIA should

- happen early in the life of the project (preferably at the planning stage);
- help to decide whether further HIA work is needed; and
- help to design evaluation and monitoring as the project goes forward.

This guide is not meant to be read from cover to cover in one sitting. We start by describing a framework for HIA and suggest some questions to consider. We then use HIA case studies to illustrate how this framework can be adapted to very different types of regeneration projects.

Figure 1 Why do HIA?

Policy for regeneration programmes is emphasising HIAs…
Regeneration and renewal programmes are increasingly expected to consider more than immediate process outputs. There is now an emphasis on broader outcome measures which examine the wider effects, or impacts, the projects have on the areas and groups on which they are targeted[8,9].

HIA can contribute to this wider perspective on regeneration projects.

Since regeneration projects focus on problems of social exclusion and deprivation they have the potential to affect inequalities in health. This guide is therefore partly concerned with health inequality impact assessment.

National health inequalities targets[10] have recently been set as:

- starting with children under one year, by 2010 to reduce by at least 10 per cent the gap in mortality between manual groups and the population as a whole
- starting with health authorities, by 2010 to reduce by at least 10% the gap between the quintile of areas with the lowest life expectancy at birth and the population as a whole.

One of the core principles of the NHS is to "work to reduce health inequalities"[11]. Developing new partnerships to tackle inequality is a key strategic role for health authorities. Local inequalities targets will be set as part of the Health Improvement Programme development process[10].

HIA can inform monitoring and evaluation…
HIA is distinct from monitoring and evaluation: the diagram below shows how HIA comes earlier in the project cycle. It explores/projects/ estimates the expected health outcomes of a project.

HIA can enable stakeholders to develop milestones for monitoring or evaluating the actual public health impact as the project goes forward.

Monitoring is conducted during an initiative and is the regular observation of changes arising from an intervention. Aspects of potential health outcomes identified by HIA may be among the changes monitored.

Evaluation explores whether or not the initiative is meeting its defined objectives[12]. Data for evaluation needs to be collected throughout the initiative but the analysis is usually conducted towards the end. Evaluation of health outcomes may be included and the choice of health outcomes for evaluation may be based on recommendations of HIA.

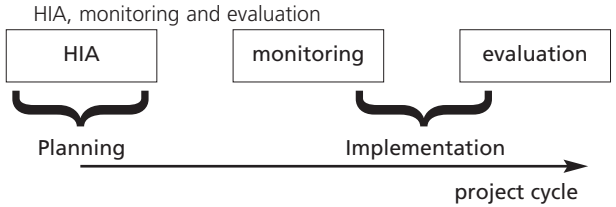


Figure 2 Selection of case studies

As this guide is a demonstration it is important that the case studies are representative of the regeneration work being carried out across East London. To assess the type of work in progress we examined a summary of 50 Single Regeneration Budget programmes which were underway in East London in 1999/2000. This was based on information from the Government Office for London.

Since prospective HIA is best introduced at an early stage, we concentrated on SRB programmes which were then in their first year of operation. At this point, although the programmes had secured funding and were clear about their objectives, there was still scope to adjust the implementation to take account of potential health impacts. The most common project emphasis in the regeneration programmes across East London was on:

- education, employment and training;
- housing and environmental conditions;
- social capital and social support networks.

These aspects of regeneration have potential for health impacts (discussed in more detail below). Ten programmes showed a strong focus on these aspects of regeneration. We therefore decided to select our demonstration programmes from these ten. We obtained the original bid documents for each programme to map the interventions in more detail. Other factors which influenced our choice of demonstration sites were:

- timing – is the programme at a stage where HIA could make a contribution?
- capacity – does the programme have the capacity to work on an HIA?

From this analysis we selected programmes for demonstration case studies. We decided through the screening process to approach the following programmes who have agreed to let us work with them:

- *"Building Sustainable Communities: Forest Gate and Plaistow"* a comprehensive regeneration SRB5 project in Newham which has a strong focus on housing, education and tackling social exclusion;
- *"Safe Routes to School: Safe Roots for Communities"* a pilot project managed by Groundwork and operating in Hackney (and in Hammersmith & Fulham) that is exploring how to develop an all-agency approach to safe, attractive, healthy and educational routes to school for young children

In this section we work through the stages of HIA.

It is important to establish who will co-ordinate the HIA and integrate the findings into the project. Once this is agreed figure 3 shows how HIA links into standard procedures.

The HIA work starts by *screening and scoping* the project.

This stage is part of project planning and will be familiar to most stakeholders.

At this stage we need not be looking for links to health but concentrating on how the project will achieve its planned outcomes.

This involves developing a good understanding of the local *context* and the *mechanisms* which the project will initiate to achieve the *project outcomes*. These are not necessarily health outcomes.

We will call the relation between the context, the mechanism and the intended project outcomes the CMO pattern[13].

HIA identifies how intended project outcomes might have particular *health outcomes*.

HIA can then provide *feedback* into the process of planning and implementation and suggest how project activities can be adjusted to maximise the potential for health gain.

Figure 4 overleaf shows how these stages map onto the terms used to describe the process in other guides to HIA.

Next we describe each of the three stages in more detail.

Figure 3 Health impact assessment and the project cycle

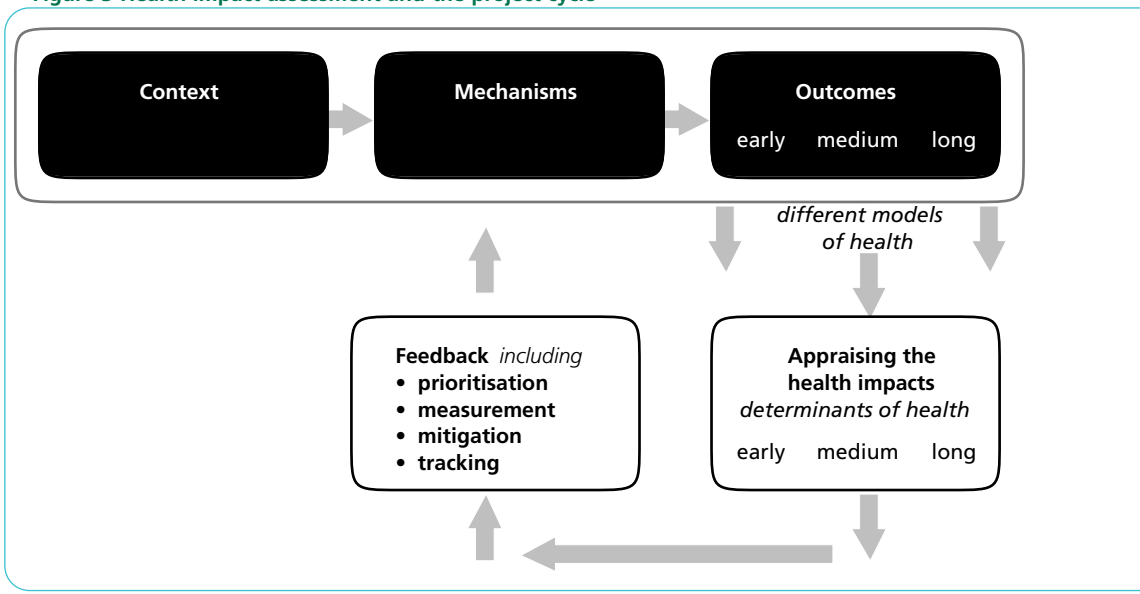


Figure 4 Some HIA terminology

Prospective Health Impact Assessment, as described by most accounts of the process[14-16] involves 5 stages:

Stage 1. screening

Stage 2. scoping

Stage 3. impact assessment

Stage 4. decision making

Stage 5. implementation and monitoring and evaluation

In stages 1 and 2 the relation between the context-mechanism-outcome is established. In stage 3 project outcomes are linked to health outcomes and stages 4 and 5 feed the recommendations back to the planning process.

