

A review package for Health Impact Assessment reports of development projects



Mette Winge Fredsgaard, Ben Cave and Alan Bond

**A review package for Health Impact Assessment
reports of development projects**

Mette Winge Fredsgaard

Ben Cave

Alan Bond

Ben Cave Associates Ltd
Leeds, UK



Published in 2009

by Ben Cave Associates Ltd,

103 Clarendon Road, Leeds, LS2 9DF, UK.

© Mette Winge Fredsgaard, Ben Cave, Alan Bond.

ISBN 978-1-907210-01-3 (for download)

ISBN 978-1-907210-02-0 (paperback)

British Library Cataloguing in Publication Data

A catalogue record for this publication is available from the British Library

Material in this document is published by Ben Cave Associates Ltd and is protected by copyright. This document may be copied, reproduced, republished, downloaded, posted, broadcast or transmitted in any way provided that you include this copyright notice. The source of the material must be identified and any material must be reproduced accurately, not changed without prior consent, and not used in any misleading way.

Cite this work or any part of it as:

Fredsgaard, M.W., Cave, B. and Bond, A. A review package for Health Impact Assessment reports of development projects. 2009. Ben Cave Associates Ltd. Available at www.hiagateway.org.uk

This HIA review package is available at www.hiagateway.org.uk and at www.bcahealth.co.uk

We are very interested to receive comments on this HIA review package. Please send comments to hiareview@bcahealth.co.uk

Ben Cave Associates Ltd is a specialist consultancy for public health and sustainability. Since 2001 we have worked with the public, the private and the community and voluntary sectors across England and in Europe. We conduct impact assessment and research, we provide training and policy analysis. We have a strong commitment to quality, to sharing knowledge and to the power of collective and creative input.



UEA/InteREAM undertake interdisciplinary research on environmental management tools and techniques in order to make them work better and lead to more sustainable decisions.



Front cover design by www.petergates.co.uk



About the authors

Mette Winge Fredsgaard was an intern at Ben Cave Associates Ltd. She has recently completed her Master of Science degree in public health at the University of Southern Denmark. She worked in HIA throughout her master's study. She has presented papers at the International HIA Conference, Liverpool and the IAIA conference, Perth. The internship with BCA enabled her to develop this HIA review package, which is also the subject of her Master's thesis.

Ben Cave is a Director of Ben Cave Associates Ltd. He conducts Health Impact Assessments (HIA) of policies, plans, programmes and projects. He has conducted research for, and provided training and advice to, government and health organisations at national, regional and local level. He has worked with bodies such as the World Health Organization, the National Institute of Health and Clinical Excellence, the Environment Agency, IDeA (Improvement and Development Agency), the Commission for Racial Equality. He is the Chair of the HIA Section of the International Association for Impact Assessment.

Alan Bond is Senior Lecturer in Environmental Management at the University of East Anglia. He is currently Course Director of a full-time MSc programme on Environmental Assessment and Management and has 18 years experience in Environmental Assessment (EIA). He has conducted research on improving the consideration of health in planning for the Welsh Assembly Government and the East of England Public Health Group and has been involved in HIA research projects for the UK Environment Agency, Health Development Agency, Health Protection Agency and World Health Organization. He works with the Institute of Environmental Management and Assessment as a member of their Technical Sub-committee and sits on the Editorial Board of Environmental Impact Assessment Review and Impact Assessment and project Appraisal.





Table of contents

Acknowledgements	i
1 Introduction.....	1
2 HIA review procedure: guidance notes.....	3
3 HIA review package.....	5
4 List of references.....	11

List of figures

Figure 1: Outline of the HIA review package.....	3
Figure 2: Structure of the HIA review package.....	4





Acknowledgements

This review package is the outcome of a research project carried out by Mette Winge Fredsgaard and Ben Cave of Ben Cave Associates Ltd and Alan Bond of InteREAM, University of East Anglia.

This research project has not received funding.

We thank people who took part in the training sessions in Brighton & Hove and in Plymouth where we first trialled the HIA review package. We also thank participants at the IAIA conference and the Liverpool HIA conference (both in 2008).

