

Case-study 8.3.1

Health impact assessment of the Merseyside local transport plan ... work in progress

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1. Project Description

I am conducting a health impact assessment of the Local Transport Plan on behalf of the Merseyside Transport, Health and Environment Forum, using the methods and procedures set out in The Merseyside Guidelines for Health Impact Assessment. This will include implementation of the recommendations of the health impact assessment of the Merseyside Integrated Transport Strategy (MERITS), and a feasibility study of the economic and health effects of air quality following on from the recommendations of the Committee on the Medical Effects of Air Pollution's report on the Economic Effects of Air Pollution in the UK.

An initial health impact policy audit conducted with members of the MERITS Implementation Group has identified the following as key impacts that the Local Transport Plan key strategic themes can significantly influence:

- Air quality
- Access to goods and services
- Accidents and Safety (includes risk of crime)
- Activity (physical exercise)
- Assurance (reliability and journey planning)
- Attitudes (to public transport, health and transport and car usage).

There are two cross-cutting themes: Equity and the Effects of the existing network (noise, community severance, intrusion and land use).

The project will be completed by June 2000 in time for publication of the LTP in July 2000.

2. Aims and Objectives

The aims of the HIA are:

1. To identify the most significant health impacts of the LTP.
2. To assess the potential health impacts, both positive and negative, of the LTP.
3. To identify where the LTP can make a difference to the health of the population of Merseyside.
4. To identify the potential added value of the LTP to other key local strategies or programmes.
5. To improve the decision-making associated with the LTP, through making recommendations to enhance the predicted positive health impacts and minimise negative ones.

The objectives are:

1. To ensure the recommendations of the HIA are sustainable.
2. To establish a common set of outcome indicators for transport and health (relating as far as possible outcomes to outputs).
3. To develop a system for monitoring the progress of implementation of HIA recommendations.
4. To assist in the development of a screening tool (policy audit) for future transport projects.
5. To include all relevant factors which affect health.
6. To ensure intersectoral collaboration, community participation and equity in the HIA process.
7. To identify and address the needs of vulnerable groups.
8. To ensure that developments are sustainable.
9. To ensure open access to, and comprehensibility in, HIA reports.

3. Funding and Costs

The Merseyside Health Action Zone Implementation Plan Goal 4 has identified a budget and a programme of work for health impact assessment because it aims to add a health dimension to related policies and initiatives. Section 4.1 of the Implementation Plan states that: "Health impact assessment will review the following:

- Local Transport Plan
- District Community Safety and Crime and Disorder Plans
- Housing Investment/Improvement Programmes
- Local Agenda 21 Plans
- New Deal for Employment
- Drug Action Teams

It is planned that there will be up to 2 HIA studies per year. A local HIA steering group of HAZ representatives has met and agreed that the first year's programme should concentrate on the 2 infrastructure projects namely Local Transport Plans and Housing Investment Programmes. This intervention contributes to the former and will also contribute to Goal 2.5.1a which is the development of Green Commuter Plans for HAZ Partners. Currently, the work on health impact assessment has been financed by the four Merseyside Health Authorities which has included their contract with the Liverpool Public Health Observatory and a Consultant in Public Health at Liverpool Health Authority having dedicated time for HIA work and a remit for Transport and Health. HIA teaching and conferences have been funded via the HEA, DoH, DETR and self-financing.

Costs of Local Transport Plan HIA Study

Elements of cost	1999/00	00/01	½	Total all years
Revenue Item	£	£	£	£
Systematic Review of Attitudinal surveys/data	£1, 500			£1, 500
Air Quality study	£4, 000			£ 4, 000
Stationary, Travel	£ 1, 000			£ 1, 000
Focus group work	£2, 000			£2, 000
Researcher's time (CPHM)	£1, 500			£1, 500 (in addition to incorporation of HIA into current work objectives)
Total Revenue	£11,000			£11, 000

Hot Tip !

The Merseyside Guidelines for Health Impact Assessment recommend that a budget is ring-fenced for a HIA case study out of the project finance and suggest a figure of 0.1% of the total budget. This is consistent with the current funding arrangements for environmental impact statements.