Agreeing terms of reference

A facilitator is usually needed to co-ordinate the HIA process. At the outset it is important to plan how to integrate HIA into the operation and organisation of the project.

Questions

- Who is the intended audience for the recommendations which the HIA will make?
- Who will facilitate and steer the HIA process?
- How will HIA fit into the activity of the organisation planning the project?
- Who will participate in HIA?

To agree the terms of reference it may be helpful to set up a steering or advisory group which can agree on the strategy for HIA, provide contacts within the project and also ensure continuity from the beginning to the end.

Decisions will also need to be made about who to include in the HIA. It is often recommended that a range of views should be included. If the regeneration project has consultative networks already established it may be appropriate to use these. Ideally, people likely to be affected by the regeneration project should be included in the discussion, as well as other stakeholders.

Resources

The process of HIA requires resources: it is a flexible approach and can be adapted to suit the project's funding requirements. The main resource is the time of the facilitator and of the other people who are involved. We include a rough costing as an example and agree with the Scottish Needs Assessment Programme which found that an HIA, which takes about six months, would cost approximately £10,000 to £13,000[17].

Context

The context within which the project operates includes aspects of the local setting which are specific, and crucial, to the project's success. HIA draws on the local knowledge and understanding of all the stake-holders. A good understanding of the context is central to the assessment (see pages 14 and 23).

Questions

- What are the circumstances in which the project will work?
- Where is the project operating?
- Who are the people who are likely to be involved in, or affected by, the project?
- What are the health characteristics of the local population in the project area?
- What information is available to answer these questions?

Sources of information are likely to include:

- documentation from the project
- local authority information
- population census information
- public health reports

Mechanism

A regeneration project injects resources into a community and creates changes by altering the choices and constraints which people face. The ways these changes occur are the mechanisms of the project (see pages 16 and 23).

Questions

- How will the project work?
- Will the project initiate new working practices? Why?
- Will the project enhance existing practices? Why?
- Will new staff come into post? What will they do?
- Will new facilities be built/ provided? What is their purpose?

Sources of information are likely to include:

- documentation about the project;
- key informants involved in the project.

Outcome

Questions

What are the desired effects of the project in the…

- short term?
- medium term?
- long term?

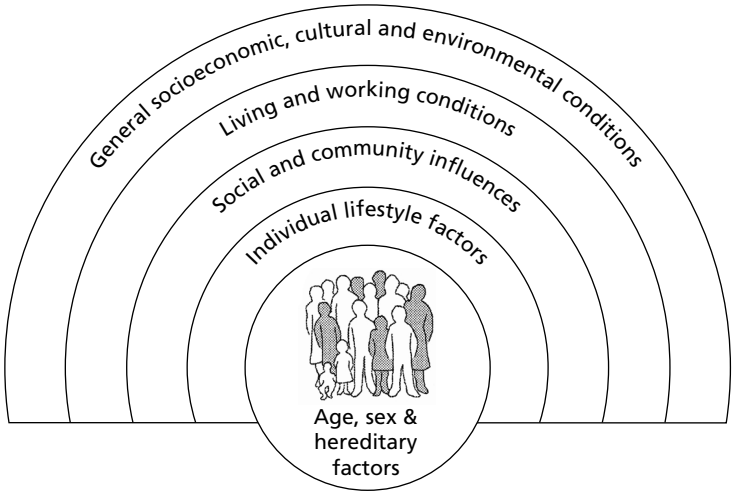
Sources of information are likely to include

- project documentation;
- key informants;
- literature on similar initiatives.

CMO pattern

The way these relate, ie the way the project is expected to work, is the CMO pattern[13] (see figure 12, p16 and figure 19, p24).

Figure 5 The main determinants of health



Source: Dahlgren and Whitehead[18] Figure 3.1, page 23 in Whitehead[19] reproduced by kind permission of The King's Fund

Considering different models of health

The next stage is to consider how the CMO pattern may relate to health. The facilitator should encourage stakeholders to consider what is understood by 'health' (see figure 20 on page 24).

There are different definitions of health which will affect the focus of the HIA. If health is defined in a medical sense it might focus on health services and on specific diseases, treatments and medicines. However, important influences on our health lie outside the National Health Service so HIA usually works with a 'social model' of health. This shows us how health is affected by a broad range of factors including housing, employment status, transport and the social and the built environment. These are determinants of health (see Figure 5).

When considering how a regeneration project might affect health it is important to look beyond the possible changes to health services.

Regeneration projects are likely to act on 'determinants of health' so health outcomes may be expected as indirect outcomes of the project. HIA encourages us to consider these indirect outcomes and to take steps to maximise the potential for the possible health gain which is implicit in a lot of regeneration work.

Changes to determinants of health may make some people's health worse, at least in the short term (see Figure 14 on page 17, Figure 15 on page 18 and Figure 21 on page 25), so an important role of HIA is to identify possible negative health impacts and ways by which to minimise them. Information will be needed in advance to decide about this. The facilitator will need to make sure this information is compiled, from the sources indicated below, before participants in HIA attempt this stage. Compiling the evidence can take some time and may require expert public health advice.

The facilitator should encourage stakeholders to consider which 'determinants of health' are most likely to be affected by changes brought about by the SRB project.

The facilitator needs to encourage stakeholders in the light of the CMO pattern already discussed to consider possible health impacts (see pages 17, 18 and 25).

Questions

- Which determinants of health are likely to be affected by the project?
- How may health determinants change as a result of a project?
- How might expected changes in these determinants of health affect the health of people in the project?
- What might be the outcomes for health?

Sources of information are likely to include

- public health literature and advisors;
- evidence base of health impacts derived from published research *(see Figure 6)*;
- views of stakeholders collated in interviews, focus groups, workshops etc.;
- other HIA case studies.

Figure 6 Presenting the evidence base

It is important for participants in HIA to have access to the existing, published evidence about how changes in the determinants of health ie housing, transport, employment etc affect people's health. Volume II of this guide (see Cave and Curtis et al[1]) presents a selected evidence base used to aid the HIA case studies described below. When considering the evidence of likely health impact of a particular project it will be helpful to have information on:

- the types of health effect which may be expected from the changes produced by the project eg mental, physical, psychosocial impacts;
- the nature of the associations eg risk to health, beneficial to health, two-way effect;
- how and why change in the health determinant produces change in health (if known);
- which population groups are likely to be affected; and
- mediating factors which might influence the ways that health effects are produced in different settings.