We are especially indebted to our expert review panel who have provided us with excellent comments and with wholly constructive criticism. The members of the expert review panel are as follows:

Debbie Abrahams	IMPACT
Martin Birley	BirleyHIA
Tim Chapman	HCA-ATLAS (Advisory Team for Large Applications)
Margaret Douglas	NHS Lothian
Hilary Dreaves	IMPACT
Eva Elliot	RCUK Academic Fellow, Cardiff University
Josh Fothergill	Institute of Environmental Management and Assessment
Liz Green	Welsh Health Impact Assessment Support Unit/ Uned Gymorth Aseu Effaith
Martin Higgins	NHS Lothian
Paul Iggulden	Ben Cave Associates Ltd
Erica Ison	Self-employed consultant
John Kemm	West Midlands Public Health Observatory
Ross Marshall	Environment Agency
Owen Metcalfe	Institute of Public Health in Ireland
Dawn Morgan	Yorkshire & Humber Public Health Observatory
Alex Scott-Samuel	IMPACT
Salim Vohra	Institute of Occupational Medicine
Colleen Williams	Department of Health, England
Gareth Williams	Professor of Sociology, Cardiff University
Sue Wright	West Midlands Public Health Observatory





1 Introduction

Background

The World Health Organization define health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (1).

Health Impact Assessment (HIA) may be defined as (2)

... a combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, programme or project on the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects.

Planning regulates the use of land in urban and rural areas and thus has great potential to influence health. Planning considers human health but legislation tends to focus on ensuring that aspects of the physical environment such as air, water and noise do not harm health. There are increasing calls for ensuring that planning decisions seek explicitly to improve health and to contribute to the wider public health: for example reducing obesity, improving mental health and wellbeing and addressing climate change (3-6). The Royal Town Planning Institute sets out the context for planning and health policy in England, Scotland and Wales in their good practice note *Delivering Healthy Communities* (7).

HIA is one way of enabling planning decisions to take health into account (8). HIA is a central theme of the World Health Organization Healthy Cities movement (9). HIA, with a focus on equity, was recommended by the *Social Commission on the Determinants of Health* (10).

There are many guides that assist practitioners to conduct HIA: for example in the UK and Ireland (11-20), across Europe (21), and further afield (22-29). HIA reports are completed without reference to one particular standard against which commissioners, or others, may review the quality of the completed HIA report. This contrasts with Environmental Impact Assessment which is a statutory requirement for certain projects in all European Union member states (30) and for which the European Commission has recognised the need for review guidance to evaluate the quality of the written output (31).

International best practice standards exist as guidance principles on conducting and reporting HIA (for example: 2;28;32). However, these standards do not provide guidance on reviewing the reports of HIAs which are conducted at project level to ensure that the reports are fit for purpose and comply with best practice.

To address this omission, in this review package we provide criteria for considering the quality of completed HIA reports. This review package focuses on HIAs prepared in the context of an application for development consent.

Aim

This review package is intended to enable a commissioner or reviewer of an HIA report to reach an opinion as to the quality of the completed report in a simple, quick and systematic manner.

We have focussed on developing a review package for reports which are submitted as evidence associated with an application for development consent. With some modification the review package may be applicable to a wider range of HIAs.

We see the users of this review package as being commissioners of HIA both in the public and private sector and those who may be asked to review HIA reports. These may include

- public health specialists;
- HIA practitioners;
- spatial planners and development control officers;
- local authority staff;
- consultees;
- developers; and



- others who may be involved in the development process.

This review package focuses on reports prepared in the United Kingdom but we offer it as the basis for other countries to modify the criteria in line with their own decision-making context and HIA practice.

Mindell and colleagues recommend good practice standards to reduce the risk of providing poor quality recommendations to decision-makers (33;34). Their focus is on standards for evidence reviews which are but one part of the impact assessment process.

There are different ways of doing an HIA and while a degree of convergence has been identified in the approaches (35) we expect that different methods will continue to be seen as appropriate for different contexts. HIA reports also differ in layout, content and size.

We do not prescribe a single approach to HIA. We intend this review package to be applicable to all types of development project HIA reports. We suggest that the review package establishes a basis for the critical review of any HIA report. The review package allows commissioners and practitioners to be aware of what characterises a *good* HIA report while allowing practitioners to keep, and to justify, their choice of layout, method and content.