4. Links to Liverpool Health Improvement Programme

Within Liverpool, respiratory health and coronary heart disease/stroke have been identified as key priorities and we have used a Health Impact Approach to look at them holistically. Transport has been identified as a major factor for the following reasons: air quality, lack of exercise and fitness (links to obesity, diabetes, high blood pressure, strokes and osteoporosis), equity of access to goods and services (affordable healthy eating, employment opportunities, community networks, reducing social isolation, education, health and social care services, leisure and fitness pursuits, Exercise Prescription Schemes, Green Commuting, Safe Routes to Schools). The Liverpool Health Improvement Programme has five key themes:

- Environment
- Employability
- Education
- Exclusion
- Empowerment.

Transport is a cross-cutting issue underpinning these themes and is also vital to the regeneration and renaissance of Liverpool as a city for the Millennium through Liverpool Vision and for the future of Merseyside as a whole. Moreover The Acheson Report on Health Inequalities in the UK has highlighted the importance of transport especially the need for sustainable, integrated, affordable public transport as a key intervention for reducing health and social inequalities.

4.1 Drivers and Barriers for Healthy Transport

The table below shows the drivers and barriers for healthy transport on Merseyside.

Drivers for healthy transport	Barriers for healthy transport
<ul style="list-style-type: none"> • low car ownership • public concern • joined-up thinking • efficient use of resources • new statutory responsibilities • improving visual image • delivering the public health agenda • reducing health inequalities • improving individual health experience • prevention better than cure • access Vs mobility 	<ul style="list-style-type: none"> • car culture • vested interests • lack of integration • lack of trust in PT • resources • attitudes and behaviour • drive for economic growth • ownership of actions • competing priorities • conflicting agendas • short-termism • healthy transport = healthy humans

5. Evidence for Use of HIA

This HIA builds on the success of the *Health Impact Assessment of the MERITS Scheme 1998*¹ which was incorporated into the MERITS Package bid for submission to the Department of Environment, Transport and the Regions and which was highly commended by the DETR for its innovative approach.

Health impact assessment has been defined as “*the estimation of the effects of a specified action on the health of a defined population*”. This action might be a construction project, a waste strategy or Government environmental policy. In the urban renaissance context, Health impact assessment is a process that can inform decision-makers of the health impacts of proposals, to enable them to take action to maximise health improvement and reduce ill health. In “Saving Lives: Our Healthier Nation”, the Government has demonstrated a commitment to the principle of health impact assessment, requiring that it be applied to all national and local policies. The idea of evaluating the impacts of health of public policy is not a new concept. The World Health Organisation introduced a health dimension to the more widely established Environmental Impact Assessment process over a decade ago.

Hot tip !

Health impact assessment as a tool is still in the developmental stages in many ways. It should be participatory and include contributions from many different groups and individuals from the local population.

UK

The UK Government is strongly committed to the principle of prospective HIA. All four of the UK nations' White Papers on public health strategy have referred to the requirement for health impact assessment of both national and local policies and projects. Further emphasis has been given by the introduction of a new duty on local authorities to promote the economic, social and environmental well being of their areas, in partnership with all relevant local interests.

Europe

There is considerable interest in HIA in the European Community with pressure from the European Parliament to incorporate into the development of all EU policy. In Sweden, HIA has been used at a local government level to assist in achieving local public health targets and in pointing the way to "healthier" decision-making.

World-wide

Canada and some Australian states have well-developed HIA programmes. In Canada, HIA has been incorporated into the legislative framework. The approach used is consistent with what has evolved in NW England and Sweden - namely that HIA should be viewed as an extension of the well-established environmental impact assessment (EIA) which links HIA to planning decisions. HIA has been conducted in developing countries over a number of years. The World Health Organisation and the World Bank have expressed an interest in its application to their work.

Taking a whole systems approach

Health impact assessment builds on the now generally accepted understanding that people's health is determined by a wide range of economic, social and environmental influences as well as by inherited or biological risk factors, the organisation of healthcare and other public services and the development of public policy. This is the process of looking at the health of a community, the factors which influence health (or lack of it) and the resources available to reduce harmful influences and to promote beneficial ones.