This information can be used for

- project design;
- bidding for funding for projects;
- detailed amendment to project plans as the projects are implemented;
- design of monitoring and evaluation.

Feedback to project design

This stage feeds the learning of the HIA back into the planning process and begins to make recommendations for project decision-makers (see pages 19 and 26). Stakeholders need to decide these recommendations.

Question

- What changes, if any, should be recommended to the project plans in the light of the rapid HIA?

The facilitator can help stakeholders to rank the health outcomes which have been identified by the stakeholders. Figure 7 lists some possible criteria for prioritising the health outcomes.

Stakeholders could also consider

- How might these changes be measured or assessed?
- How might these changes be monitored and evaluated?

It may be necessary to go beyond the rapid HIA described here to investigate important potential health impacts in more detail. This implies producing a plan for evaluating and monitoring the project, as it proceeds, which will include consideration of health outcomes.

Question

- Should the stakeholders commission a more detailed HIA or an evaluation which focuses on the most important health outcomes to which they have given the highest priority?

Figure 8 on pages 9 and 10 brings the questions together as a checklist for HIA.

The next sections of the guide illustrate the flexible use of this framework.

Figure 7 Suggested criteria for prioritising health outcomes

- amount of benefit: to population, to vulnerable groups
- amount of harm: to population, to vulnerable groups
- likelihood of benefit: to population, to vulnerable groups
- likelihood of harm: to population, to vulnerable groups
- number of people affected
- size of geographical area affected
- priority within policy/strategy framework of own organisation/partnership
- priority within policy/strategy framework regionally/nationally
- priority within community group
- cost to benefit ratio of action to maximise benefit and minimise harm
- time necessary for benefit to become apparent
- capacity in community (availability of skills)
- impact/demand on public services
- impact on environmental capacity eg air quality, water supply, land use, waste production

from Ison[20]

Figure 8 Checklist of questions for HIA (continued overleaf)

Project being appraised.....	**Information gathered/conclusions**	**Project management** **Who led, and was involved in, each stage of HIA?**
Getting started: agree terms of reference and responsibilities • Who is the intended audience for the recommendations from HIA? • Who will facilitate and steer the HIA? • How will HIA fit into the activity of the organisation planning the project? • Who will participate in HIA? Screening and Scoping *Context* • What are the circumstances in which the project will work? • Where is the project operating? • Who are the people who are likely to be involved in, or affected by, the project? • What are the health characteristics of the local population in the project area? *Mechanism* • How will the project work? • Will the project initiate new working practices? Why? • Will the project enhance existing practices? Why? • Will new staff come into post? What will they do? • Will new facilities be built/provided? What is their purpose? *Planned project outcomes* What will the effects of the project be in the… • short term? • medium term? • long term?		

Figure 8 Checklist of questions for HIA (continued)

	Information gathered/conclusions	**Project management** **Who led, and was involved in, each stage of HIA?**
Rapid appraisal of health outcomes • Which determinants of health are likely to be affected by the project? • How may health determinants change as a result of a project? • How might expected changes in these determinants of health affect the health of people in the project? • What might be the outcomes for health? Feedback to project design • What changes, if any, should be recommended to the project plans in the light of the rapid HIA? • How might these changes be measured or assessed? • How might these changes be monitored and evaluated? • Will the stakeholders commission a more detailed HIA or an evaluation which focuses on the most important health outcomes to which they have given the highest priority?		

Case Study 1 – Safe routes to school: safe roots for communities

This case study looks at the Groundwork project in London Borough of Hackney. *The Groundwork Guide to HIA* **also looks at the Groundwork project in London Borough of Hammersmith & Fulham[21].**

This project is a collection of micro-level interventions working with single classes or small groups of children. It is a relatively small project with £900,000 of SRB funding over three years. The project is piloting different ways to develop and promote safe travel to school.

Unlike most 'Safe Routes' schemes, this project has two distinct and equally important angles – safe routes to school and safe roots for communities. Groundwork believes that the process of involving local schools and communities is key to effectively improve safety along routes to school.

Through community co-operation and communication the project aims to change ideas and ways of thinking by involving communities in the improvement of safety along routes to school. The work is all locally developed and relevant, and is resulting in research that will help spread the good practice being developed.

This project is operating in two London Boroughs. The situation in London is very different in nature to that in most other areas of the country – higher pollution levels, better public transport and higher youth-accident statistics. Through curriculum-based working and community-based learning, Groundwork is helping children to assess their routes to school and develop their own ideas about how they can be improved.

- Using photography and video to record problem areas and the views of pupils, parents and community members.
- Promotion of cycling through bike maintenance and cycle training.
- Using Design Technology and Art classes to design practical and artistic solutions to everyday problems eg designing bike shelters, or a creative and well-lit trail through a park.
- Using drama to explore road and personal safety issues, using speed guns and vehicle counts to gather data about the dangers faced on their routes.
- Plotting routes to school on maps in geography classes, analysing survey results in Maths lessons using IT, looking at personal safety and transport choice through literacy.
- Developing a web site recording the process as the project unfolds helping children become more familiar with computer technology.
- Designing and running a poster competition to promote sustainable transport and road safety in business studies.
- Producing a travel plan in conjunction with the Hammersmith and Fulham Urban Studies Centre. The plan detailed routes to school, local history, surveys conducted and listed 17 recommendations. This work is now available on-line at http://www.la21.org.uk

Locally Generated Ideas

From the outset, there are no preconceived ideas of what physical improvements are required. All the ideas are generated through the work that the local

pupils undertake. This means that solutions devised are directly related to the problems in the local area. Not only does this make the work more efficient by meeting the actual need, it helps make it more lasting as people feel they have a stake in the work.

The children have worked with local communities and their families to develop new ideas. Their work and enthusiasm has enabled the community to see the children as part of the solution and not the problem. The work has helped bring the community together and realise they can make changes. The project has also enabled local companies, schools, shops and community groups to work together for the first time. By involving the community in the planning process, Groundwork has been able to help the local authorities to incorporate local needs and aspirations into proposals.

The physical results can include improved cycle paths, more attractive routes, safer environments, a decrease in car use and more active and independent young people. These changes have a profound impact on the sense of civic pride.

Making the Most of the Work

The web site being developed through this work will also serve as a useful tool. It will provide ideas and guidance to teachers and community members involved in such projects as well as helping people to learn more about sustainable transport issues.

The scheme is being monitored by academic institutions, both for health benefits and for good practice. Queen Mary, University of London is developing best practice guidance notes on the use of Health Impact Assessments in project planning. Educational packs are also being developed to assist schools in the practical implementation of 'safe routes' lesson planning.

Safe Routes to School: Safe Roots for Communities

The 3-year programme has received £900,000 from the Single Regeneration Budget, which is administered by the London Development Agency. The total programme value is currently estimated to be over £2 million and we are working in close partnership with the London Borough of Hackney and the London Borough of Hammersmith & Fulham.

Groundwork is an environmental regeneration charity putting the theory behind sustainable development into practice. From small community projects to major national projects, Groundwork believes in using the environment as a tool to engage and motivate local people to improve their quality of life. Groundwork Regional Office is the accountable body and responsible for overall management, with the project delivered by Groundwork West London and Groundwork Hackney.