The review package treats the HIA report as a stand-alone document. In practice HIA is often conducted alongside, and may draw on the results of, other assessment studies. The results of the HIA may be presented as an integral part of a larger study or as a stand-alone report. The way in which the results are presented is likely to be decided by the commissioner of the report and other parties such as the planning authority and the responsible health authority, for example the NHS Primary Care Trust. We suggest that the coverage of health issues will still need to address the criteria specified in this review package.

Method

The HIA review package was originally based on review tools within Environmental Impact Assessment (EIA) (36-39). A previous version of the HIA review package was first prepared for a training day in 2006 in Brighton and Hove, UK (40).

In April of 2008 the document was slightly amended and used for a training day in Plymouth, UK. In the same month the draft was issued to an expert review panel in the UK. This draft was also presented at the International Association for Impact Assessment conference in Perth, Western Australia (May, 2008).

In October 2008 the HIA review package was discussed at the International HIA conference in Liverpool, UK. The authors were still addressing the first round of comments from the expert review panel and so the review package was not in a state to share with the HIA conference participants.

In November of 2008 a second draft was issued to the expert review panel and comments were received.

The criteria in the review package are now supported by HIA best practice as described in published guidelines for, and articles about, conducting and evaluating HIA. For example, the structure and content of the review package draws on guidelines for evaluating complex community initiatives (41), approaches for evaluating HIAs (33;42;43) and for critically appraising quantitative and qualitative research (44;45).

Feedback

Whilst considerable effort has gone into the production of this HIA review package, we acknowledge that experience gained through its application will be essential to ensure that it covers all that it should, and that it continues to promote best practice in HIA. Thus we are interested to receive comments on this review package.

Please send comments to hiareview@bcahealth.co.uk



2 HIA review procedure: guidance notes

Figure 1 shows the structure of the review package. The review package consists of four review areas, 12 categories and 36 sub-categories. Each Review Area considers the way in which the HIA report describes aspects of the HIA.

- Review Area 1: the context within which the development is taking place.
- Review Area 2: the process whereby decisions are made throughout the HIA on whether to proceed, the topics that should be considered as well as the process of the HIA.
- Review Area 3: the conclusions that the report reaches and the methods used to substantiate the conclusions.
- Review Area 4: the ways in which the results are communicated to the reader.

The questions in the review package are intended to cover key areas in HIA and to ensure that the assessment picks up on critical issues for public health. We have used the modal verb *should* to express a sense of obligation as well as one of expectation. We include footnotes when a question requires further explanation and guidance.

Figure 1: Outline of the HIA review package

1	Context
	1.1 Site description and policy framework
	1.2 Description of project
	1.3 Public health profile
2	Management
	2.1 Identification and prediction of potential health effects
	2.2 Governance
	2.3 Engagement
3	Assessment
	3.1 Description of health effects
	3.2 Risk assessment
	3.3 Analysis of distribution of effects
4	Reporting
	4.1 Discussion of results
	4.2 Recommendations
	4.3 Communication and layout

The recommended approach, based on experience from the use of review tools within EIA (36), is for two reviewers to use the review package and to reach a consensus on the final grade of the HIA report. Each reviewer grades the HIA report individually. The two reviewers then grade the report together, discussing the individual grades and the overall grade. The process of reaching consensus and documenting that discussion is important and explains the grade awarded to the HIA.