Hot tip !

The overall aim is to achieve maximum health gain for the resources available.

6. Principles of HIA

The main advantages of a health impact assessment approach are that:

- It has an explicit focus on social and environmental justice (it is usually the already disadvantaged who suffer most from negative health impacts).
- A multi-disciplinary, participatory approach.
- Gives equal status to qualitative and quantitative assessment methods.
- Makes explicit values and politics.
- Is open to public scrutiny.

These advantages were confirmed by the Merseyside case studies which consistently showed that participation in the prospective health impact assessment process led to:

- Good intersectoral collaboration.
- Raised community awareness/participation.
- Spreading of the PHIA message in the wider community.
- Demonstrating that "health" is far broader than just NHS or health care issues.
- Winning converts in partner agencies.
- Positively encourages public participation in the debate about public health issues and public policy or planning issues.

Hot tip !

Improves the quality of decision-making in health and partner organisations by incorporating the need to address health issues positively into planning and policy-making.

7. Engaging stakeholders

Engaging communities

Through the involvement of Passenger User Groups, Community Involvement Officers and incorporation of health impact assessment into the public consultation on the Local Transport Plan. Initially transport and health issues have been posted on the Local Transport Plan website and have been incorporated into the LTP newsletter and leaflets for the first stage of the Public Consultation. Focus group work with the communities forms an integral part of the HIA process

Engaging front-line staff

Those charged with the implementation of the HIA recommendations have been involved in its development through a 1/2 day seminar with the MERITS Implementation Group. Representatives of those organisations involved in the Transport, Health and Environment Forum will be involved in the project management. It is also intended that as well as incorporating health issues into the main public consultation of the LTP that a health focus group is set up and this should include PCG and other NHS staff as well as CHC representation.

Developing a person centred approach

The process of HIA requires broad participation if a comprehensive picture of potential health impacts is to be established. The co-operation and expertise of a wide range of stakeholders and key informants will be needed.

- Those involved in the project or will be directly affected by it
- Those who have knowledge or information of relevance to the project and its outcomes
- Representative(s) of affected communities
- Proponents of the project
- Local or outside experts whose knowledge is relevant to the project.
- Relevant health professionals, e.g. general practitioners, health visitors, social or community workers
- Voluntary organisations
- Key decision-makers

Hot tip !

Public participation throughout the HIA is essential, both to ensure that local concerns are addressed and for ethical reasons of social justice.

Working in partnership

The MERITS Implementation Group, the Goal 4 review Group, the HAZ HIA Steering Group, Travelwise, The Transport, Health and Environment Forum. These groups consist of representatives of some or all of the following: the Passenger Transport Authority, Passenger Transport Executive, Local Authorities (Planning, Transportation, Highways Engineers, Road Safety Officers, Environmental Health, Leisure Services, Social Exclusion Unit), Passenger and Users Representatives, Police, Transport Operators (Bus, Rail, Taxi, Airport), Transport 2000, Liverpool Cyclists Touring Club, Educational establishments, Chamber of Commerce, Merseyside Information Service, Health Authorities (Public Health and Information).

8. Management of Project

The accountable body charged with the implementation of the HIA recommendations will be The Transport, Health and Environment Forum.

In accordance with the normal process for an HIA, a project steering group has been set up to manage the study which comprises of members of the Forum and the Merits Implementation Group's Environment Sub-group. The project steering group has set out the terms of reference for the project.

Hot tip !

The purpose of terms of reference is to provide a quality assurance procedure for the work undertaken. Terms of Reference are project specific but include the following elements:

- Steering group membership should be listed together with members' roles including those of chair and secretary.
- The nature and frequency of feedback to the steering group should be specified.
- The methods to be used in the assessment should be described in adequate detail.

- The TOR should outline the form and content of the project's outputs and any conditions associated with their production and publication including ownership, confidentiality and copyright.
- The scope of the work should be outlined – what is to be included and excluded, and the boundaries of the HIA in time and space.
- An outline programme – including any deadlines – should be provided.
- The budget and source(s) of funding should be specified
- Establish a reporting mechanism and ownership of the study recommendations.