In this programme the HIA facilitator's role has been to collate views from a number of different stakeholders in the scheme in order to compile and disseminate ideas about health impact across the whole programme. Given the small scale of the projects, the most appropriate HIA methods for individual interventions are simple techniques for self assessment. These can be carried out by those leading the intervention locally, using the learning about health impact assessment which is being disseminated.

The Director of Public Health of Ealing, Hammersmith and Hounslow Health Authority lead discussions involving officers from Regeneration, Health Strategy and Health Promotion to identify a policy or project area in which to develop HIA. There was unanimous support to identify projects which:

- had a set timescale and were at an early stage of development
- had clear boundaries in terms of geography, target group, agency responsibility
- had clear inputs – they did not want to select a broad area/ project which had many possible confounders such as other strategies and projects
- had accessible target groups and information collection systems
- involved a range of partners who would be looking for other outcomes but who would be supportive of identifying health gains from their interventions.

The Safe Routes to School (SRTS) project met these criteria and so it seemed appropriate to carry out an HIA.

Academic institutions were invited to respond to a proposal; the response had to include details of experience in HIA, how the HIA would be conducted, time to be allocated to the work and costs which would be incurred.

Queen Mary, University of London, had identified this programme as suited to HIA (described in Figure 2 on page 2) and were thus in a position to tender for the work.

The next sections describe how the HIA moved through the stages in Figure 9.

Figure 9 Stages of HIA for SRTS pilot projects

Screening and scoping the CMO
- work with steering group
- collating information from stakeholders
- observing projects

Appraisal of health outcomes
- characterising key features of CMO
- linking key features with possible health outcomes

Feedback to planning process
- feedback to regional forum
- feedback to local projects

Figure 10 Key stakeholders in SRTS projects

The stakeholders included:

- Groundwork West London
- Groundwork Hackney
- Urban Studies Centre, Hammersmith & Fulham
- Highways Department, Hammersmith & Fulham
- SRTS Consultant , Hammersmith & Fulham
- Primary Schools, LB Hackney
- Primary Schools, Hammersmith & Fulham
- Secondary School, LB Hackney
- Road Safety Officer, LB Hackney

Work with steering group

A steering group was set up to guide and monitor the HIA and to ensure the findings were integrated into the SRB projects. The steering group agreed on the scope and focus of the HIA and identified the audience for the recommendations of the HIA. The steering group also provided contacts for, and information about, the projects.

The membership included:

- Policy and Equalities Officer, LB Hammersmith & Fulham
- LB Hackney
- Project Officer, Groundwork Hackney
- Project Officer, Groundwork West London
- Project Manager, Groundwork Regional Office
- Public Health Specialist, Ealing, Hammersmith & Hounslow Health Authority
- Health Promotion, East London & the City Health Authority.

Collate information from key informants

The facilitator developed a picture of how the project activities were expected to create change by talking with key informants representing the views of the different stakeholders. They are listed in Figure 10.

Observations of the projects in operation

The facilitator also observed, and participated in, several projects to see how they were working. Observations included visits to a secondary school and to a Primary School in Hackney.

One model of the Groundwork interventions consisted of a series of class-based sessions in primary schools using participatory and inductive methods. The HIA focused especially on this model and looked at examples of how it was working.

Primary Schools in Hackney

The children were encouraged to look at their impact on their local environment. The sessions involved regular work with one class and were focused on traffic and pollution and other issues arising from plans to pedestrianise the high street on which the school is situated. The Groundwork SRTS sessions built on work which the school had initiated.

The sessions were run by the Groundwork Project Manager and the class teacher was present throughout. The children worked in small groups. The HIA facilitator attended two sessions mainly as an observer but also got involved in working with the groups of children.

The children identified the ways in which traffic affected their lives and looked at different ways of measuring these effects. Each group focussed on a particular issue. One group designed questionnaires which they used to survey members of the public and shopkeepers about the ways in which pedestrianising the street would affect how the street was used. Another group looked at the traffic and measured the phasing of the traffic lights and the width of the pavement at various places along the road. Another group looked at noise pollution and measured the sound level at various points and in the local park. The children presented the results back to the whole school.

Secondary School, Hackney

This project involved a group of six children from a Business Studies course; they designed a poster campaign to advertise a Safe Routes To School competition for school children in Hackney.

Groundwork had approached the school with several options for SRTS sessions. The teacher selected the poster campaign as it fitted well with the Business Studies syllabus. It was a way to bring the school work to life through accelerated learning and peer teaching. An important skill for the teacher is to assess the make-up of the class and to select appropriate teaching techniques: alternatives to 'chalk and talk' were preferable.

The teacher introduced the poster campaign to the class as a competition. The pupils had to 'bid' for the opportunity to take part. The teacher decided this would be the best way of identifying those pupils with the highest motivation. 12 girls applied and 8 were selected. The work was extra-curricular and involved extra commitment for the teacher and the pupils. They met in the lunch hour and after school. The group reported back to the class and the project formed part of their assessed work for GCSE.

We discussed the initiative with the class teacher and the Groundwork project manager and observed the posters. The posters (see Figure 11) have a professional style of production so the campaign simulates a real media campaign.

This is educational for the pupils and increases the sense of achievement.

Figure 11 Poster produced by Business Studies pupils

Reproduced with kind permission of Groundwork

Figure 12 SRTS sessions in primary school ... CMO

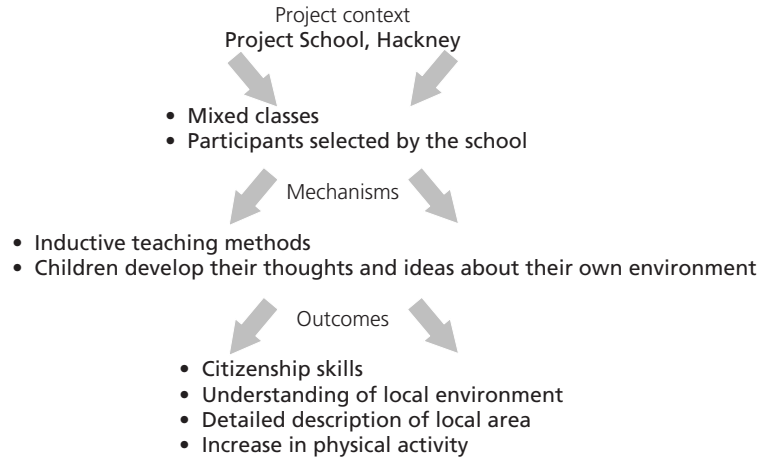


Figure 13 Potential psychosocial and physical effects of SRTS

- Improved educational attainment could boost children's confidence and sense of self worth, and may improve the children's long-term life chances, affecting a range of adult health indicators[22].
- Alternative methods of travel to school such as walking and cycling or using public transport provides children with time which is not regulated by adults; this can be beneficial for social skills and independence[23]. It could also increase their exposure to negative behaviour outside school premises such as bullying and intimidation.
- Moderate levels of physical activity are associated with improved mental health for adolescents[24] and if the children maintain an active lifestyle throughout their adolescence and adulthood they will also enjoy a decreased risk of coronary heart disease[25].
- If more children walk and cycle to school there will be a greater number who are exposed to traffic hazards and this might result in an increase in the number of accidents[26].