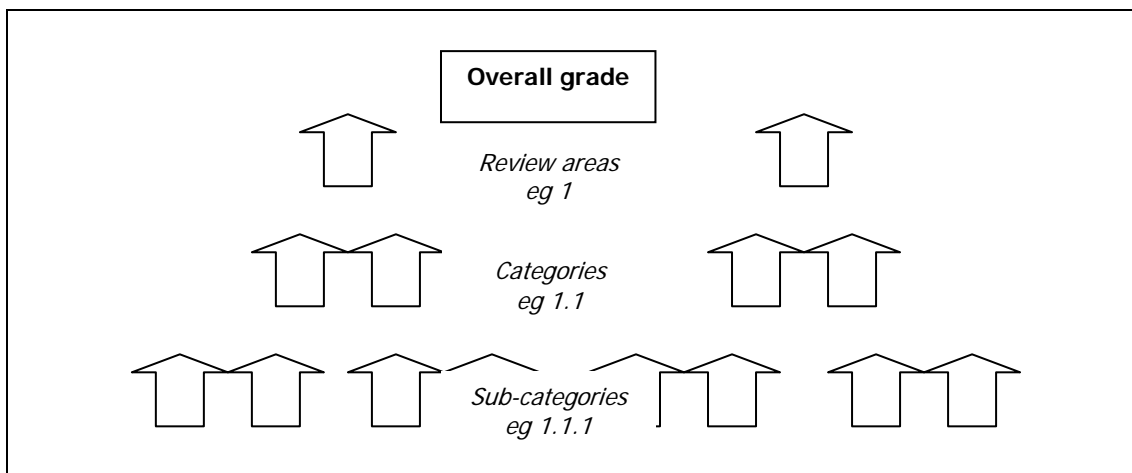
It may not always be possible for two reviewers to look through the HIA report (although we would suggest that review conclusions must be very tentative if based on a single review). We describe the steps below for an *individual review* and for a *joint review*: steps 1-3 describe an *individual review* and step 4 describes the way in which a *joint review* should be concluded.

- 1 Review the HIA report: there is space next to each question to note the grade but it is important to document your decisions on the collation sheet.
- 2 Figure 2 shows the levels of the review package. Start with the sub-categories.
 - a. use the grades achieved in the sub-categories to determine a grade for the categories.
 - b. use the grades achieved in the categories to determine a grade for the review areas.
 - c. use the grades achieved in the review areas to determine an overall grade for the HIA report.



- 3 On the collation sheet summarize the grading of the HIA report. Include the main strengths and weaknesses of the report. It is useful to note any omissions which should be rectified before impacts can be considered to have been satisfactorily assessed or evaluated. The notes you take are very important as these explain the grade and identify strengths and weaknesses in the HIA report.

Figure 2: Structure of the HIA review package



- 4 In a joint review both reviewers work through steps 1 to 3. Discuss and compare each grade and your supporting notes and reach a consensus: *nb* a consensus is a position that both reviewers can accept. Whilst it does not necessarily mean complete agreement, it definitely does not mean compromising at an average; the reasons for allocating grades should be explored and argued in the discussion. You will need to agree a consensus grade for the sub-categories, categories, review areas, and an overall grade for the HIA report. As in the individual review the notes you take are very important as these explain the grade and identify strengths and weaknesses in the HIA report.

Grades

The grades are defined as follows:

- A .. Relevant tasks well performed, no important tasks left incomplete, only minor omissions and inadequacies.
- B .. Can be considered satisfactory despite omissions and/or inadequacies.
- C .. Parts are well attempted but must, as a whole, be considered just unsatisfactory because of omissions or inadequacies.
- D .. Not satisfactory, significant omissions or inadequacies, some important tasks(s) poorly done or not attempted.
- NA Not applicable.

There are some situations (for a particular type of project for example) where a criterion will not apply, however the reviewer is advised to avoid N/A unless there is no alternative.



3 HIA review package

Review area, categories and sub-categories	Score
1 Context ¹	
1.1 Site description and policy framework	
1.1.1 The report should describe the physical characteristics ² of the project ³ site and the surrounding area.	
1.1.2 The report should describe the way in which the project site and the surrounding area are currently used. ⁴	
1.1.3 The report should describe the policy context and state whether the project accords with significant policies ⁵ that protect and promote wellbeing and public health and reduce health inequalities.	
1.2 Description of project	
1.2.1 The aims and objectives of the project should be stated and the final operational characteristics of the project should be described. ⁶	
1.2.2 The estimated duration of the construction phase, operational phase and, where appropriate, decommissioning phase should be given.	
1.2.3 The relationship of the project with other proposals should be stated.	
1.3 Public health profile	
1.3.1 The public health profile should establish an information base from which requirements for health protection, health improvement and health services can be assessed.	
1.3.2 The profile should identify vulnerable population groups. The profile should describe, where possible, inequalities in health between population groups and should include the wider determinants of health ⁷ .	

¹ If the HIA is prepared in conjunction with an Environmental Impact Assessment, or other studies, elements of this description may be shared with those other studies.