9. Major Components of LTP HIA

9.1 Steering Group Seminar

A seminar was held with the Project Steering Group at the end of Nov 1999 that set out the following:

- Terms of reference for the project.
- The aims and objectives of the project.
- Initial screening of the LTP using a newly devised HIA policy audit tool (see below) to identify key health influences and their potential impacts.
- Identify areas that required commissioning further work and the involvement of outside expertise.
- Agree work programme.

9.2 Screening Procedure

The issues on which selection of priority impacts is based are shown below. Potential projects, programmes or policies should be rapidly assessed with regard to their likely performance in relation to each of these issues. While the procedure is necessarily crude, it can give a useful indication of how resources for HIA can be most effectively deployed.

Economic issues

- The size of the project and of the population(s) affected
- The costs of the project, and their distribution

Outcome issues

- The nature of potential health impacts of the project
- The likely nature and extent of disruption caused to communities by the project
- The existence of potentially cumulative impacts

Epidemiological issues

- The degree of certainty (risk) of health impacts
- The likely frequency (incidence / prevalence rates) of potential health impacts
- The likely severity of potential health impacts
- The size of any probable health service impacts

Strategic issues

The need to give greater priority to policies than to programmes, and to programmes than to projects, all other things being equal. (This results from the broader scope - and hence potential impact - of policies as compared to programmes and to projects)

- Timeliness:
 - That HIA is prospective wherever possible
 - Relative to Planning Regulations and other statutory frameworks
- Whether the project requires an Environmental Impact Assessment
- Relevance to local decision making

9.3 Health impact assessment policy audit questions

A health impact assessment tool was initially developed for the North West Regional Assembly in order that appropriate health evaluations can be made in the early stages of the decision-making process. This tool owes much to work carried out in Merseyside, which has embraced best practice from within and outside of the UK.

The model set out below is intended to initiate discussion; organisations carrying out health impact assessment must adapt it to their own requirements and priorities. It must also provide clear,

measurable indicators of the impacts of action on the physical, social and environmental well being. Whatever model is utilised, politicians and other decision-makers must be able to apply health impact assessment to their everyday work. It needs to be “*simple and easy-to-use, in order that it becomes the norm to measure all impacts*”.

The following process is suggested for the application of health impact assessment policy audit tool to local policy-making.

- a) **Selection of policy programmes or project for health impact assessment.** It is essential that areas with the greatest likely impacts on health, and on the broadest and most vulnerable groups in the population, are given priority for evaluation within the constraints of budget and timescales.
- b) **Evaluation of its potential impacts on factors which determine health.** These influences can be considered under a number of headings. The relative importance of these health impacts, in the short, medium and long term, and the risks to health versus health gain should be considered.

1: Will the decision affect

- a) The population of Merseyside?
- b) Individual groups in Merseyside as defined by geography/age/social disadvantage?
- c) Organisations?

2: In relation to these groups, can the following be identified in implementing the decision:

- a) Potential negative health impacts?
- b) Potential positive health impacts?
- c) The relative probability of the impacts in the short/medium/long term?

3: Do the potential health impacts that have been identified justify further action?

4: Can the decision be modified to:

- a) Maximise positive impacts on health?
- b) Minimise negative impacts on health?

5: What practical measures can be taken to achieve these modifications, and what is the timescale for this action?

6: If the best option is to undertake further research before taking action, how can this be achieved and by whom?

9.4 Results of Screening Draft LTP

The Project Steering Group decided that it was important for the HIA to concentrate on the key themes of the Local Transport Plan (like MERITS) rather than the major capital schemes. It was agreed that these would be subjected to separate HIAs as part of their planning process. So that as part of its programme of work the LTP will commit to undertake HIA/EIA of its major capital schemes. The rationale for choosing the themes was that they are sustainable beyond life of the current LTP. The key themes are listed below:

- **Economic Regeneration**
 - Access to strategic sites and gateways for industry*
 - Merseyside integrated freight study*
 - Access to work*
 - Partnerships*
- **Merseyside Integrated Public Transport Strategy**
 - The Merseyrail Network*
 - Merseyside Bus Strategy*
 - Interchange Strategy*
 - Information Strategy*
 - Ticketing*
 - Total Investment Strategy*
- **Demand Management**
- **Integration**
- **Sustainability**

- **Cross Boundary Links**

9.5 HIA Process

It is important to distinguish between procedures and methods for health impact assessment. Procedures are frameworks for commissioning and implementing HIAs; methods are the systems for carrying them out (see Table below).