The following outline shows how the HIA facilitator brought together the evidence from different sources to summarize HIA.

Key features of the sessions in the primary school

Figure 12 summarises the intended CMO pattern for the sessions in the primary school. The class was mixed sex and had been selected by the teacher to take part in the SRTS sessions.

The children were encouraged to examine their local environment from their perspective and that of other people.

The 'outcomes' section of Figure 12 summarizes the intended project outcomes: the children were expected to gain citizenship skills and to acquire knowledge about their area and environment. The classes aimed to encourage children to consider using alternatives to car travel to school (walking and cycling). This may promote greater levels of physical activity.

Figure 13 shows how the intended project outcomes were related to evidence of health impact from public health literature. The health outcomes of this type of intervention might relate to both psychosocial and to physical health: the outcomes of the sessions have the potential to affect health, both positively and negatively.

Figure 14 shows how the link was made between the CMO pattern and potential health outcomes.

Key features of the sessions in the secondary school

Designing the poster campaign provided the Business Studies pupils with experience of some of the challenges faced by professional media companies. It was a process of active learning which enriched their Business Studies course. This project might also increase the pupil's confidence; seeing their poster displayed on billboards might provide tangible proof of their achievements. It is hoped that this will improve their relationship with, and attitude towards, school. This may lead to an improvement in their educational attainment which could, in turn, lead to improved long-term life chances and potential impact on a range of adult health indicators.

The benefits of this project would mainly be enjoyed by the six pupils who designed the campaign. It is hoped that their achievement would also provide a good incentive to other children in the school and the wider area and provide good publicity for education in Hackney.

Figure 15 shows how the health outcomes may be positive ie increased confidence from considering their environment and realising the depth of their knowledge and also from an increased integration in, and support from, the local community.

This process of reflection could have a negative effect if, through the process of examining their neighbourhood, the children come to see it, and themselves, as deprived. This might lead to a sense of powerlessness and a negative psychosocial impact.

Figure 14 SRTS sessions in primary school … CMO and health outcome

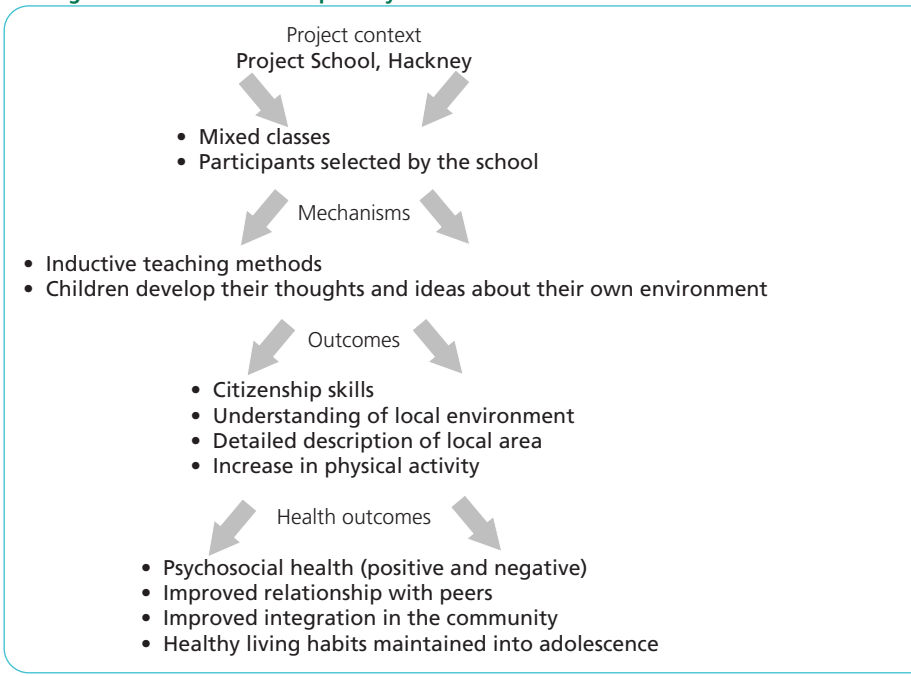
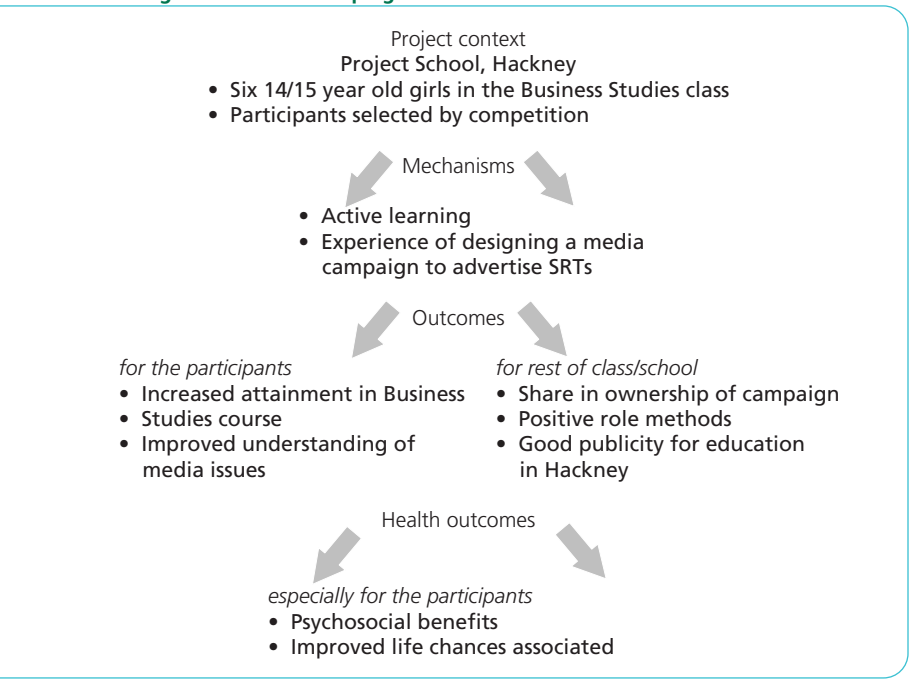


Figure 15 Poster campaign … CMO and health outcome



Feedback to the steering group

The next stage was to feed the recommendations back to the steering group and to a regional forum. This was to inform further development of the project as the SRB5 pilot projects are rolled out to a pan-London SRB6 programme.

The report from the pilot HIA work on the SRB5 project will provide guidelines for the HIA implementation of the SRTS components of the SRB6 programme. It is worth noting that HIA could also contribute to the design of the other projects within the wider SRB6 programme.

The feedback noted how the HIA had identified possible positive and negative impacts on health. It was stressed that it would be desirable to take early action at the planning stage to anticipate the potential health impacts of the SRB6 schemes and to try to maximize possible health gains.

The project could have positive and negative effects on both the physical and psychological health of the children involved. This HIA has concentrated on the children but the work could have some effect on parents, teachers and the wider community. SRTS can tackle social exclusion by providing resources, opportunities and scope for the children.