² The physical characteristics may include the location, design, size and an outline of the area of land take during the construction and operation phase. Presentation or reference to diagrams, plans or maps will be beneficial for this purpose. Graphical material should be easy to understand without having any knowledge about planning and design.

³ The review package uses the term project to mean *the execution of construction works or of other installations or schemes; or other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources* (30:46).

⁴ Does the site description indicate whether the site and the surrounding area are used, either formally or informally, and if so who by?

⁵ The policies may be local, regional, national or international policies or they may be sector-specific.

⁶ Has a do-nothing option and other alternatives to the project been described? Does the report also describe the primary advantages and disadvantages to health of the proposal and alternatives? It should be noted if no alternatives are being assessed.

⁷ People's health is influenced by the conditions in which they live. Health determinants are the personal, social, cultural, economic and environmental factors that influence the health status of individuals or populations. These include, but are not limited to, factors such as income, employment, education, social support and housing.



Review area, categories and sub-categories	Score
1.3.3 The information in the profile should be specific about the timescale, the geographic location and the population group being described and links should be made with the proposed project. ⁸	
2 Management	
2.1 Identification and prediction of health impacts	
2.1.1 The report should describe the screening and scoping stages of the HIA and the methods used in these stages. ⁹	
2.1.2 A description of how the quantitative evidence was gathered and analysed (where appropriate) should be given and its relevance to the HIA justified. ¹⁰	
2.1.3 A description of how the qualitative evidence was gathered and analysed (where appropriate) should be given and its relevance to the HIA justified. ¹⁰	
2.2 Governance	
2.2.1 The governance process for the HIA should be described. ¹¹	
2.2.2 The terms of reference for the HIA should be available to the reader and the geographical, temporal and population scope of the HIA should be made explicit.	
2.2.3 Any constraints in preparing the HIA should be explained. ¹²	
2.3 Engagement	
2.3.1 The report should identify relevant stakeholder groups, including organisations responsible for protecting and promoting health and wellbeing that should be involved in the HIA.	
2.3.2 The report should identify vulnerable population groups which should be involved in the HIA. ¹³	
2.3.3 The report should describe the engagement strategy for the HIA. ¹⁴	

⁸ Does the profile include consideration of the future profile of the population?

⁹ Tools or checklists are methods mostly used to screen for potential health impacts. The scoping stage often includes consultation, workshop, matrices, specific checklists, literature review, expert advisory panels, etc. Sometimes the scope of the HIA is predetermined by the commissioner of the HIA. Do the authors justify the use of particular methods?

¹⁰ Is the use of any statistical techniques adequately justified?

¹¹ Was the HIA guided and scrutinised by a steering group? What was the membership of the steering group? Which organisation has final ownership of/accountability for the report and its findings? Was the commissioner's relationship to the HIA process including the development of findings and reporting of the HIA made explicit?

¹² This might include limitations of method or availability of evidence, for example time, resources, accessibility of data, non-availability/involvement of key informants and stakeholders. It might also describe any limitations in the scope of the HIA.

¹³ Does the report describe how stakeholders were identified and whether key informants have been selected as representatives?

¹⁴ Does the report describe how the stakeholder groups, key informants, other stakeholders and citizens who were involved were involved? There may be reasons for not engaging or consulting members of the public. If



Review area, categories and sub-categories	Score
3 Assessment	
3.1 Description of health effects	
3.1.1 The potential health effects of the project, both beneficial and adverse, should be identified and presented in a systematic way. ¹⁵	
3.1.2 The identification of potential health impacts should consider the wider determinants of health such as socio-economic, physical, and mental health factors.	
3.1.3 The causal pathway leading to health effects should be outlined along with an explanation of the underpinning evidence. ¹⁶	
3.2 Risk assessment	
3.2.1 The nature of the potential health effects should be detailed. ¹⁷	
3.2.2 The findings of the assessment should be accompanied by a statement of the level of certainty or uncertainty attached to the predictions of health effects.	
3.2.3 The report should identify and justify the use of any standards and thresholds used to assess the significance of health impacts.	
3.3 Analysis of distribution of effects	
3.3.1 The affected populations should be explicitly identified.	
3.3.2 Inequalities in the distribution of predicted health impacts should be investigated and the effects of these inequalities should be stated. ¹⁸	
3.3.3 Effects on health should be examined based on the population profile. ¹⁹	

so, are these provided and adequately explained? Does the report explain the engagement methods, and their timing, e.g., were leaflets, meetings, interviews, etc. used and at what stage and for which stakeholder groups?