Hot tip!

Table. Procedures and Methods in HIA

HIA procedures	HIA methods
Screening, to select policies or projects for assessment	Policy analysis (where appropriate)
Establishing a Steering Group and agreeing Terms of Reference	Profiling the areas and communities affected
Carrying out the health impact assessment	Involving stakeholders and key informants in predicting potential health impacts, using a predefined model of health
Negotiating the favoured option(s) for achieving optimal health impact	Evaluating the importance, scale and likelihood of predicted impacts
Monitoring and evaluating processes and outcomes of the HIA and providing feedback to influence continuing review	Considering alternative options and making recommendations for action to enhance or mitigate impacts

9.6 Key Stages in the LTP HIA

- Seminar with Project Steering Group - Nov 1999.
- Transport and Health paper to local Primary Care Group boards - Nov 1999
- Health Issues added to public consultation - Dec 1999.
- Presentation to the Integrated Transport Forum and Transport, Health and Environment Forum - Jan 2000.
- Presentation to and member of Accessibility sub-group of Liverpool Airport's Surface User's group - commenced Feb 2000.
- Review of Merits HIA report - current.
- Review of local health/social policy for transport initiatives and recommendations including Green Travel Plans - current.
- Transport questions form major component of the Merseyside Citizens Panel questionnaire for April 2000.
- Feasibility study on the economic and health effects of air pollution - commenced March 2000.
- Systematic review of attitudinal surveys on cycling, walking and public transport - commenced March 2000.
- Seminars with Access Panels (Local, Women's, Older People's and Disabled People's) - First round completed - ongoing.
- Health Service Focus group to be part of the second round of public consultation - May 3rd 2000.
- Expected completion of draft HIA report for revision by Steering Group - end May 2000.

10. External expert advice

10.1 Feasibility study on the economic and health effects of air pollution

Dr Adrian Watson, Senior Lecturer in Geography and Environmental Science from the Atmospheric Research Information Centre at Manchester Metropolitan University and Ms Lorraine Stewart, PhD research student have been commissioned to undertake a feasibility study of the economic and health effects of air pollution on Merseyside. Geographical information systems will be used to map:

- Pollution data from the local authorities (co-ordinated by Carole Quinn of Knowsley MBC and Gary Mahoney of Sefton MBC) and ARIC's own data.
- Health data (deaths, years of life lost, incidence and admissions) on respiratory disease, heart disease, lung cancer and leukaemias from the Small Area Database (Caroline Rand of Liverpool Health Authority lead contact).
- Economic data on work and school absenteeism and NHS costs (MIS and ONS data).
- Traffic flows (MIS and ARIC own data).

The aims are three-fold:

1. To produce an analysis of whether it is currently possible to link up standard air quality, health and economic data.
2. To establish whether there is any plausible relationship between major causes of death and ill-health on Merseyside and air quality.
3. To make recommendations about the development of long-term monitoring and surveillance of the effect of air quality on major causes of ill-health on Merseyside.

This study will assist in the production of a set of transport and health indicators that can be used to monitor the progress of transport strategies and programmes.

10.2. Systematic review of attitudinal surveys on cycling, walking and public transport

Merseyside Information Service have been commissioned to undertake a systematic review of attitudinal surveys on transport over the last 3-5 years on Merseyside. This study which is being conducted by a social geographer jointly supervised by MIS and Public Health Department of Liverpool Health Authority

11. Implementation of recommendations

The HIA recommendations will be incorporated into the Local Transport Plan that is the 5 year strategic plan for transport on Merseyside. It will determine the annual level of funding received by Merseytravel on behalf of Merseyside Authorities from Central Government through the Department of Environment, Transport and the Regions. Thus recommendations will be funded from this source. It also intended that separate HIA s will be commissioned by Merseyside Authorities for the major capital schemes set out in the Local Transport Plan.