It was noted that the schools were unwilling to 'waste' the resources which Groundwork offered and selected their most able pupils for the SRTS sessions. The programme is located in areas which experience deprivation. Inequality, and health inequality, are defining features of deprivation. SRTS could reproduce and entrench these inequalities if it does not seek to work with children who may be less academically skilled.

The facilitator was asked to help to plan future evaluation of the programme as it developed to assess how far expected outcomes and possible health outcomes were being realised.

Feedback to local projects in schools

It was agreed that feedback to schools was also appropriate. The mechanisms which were suggested included

- project managers in contact with schools
- facilitator revisiting the schools
- interactive SRTS website

Case Study 2 – Building sustainable communities: Forest Gate and Plaistow

"Building Sustainable Communities: Forest Gate and Plaistow" is a comprehensive regeneration project in the London Borough of Newham which has a strong focus on housing, education and tackling social exclusion. This regeneration project had been identified as a potential case study by screening the regeneration work in East London (as described in Figure 2 Selection of case studies on page 2). This case study shows how one of the main elements of the project aims to establish a housing company which will implement a range of housing improvements, working in collaboration with the Council and Registered Social Landlords (RSLs). Efforts at improvement will be especially concentrated on housing in the private rented sector where there is a large number of poor quality, overcrowded houses which command a low rental value.

This HIA looks at how the proposed changes in housing might affect the health of the population in the project area.

Building Sustainable Communities is a housing led programme in an area of East London which contributes to a wider area regeneration strategy. Passmore Urban Renewal is a housing regeneration company which has been set up to develop a co-ordinated framework to address low levels of investment, particularly in the built environment[27].

Passmore Urban Renewal will manage a project of housing improvements and continue the work after seven years of SRB funding is finished. This housing regeneration company is just one project, albeit the main one, within the Building Sustainable Communities SRB5 programme.

The housing regeneration company has three roles:

- The first is to make affordable housing available to key workers, such as teachers and nurses, to encourage them to settle in the area. The housing company will acquire a number of properties, refurbish them and let them at sub-market rents. The housing company will also develop home ownership options so that key workers and other local people have opportunities to move between tenures within the area and it will be considering how it can assist people on low incomes to maintain their homes. More detailed plans are being developed in these last two areas.
- Its second role is to improve housing by working strategically with the Council and RSLs in directing their capital spending projects in the area (location and type of properties, beneficiaries, lettings policy). RSLs will themselves acquire and refurbish about 350 properties over the project. Acquisitions for both RSLs and the housing company will focus on vacant properties and houses in multiple occupation (HMOs) which have been compulsorily purchased following intervention by the environmental health department.
- The third company role in the long term, is to use any surpluses generated to build up a community investment fund for reinvestment in local community projects.

Some of the detail of the project is still being formulated. The council has to balance statutory responsibilities toward housing the homeless with wider regeneration objectives.

The SRB programme is also implementing other initiatives to improve the infrastructure in the area and reduce social exclusion and reduce the concentration of deprivation that puts pressure on already stretched local services. The programme is progressing in consultation with a network of community representatives.

Getting started

In this case study the HIA facilitator approached *Building Sustainable Communities* to invite them to participate. (In a different situation, when a project takes the initiative to consider HIA, a facilitator would need to be appointed.) The initial meeting between the HIA facilitator, the Project Manager and a representative from the local authority was concerned with the HIA process and exploring how it could be useful for *Building Sustainable Communities*.

It was agreed that HIA was a decision tool which would help to

- anticipate the expected health impacts of Building Sustainable Communities;
- clarify the potential for public health benefits which are inherent in the housing project and
- identify any potentially negative impacts on health.

It was also agreed that HIA is distinct from evaluation but the process of identifying the expected health outcomes would help to develop milestones for monitoring or evaluating the actual health impact during the project.

It was explained that the HIA would focus on the housing project, as this was one of the main components of the Building Sustainable Communities programme, and its potential to affect population health.

The project manager provided a list of contacts who would be key informants.

Figure 16 Key stakeholders in the Building Sustainable Communities project

- Stratford Development Partnership
- Regeneration and Partnerships, London Borough of Newham
- Building Sustainable Communities Partnership Board
- Community Involvement Unit
- Housing Company
- Residents Association

Figure 17 Housing and health … some of the evidence

Several reviews have pointed to links between poor housing and health[29-34].

Aspects of physical health which may be affected by poor housing include: greater risks of injury; greater levels of reported respiratory disease and gastro-intestinal problems associated with cold, damp and mould growth; and an increased risk of infections due to crowded conditions especially in temporary accommodation.

Cold, damp housing or crowded housing which is in poor condition may also be associated with mental illness. Mental health of mothers and children living in flats may be worse, perhaps due to isolation and the difficulties of getting out of the home[29]. Evidence for women in Britain suggests that high density living may be damaging to mental health[35]. A recent review states that children living in temporary accommodation are more susceptible to a range of conditions including disturbed sleep, poor eating, overactivity, bedwetting and soiling, aggression and higher rates of accidents and infectious disease[34]. Living in cramped unsanitary conditions is also very stressful and undermines personal and parental relationships[36].

The evidence concerning the links between health and rehousing or housing renewal is less extensive; it suggests that the degree of control individuals have over the rehousing process is important. Smith et al[37] found that medical priority rehousing alleviated mental illness and depression. However they also found that rehousing could precipitate bouts of depression. Allen[38] looked at the experiences of tenants on a peripheral local authority housing estate which was undergoing renewal. The experiences they reported appeared to depend on the amount of control they wished to have, and managed to exert, over the refurbishment process. Some found it intrusive and disempowering to have no say over the improvements, choice of contractor or when the work should take place. Others were pleased with the improvements to their home. Allen suggests that tenants should be involved as much as possible in the process of renewal. Collard[39] looked at the experiences of Bangladeshi families in temporary accommodation. The families reported that financial assistance in moving, redecorating and furnishing the new home would have been helpful. Temporary accommodation is one phase of a cycle of homelessness. High levels of mobility had detrimental effects on the families access to primary health care and education.

Review documentation

The project documentation was reviewed to help establish the CMO pattern. The most current information on the project and the housing project was contained in the original bidding document. The Regeneration Strategy for the London Borough of Newham[28] also contained important information on the regional priorities which informed the planning of *Building Sustainable Communities*.

Interviews with key informants…advisors to the HIA

The facilitator conducted a series of interviews with key informants (see Figure 16) to develop an initial impression of how those involved saw the relationship between the context, the mechanisms and the outcomes of the project.

The interviews also served to establish and maintain informal links to a consultative group within the project. Notes of the interviews were sent to the key informants so they were able to check the accuracy of their description. This was important as it was made clear that all information gathered throughout the HIA was in the public domain.

Summarising the links between housing and health

It became clear that the HIA would need to be informed by evidence of the known links between housing and health, so the facilitator compiled information in the form of a structured review of this evidence, summarised in an easily accessible format and described in Figure 6 on page 7.

The relevant links between housing and health are summarised in Figure 17. See also Figure 6 on page 7 for a description of the evidence base.

Multi-agency stakeholder workshop

Using the consultative networks already established for this project, we facilitated a workshop to go through the possible health impacts with a wider group. Attendance was by invitation and was drawn up using the project's database of contacts.