¹⁵ Does the identification of impacts consider short-term, long-term (and are these timescales defined?), direct and indirect impacts on health and well-being? Does the identification of health impacts distinguish between the construction phase, the operational phase and where relevant the decommissioning phase?

¹⁶ The potential health effects may be presented in diagrams, which show the causal pathways and changes in intermediate factors by which the project may affect population health, or may be descriptive.

¹⁷ Does the assessment consider the severity of impact/exposure (intensity, reversibility and impact on vulnerable population groups), the impact magnitude (number of people affected and duration of impact/exposure) and the importance (political and ethical)? Have the health impacts of each alternative been assessed? Sometimes the health impacts are ranked and prioritized before making recommendations, if so; have the criteria for prioritizing and ranking health impacts been given?

¹⁸ How does the report define inequalities? Inequalities are found between social groups and can be measured in different ways e.g. by geography, social class or social position, population (ethnicity, gender, sexuality etc).

¹⁹ It should be possible to determine whether effects are more prevalent in certain demographic or vulnerable groups.



Review area, categories and sub-categories	Score
4 Reporting	
4.1 Discussion of results	
4.1.1 The report should describe how the engagement undertaken has influenced the HIA, in terms of results, conclusions or approach taken.	
4.1.2 The report should state the effect on the health and wellbeing of the population of the option and any alternatives which have been considered.	
4.1.3 The report should justify any conclusions reached, particularly where some evidence has been afforded greater weight than others.	
4.2 Recommendations	
4.2.1 There should be a list of recommendations to facilitate the management of health effects and the enhancement of beneficial health effects. ²⁰	
4.2.2 The level of commitment of the project proponent to the recommendations and mitigation methods should be stated.	
4.2.3 There should be a plan for monitoring future health effects by relevant indicators and a suggested process for evaluation.	
4.3 Communication and layout	
4.3.1 Information should be logically arranged in sections or chapters and the whereabouts of important data should be signalled in a table of contents or index.	
4.3.2 There should be a lay summary (executive summary) of the main findings and conclusions of the study. Technical terms, lists of data and detailed explanations of scientific reasoning should be avoided in this summary. ²¹	
4.3.3 All evidence and data sources should be clearly referenced.	

²⁰ Do the recommendations cover the construction, operational and, where appropriate, decommissioning phases in the short, medium and long term (and are these timescales defined?). Some HIAs include recommendations as a management plan and list the roles and responsibilities of stakeholders and provide a timetable for action. Do the recommendations link with the findings of other relevant studies for example, Environmental Impact Assessment?

²¹ Does the summary cover all main issues discussed in the HIA report and contain at least a brief description of the project and the potentially affected population, a description of the most important positive and negative health effects and the project's impact on equality, an account of the main recommendations and mitigation measures to be undertaken by the developer and the main outline of the action plan recommended to *manage*, and monitor the health effects and evaluate the HIA. Is a brief explanation of the methods by which data were obtained, and an indication of the certainty which can be placed in them included?



Overall grade

Please use the collation sheet to estimate the grade of the Health Impact Assessment report and then please circle one of the following grades as the overall grade:

- A .. Relevant tasks well performed, no important tasks left incomplete, only minor omissions and inadequacies.
- B .. Can be considered satisfactory despite omissions and/or inadequacies.
- C .. Parts are well attempted but must, as a whole, be considered just unsatisfactory because of omissions or inadequacies.
- D .. Not satisfactory, significant omissions or inadequacies, some important tasks(s) poorly done or not attempted.
- NA Not applicable.

There are some situations (for a particular type of project for example) where a criterion will not apply, however the reviewer is advised to avoid N/A unless there is no alternative.