12. Intended outcomes

1. It will be apparent to readers of the HIA report as to how the conclusions and recommendations have been arrived at. Their relevance and justification should be made clear so that they logically follow on from the reports' findings and refer back to the aims and objectives outlined above. It will be very clear which health impacts a particular recommendation is supposed to address and there will be discussion of alternative options.
2. Recommendations will be assessed for their feasibility, the resources required to implement them and how they might fit in with or influence both the LTP and other major policy programmes: e.g. Unitary Development Plans or Health Improvement Programmes.
3. The HIA report will include an action plan with identified lead agencies, milestones and which organisations/committees have seen and approved the report.

Undertaking a HIA of the LTP will hopefully result in the following outcomes:

- Siting of essential services and premises that are linked to transport provision.
- Including means of transport in the planning and commissioning of health services will increase their effectiveness and maximise their use.
- Increasing access to services that will improve attendance rates especially amongst those people who are most disadvantaged.
- Increasing efficiency of service delivery for Public, Private and Voluntary sectors.
- Helping the Transport Sector to develop their role in reducing health inequalities and promoting social inclusion.
- Assist in promoting healthy lifestyles and promoting individual fitness especially linked to initiatives such as Exercise Prescription Schemes.
- Reduce levels of obesity and its subsequent health effects notably strokes and high blood pressure.
- Assist in reducing the frequency and severity of attacks experienced by people suffering from chronic respiratory disease.
- Reduce death and injury rates caused by road traffic accidents in line with the targets set by "Saving Lives: Our Healthier Nation."

Hot tip !

The aim of a successful HIA case study is to produce a “Win-Win” situation. So that the most damaging health consequences are averted and the most beneficial health effects are boosted whilst, at the same time, meeting the objectives of the proponent. There should be clear separation of the recommendations into those that would mitigate the nuisance of the development phase of the LTP and those that would enhance the benefits of the operational phase.

13. Intended outputs

Output description	targets 99/00	targets 00/01	targets 01/02	Total all years
Completed HIA study	✓			
Completed feasibility project on the economic and health effects of air pollution	✓			
Implementation of HIA recommendations through incorporation into the Local Transport Plan		✓		
Development of joint health and transport outcome indicators		✓		
Establishment of long-term joint Merseyside monitoring system for economic, health and air quality and transport indicators			✓	

14. Monitoring and evaluation

HIA can be viewed as analogous to an audit cycle in which the results of subsequent monitoring and evaluation in turn influence the continuing operation of the project. The indicators and methods proposed for monitoring will depend on the nature and content of the project, and also on the perceived importance of this stage of the assessment. Depending on resources, monitoring may include the collection and interpretation of appropriate indicators and the phased replication of parts of the actual health impact assessment. Outcome evaluation is constrained by the degree of success of the HIA; negative impacts which have been successfully avoided (or weakly positive ones which have been successfully enhanced) due to the modification of the project will clearly not be identifiable. In practice, things are rarely this perfect and it may be possible to construct and compare notional and actual outcomes relating to the proposed and actual projects. Multi-method assessments of specified outcomes (triangulation) should be undertaken where feasible, in order to increase validity. Process evaluation involves the assessment of the HIA procedures against the Terms of Reference initially agreed by the Steering Group and the assessment of the extent to which agreed recommendations of the HIA were implemented.

Hot tips !

- Each HIA is uniquely located in time, space and local conditions - though its evidence base can be evaluated, and the rigour with which procedures and methods were implemented can (and should) be assessed.
- HIA should take place early enough in the development of a project to permit constructive modifications to be carried out prior to its implementation, but late enough for a clear idea to have been formed as to its nature and content.
- The financial and opportunity costs of undertaking health impact assessment dictate the need both to screen potential candidate projects and also to have a range of methods available according to the depth of analysis required.
- Political imperatives may ultimately determine the outcome. Disagreements or power inequalities between different stakeholder factions may be similarly important.

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