This consultative group was made up of a range of stakeholders including local residents who had lived in the area for some time. It would have been desirable to include representatives of the private landlords and their residents as these groups of people will also be directly affected by the changes planned in the project.

The workshop was held in one afternoon in a local youth centre and included representatives from the local community, the voluntary sector and the statutory sectors.

The workshop was opened with three short presentations; the chair of the partnership board described the regional strategy, the project manager spoke about the SRB project and the HIA facilitator introduced HIA and outlined some of the links between health and housing.

The participants then broke into three small discussion groups facilitated by 'advisors' from an academic/public health background, who were familiar with the public health perspective on HIA, to lead them through the diagram in Figure 3 (page 3) and record ideas and comments on a flip chart. A roving 'scribe' took notes from all the groups.

Working through the stages of HIA

In the first part of the discussion participants concentrated on summarizing the links between the context, the mechanisms and the outcomes of the housing regeneration project. This is a familiar part of regeneration planning and consultation and had already been explored in previous consultation meetings. There are advantages in beginning the process of HIA with issues which are familiar to the stakeholders and also in re-examining the aims and assumptions of the project.

Key features of the CMO pattern

The CMO pattern in Figure 19 shows how the improvements to housing and other environmental improvements are intended to change the project area. Figure 20 (overleaf) shows how, in turn, these changes may affect population health.

Context – area profile

The borough of Newham has a young and mobile population, high levels of deprivation and a high proportion of people from black and ethnic minority communities. Significant numbers of dwellings are in low quality, privately rented houses which offer poor living conditions and have high levels of multiple occupation and crowding. A large proportion of the tenants in this housing stock are state benefit claimants and the private landlords have little incentive to maintain the standards of their properties.

Mechanisms

The housing company has three main aims; the company will acquire and refurbish properties and operate a community lettings policy which will encourage key workers to remain in the area. The company will work with and seek to influence major providers of public housing in the project area. The company will use any surplus it generates to establish a community investment fund.

Figure 18 Stakeholders represented at the workshop

- Community Involvement Unit
- Community Link
- Building Sustainable Communities Partnership Board
- LB Newham Environmental Health Department
- LB Newham Chief Executive's Office
- Newham Community Health Services NHS Trust
- Newham Community Safety Unit
- Newham Tenants and Residents Federation
- Passmore Urban Renewal
- Regeneration & Partnerships, LB Newham
- Social Enterprise Zone, Community Link
- Secretary of Resident's Association
- Forest Gate Youth Centre
- Community representatives

Figure 19 Housing change … CMO

Context

- Young, mobile, ethnically diverse population, high levels of deprivation
- Poor living conditions in privately rented houses
- Private landlords have little incentive to maintain their properties
- Large population of the tenants are state benefit claimants

Mechanisms
Housing company

- Acquire and refurbish properties – community letting – key workers important
- Work with the council and RSLs in directing capital spending programmes
- Use surpluses to build a community investment fund

Outcomes

- Residents feel more positively about area
- The area will become more attractive to tenants who want permanent homes and are able to pay higher rents in the private market
- Improved understanding of media issues
- Building works
- Renovation process
- Some people might have to move to new accommodation outside programme area

Figure 20 Some definitions of health

1 Health is a state of complete physical, mental and social well-being, and not merely the absence of disease *World Health Organization Constitution*

2 Health is the reduction in mortality and disability due to detectable disease and disorder, and an increase in the perceived level of health *World Health Organization/Euro Health*

3 Health is a resource for everyday life, not the object of living. It is a positive concept emphasising social and personal resources as well as physical capabilities *World Health Organization Health Promotion Glossary*

4 Health is the capacity of people to adapt to, respond to, or control life's challenges and changes *Frankish et al*[40]

Source Ison[20]

Project outcomes

The changes in housing are intended to improve the quality of housing offered in the refurbished homes and make the project area a more attractive place to live. The socio-economic profile of the population is expected to become more mixed and less disadvantaged overall as it becomes more desirable to tenants who are able to pay higher rents in the private market.

The residents are expected to feel more positively about where they live, to experience an improved quality of life and a sense of belonging in the local community. The project is therefore expected to foster more stable communities with less residential mobility and to strengthen social capital through greater social coherence.

Potential health outcomes

In the workshop we used prompt sheets to introduce different concepts of health (see Figure 20) to the stakeholders. These were developed specifically for rapid HIA by Ison[20] for the Directors of Public Health from Berkshire, Buckinghamshire, Northamptonshire and Oxfordshire this aided the transition from project outcomes to health outcomes. We used prompt sheets from the same source to provide examples of determinants of health.

The facilitator in one of the groups found it helpful to paraphrase the definitions in Figure 20 as follows:

1 health as general well-being;

2 a medical definition of health in terms of diseases which doctors would recognize;

3 social and physical well-being to help people to cope with everyday life;

4 health as the capacity to be in control of one's life.

The participants in the three groups agreed that each of the definitions were important and also that the links between poverty and health are paramount in understanding the possible health impacts.

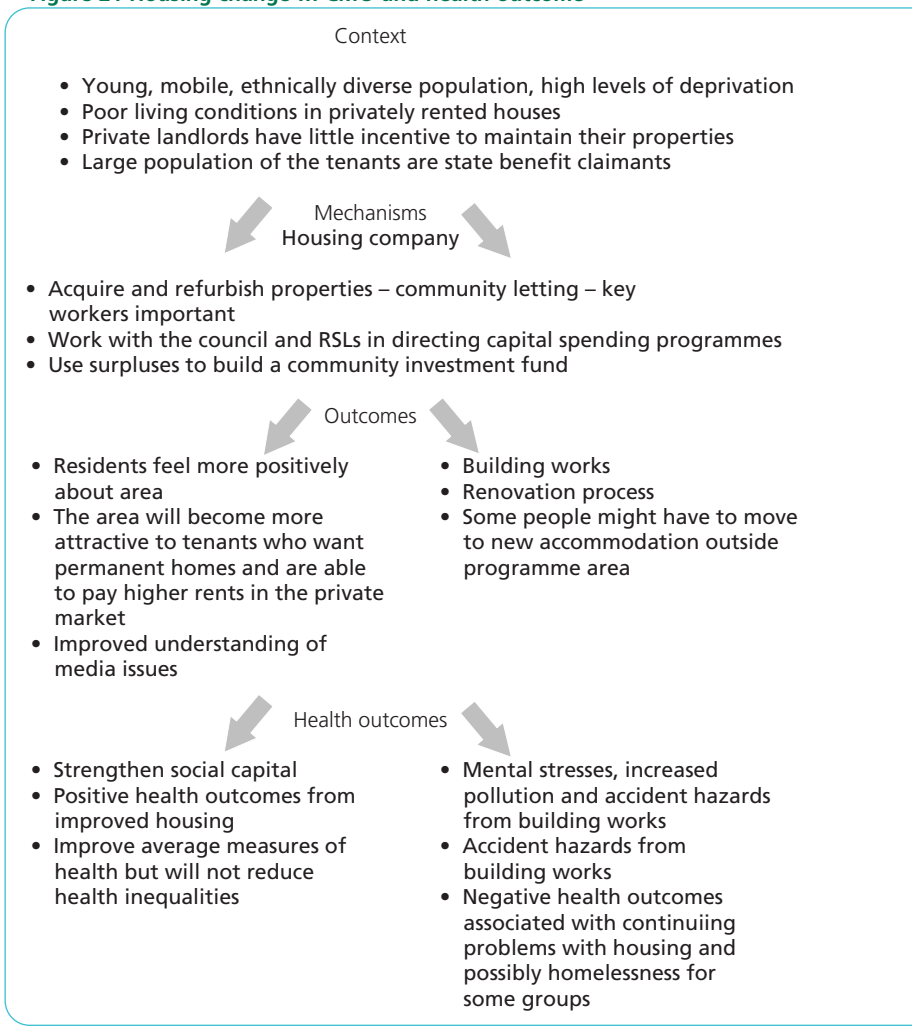
Figure 21 shows the links which the participants identified between project outcomes and health outcomes. It was agreed that improving housing could bring long-term health benefits for those people within the project area whose housing is improved; these benefits might include better mental health, improved quality of life and a sense