4 List of references

1. World Health Organization. Preamble to the Constitution of the World Health Organization; signed on 22 July 1946 by the representatives of 61 States and entered into force on 7 April 1948. Official Records of the World Health Organization, no. 2, p.100. 1948. New York.
2. Quigley, R., den Broeder, L., Furu, P., Bond, A., Cave, B., and Bos, R. Health Impact Assessment. International best practice principles. Special publication series No. 5. 2006 International Association for Impact Assessment. Available at www.iaia.org
3. Select Committee. Health. Third report. 2004 United Kingdom Parliament. Available at www.parliament.the-stationery-office.co.uk
4. Royal Commission on Environment and Pollution. The urban environment. 26th report. 2007. Available at www.rcep.org.uk
5. Butland, B., Jebb, S., Kopelman, P., McPherson, K., Thomas, S., Mardell, J., and Parry, V. Foresight. Tackling Obesity: Future Choices - Project Report Government Office for Science. 2nd Edition. 2007. Available at www.foresight.gov.uk
6. Health Select Committee. Tackling health inequalities across other sectors and departments. United Kingdom Parliament website, 2009. Available at www.publications.parliament.uk/pa/cm200809/cmselect/cmhealth/286/28610.htm#a80
7. Royal Town Planning Institute. Delivering Healthy Communities. RTPI Good Practice Note 5. 2009. Available at www.rtpi.org.uk
8. Cave, B., Bond, A., Molyneux, P., and Walls, V. Reuniting health and planning: a training needs analysis. Research into developing a skills base for sustainable communities in the East of England. 2005. Ben Cave Associates for the East of England Regional Public Health Group and the Government Office for the East of England. Available at www.bcahealth.co.uk/docs/download/reuniting_health_planning_exec_sum.pdf
9. WHO Regional Office for Europe. Health Impact Assessment toolkit for cities. Document 1. Background document: concepts, processes, methods Vision to Action. 2005. Available at www.euro.who.int
10. Commission on the Social Determinants of Health. Closing the gap in a generation. Health equity through action on the social determinants of health. 2008 World Health Organization. Available at www.who.int/social_determinants/final_report/en/index.html
11. Scott-Samuel, A., Birley, M., and Ardern, K. The Merseyside Guidelines for health impact assessment. 2nd edition. 2001. Liverpool. International Health Impact Assessment Consortium. Available at www.hiagateway.org.uk
12. Ison, E. Resource for health impact assessment. Volume 1. The main resource. 2000. London. commissioned by NHS Executive. Available at www.hiagateway.org.uk
13. Cave, B., Curtis, S., Coutts, A., and Aviles, M. Health impact assessment for regeneration projects. Volumes I-III. 2001. London. East London and the City Health Action Zone and Queen Mary, University of London. Available at www.bcahealth.co.uk
14. Metcalfe, O., Higgins, C., Doyle, C., and McDowell, S. Health Impact Assessment guidance. 2006 Institute of Public Health in Ireland. Available at www.hiagateway.org.uk
15. National Assembly for Wales. Developing health impact assessment in Wales. 1999 Health Promotion Division. Available at www.hiagateway.org.uk
16. Douglas, M., Thomson, H., Jepson, R., Hurley, F., Higgins, M., Muir, J., and Gorman, D. Health impact assessment of transport initiatives: a guide. 2007. Edinburgh. NHS Health Scotland, MRC Social and Public Health Sciences Unit and Institute of Occupational Medicine. Available at www.healthscotland.com
17. Dolman, M. and Swift, J. D. Health Impact Assessment toolkit for Public Health practitioners. Main report. 2007. Leeds. Leeds County Council and Leeds Primary Care Trust. Available at www.hiagateway.org.uk
18. Kemm, J. More than a statement of the crushingly obvious: A critical guide to HIA. 2007 West Midlands Public Health Observatory. Available at www.hiagateway.org.uk
19. Coggins, T., Cooke, A., Friedli, L., Nicholls, J., Scott-Samuel, A., and Stansfield, J. Mental well-being impact assessment: a toolkit. A living and working document. 2008 Care Services Improvement Partnership, North West Development Centre. Available at www.northwest.csip.org.uk