of community coherence, as well as a reduction in physical health problems such as infectious diseases and domestic accidents. It was also felt that in a more stable community people would have more established links with curative and preventive health services which would benefit their health.

There might be negative health impacts which result from the housing changes; in the long term the scheme may improve average measures of health but the expected demographic changes may also mean that health inequalities increase. In the short term it was acknowledged that some people who were currently in temporary accommodation would have to move out of the area. Some members of the workshop felt this might lead these people to experience continuing problems with housing and possibly homelessness. Some participants commented that as the housing company was focussing on poor housing in the private sector it would not help local authority tenants who are dissatisfied with their housing. Those who stay in the project area may experience increased pollution and accident hazards from the building works and also mental stresses associated with the renovation process.

In the last stage of the workshop the ideas generated by the groups were fed back to a plenary session. Evaluation sheets asking for views on the workshop were distributed; the participants were asked whether they found the workshop useful, whether there were aspects of the workshop which should be changed. They were invited to give other comments.

Figure 21 Housing change … CMO and health outcome



Feedback to the partnership board

The HIA facilitator summarised the flipcharts and evaluation sheets (as shown in figure 21) and a number of recommendations were made in a presentation to the partnership board. Some of the issues which the workshop identified were already matters of concern for the Building Sustainable Communities programme team. This can be seen as justification for the time and resources which had been spent on the issues.

Recommendations from the workshop

In the short term prioritise allocation of vacancies. It may be important to target attention on households with vulnerable groups such as the very young, or elderly people whose health might be most affected by their housing. A further recommendation was to develop a programme of brokerage to guide families through reallocation and other encounters with statutory, and other, agencies.

In the short to medium term ensure that building contractors provide health and safety training and are aware of an increased need for road safety near the school.

The longer term recommendations focus on the needs for community development; a mix of tenures does not automatically foster a growth of social capital in the community. Also highlighted was the need to integrate the plans for health care with the development and implementation of the project. The changing socioeconomic profile of the population means that the health needs may also change. Increased residential stability will give more opportunity for preventive health services to operate.

Ideas for monitoring and evaluation were proposed including following a panel of the same people over time to measure any changes in lifestyle, in social participation and quality of life.

It was also recommended that the findings of the workshop should be disseminated by presenting them to the Partnership Board, reporting on the workshop in the newsletter which is distributed in the programme area and by feeding into the next phase of community consultation.

Presentation to the Partnership Board

The HIA facilitator made a short presentation to the Partnership Board outlining the process of the HIA and the recommendations from the workshop. The findings were well received.

The Board members asked about the observation that some people may experience homelessness as a result of the renovation process. It was explained that people who are relocated outside the project area will not benefit from ongoing support offered by the project and may go on to experience deterioration in their housing.

The Board Members commented on how health and safety training about the dangers of building sites for youngsters was especially important around the school.

It was also noted that it was illuminating to consider the potential positive and negative impacts of project outcomes.

Other resources for health impact assessment

There is currently a great deal of work developing health impact assessment.

The following websites have information on HIA in London and nationally:

London Health Observatory
http://www.lho.org.uk

Health Development Agency
http://www.hda-online.org.uk

Department of Health
http://www.ohn.gov.uk

London resources for HIA include:

Health impact assessment for regeneration projects. Volume II: Selected evidence base
Cave, B., Curtis, S., Coutts, A., and Aviles, M. (2001). Queen Mary, University of London and Regeneration Workstream, East London Health Action Zone. Department of Geography, Queen Mary, University of London.
An evidence base to focus discussion around the likely health impact of regeneration projects. The volume looks at how health links to employment, social capital, housing and transport. The studies are presented in a table so that the key lessons are easy to locate. Work is in progress to develop this into a database.
contact: http://www.geog.qmul.ac.uk/

Health impact assessment for regeneration projects. Volume III: Principles
Cave, B. and Curtis, S. (2001). Queen Mary, University of London and Regeneration Workstream, East London Health Action Zone. Available: Department of Geography, Queen Mary, University of London.
A look at the principles behind urban regeneration, health change and HIA.
contact: http://www.geog.qmul.ac.uk/

Health impact assessment for Groundwork Safe Routes to School projects
Cave, B. and Curtis, S. (2001). Queen Mary, University of London. Available: Department of Geography, Queen Mary, University of London.
This guide shares a generic approach with the current document. It concentrates in more detail on ways to conduct HIA with children in schools and includes examples of lesson plans which incorporate HIA.
contact: http://www.geog.qmul.ac.uk/

A short guide to health impact assessment: informing healthy decisions
NHS Executive London. 2000. London.
An introductory guide to HIA looking at definitions of HIA and covering the key stages.
available at: http://www.doh.gov.uk/london/shortguide.pdf

London's Health: developing a vision together. Resource for health impact assessment
Ison, E. 2000. London, commissioned by NHS Executive.
A detailed resource which covers the methodology behind HIA and which provides in-depth guidance for each stage of an HIA. This resource includes an overview of HIA case-studies in the London region.
available at: http://www.doh.gov.uk/london/resource.htm

Other resources include:

Health impact assessment: piloting the process in Scotland
Conway, L., Douglas, M. et al. pp.1-39. 2000. Glasgow, Scottish Needs Assessment Programme.
Definitions, values and principles and resources.
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The Merseyside Guidelines for health impact assessment
Scott-Samuel, A., Birley, M. et al. 1998. Liverpool.
Definitions, values and principles, synopsis of key stages and a more detailed breakdown of the key stages,resources required and potential screening instruments.
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Developing health impact assessment in Wales
National Assembly for Wales. 1999.
Definitions, values and principles, synopsis of key stages, a discussion of epidemiological techniques and potential screening instruments
available at:
http://www.wales.gov.uk/polinifo/health/keypubs/healthimpact/pdf/healthimp_e.pdf

Health impact assessment: a ten minute guide
Barnes, R., Scott-Samuel, A. IMPACT: International Health Impact Consortium
available at: http://www.ihia.org.uk/hiaguide.html
A leaflet summarising definitions of HIA, and the values and principles and ethos behind HIA.

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