20. Greenspace Scotland. Health impact assessment of greenspace: a guide. 2007 Health Scotland, Scottish Natural Heritage and Institute of Occupational Medicine. Available at www.greenspacescotland.org.uk
21. IMPACT, Institute of Public Health in Ireland, RIVM, National Institute for Public Health and the Environment, and loegd, Institute of Public Health NRW. European Policy Health Impact Assessment: a guide. 2004. Available at http://ec.europa.eu/health/ph_projects/2001/monitoring/fp_monitoring_2001_a6_fre_p_11_en.pdf
22. Aldrich R, Mahoney M, Harris E, Simpson S, Stewart-Williams J. Building an equity focus in health impact assessment. NSW Public Health Bulletin 2008;16(7-8):118-9.
23. Mahoney, M., Simpson, S., Harris, E., Aldrich, R., and Stewart-Williams, J. Equity focussed health impact assessment framework. 2004 The Australasian Collaboration for Health Equity Impact Assessment (ACHEIA).
24. Bos, R., Birley, M., Furu, P., and Engel, C. Health opportunities in development. 2003 World Health Organization.
25. North American HIA Practice Standards Working Group. Practice Standards for Health Impact Assessment (HIA). Version 1. 7-4-2009 North American HIA Practice Standards Working Group. Available at www.sfphes.org
26. Health Canada. Canadian Handbook on Health Impact Assessment. Volumes 1-3. 2004. Available at www.hc-sc.gc.ca
27. International Finance Corporation. Introduction to Health Impact Assessment. 2009. Available at www.ifc.org
28. Harris, P., Harris-Roxas, B., Harris, E., and Kemp, L. Health Impact Assessment: a practical guide. 2007. Sydney. Centre for Health Equity Training, Research and Evaluation (CHETRE). Part of the UNSW Research Centre for Primary Health Care and Equity, UNSW. Available at www.hiaconnect.edu.au
29. IPIECA. A guide to health impact assessments in the oil and gas industry. 2005 International Petroleum Industry Environmental Conservation Association, International Association of Oil and Gas Producers. Available at www.ipieca.org
30. Council of the European Union. Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment. 40(L73). 1997. Brussels. Official Journal of the European Community. 5-14. Available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997L0011:EN:HTML>
31. ERM. Guidance on Environmental Impact Assessment: EIS Review. 2001. Brussels. Commission of the European Communities. Available at <http://ec.europa.eu/environment/eia/eia-guidelines/g-review-full-text.pdf>
32. WHO Regional Office for Europe and European Centre for Health Policy. Health impact assessment: main concepts and suggested approach. Gothenburg consensus paper. 1999. Brussels. WHO Regional Office for Europe, ECHP. 1-10. Available at www.euro.who.int
33. Mindell J, Boaz A, Joffe M, Curtis S, Birley M. Enhancing the evidence base for health impact assessment. J Epidemiol Community Health 2004;58:546-51.
34. Joffe M, Mindell J. A framework for the evidence base to support health impact assessment. J Epidemiol Community Health 2002;56(2):132-8.
35. Mindell, J., Boltong, A., and Forde, I. A review of health impact assessment frameworks. Public Health . 2008.
36. Lee, N., Colley, R., Bonde, J., and Simpson, J. Reviewing the quality of environmental statements and environmental appraisals. 1999. Manchester: EIA Centre, Department of Planning and Landscape. University of Manchester.
37. Glasson J, Therivel R, Chadwick A. Introduction to Environmental Impact Assessment Third Edition. Third ed. Abingdon: Routledge; 2005
38. Institute of Environmental Management and Assessment. EIA Review Criteria. 2001. Available at www.iema.net
39. Institute of Environmental Management and Assessment. Environmental Statement Review Criteria. 2006. Available at www.iema.net
40. Bond, A. and Cave, B. Health impact statement review package. Prepared for Health Impact Assessment training course for Brighton & Hove Primary Care Trust and Brighton & Hove City Council. 2006 Ben Cave Associates Ltd.
41. Pawson R, Tilley N. Realistic evaluation. London; Thousand Oaks, Calif.: Sage; 1997



42. Parry, J., Kemm, J., and on behalf of all participants of the Evaluation of Health Impact Assessment Workshop. Criteria for use in the evaluation of health impact assessments. Public Health . 2005.
43. Bekker MPM, Putters K, van der Grinten TED. Evaluating the impact of HIA on urban reconstruction decision-making. Who manages whose risks? Environmental Impact Assessment Review 2005;25(7-8):758-71.
44. Public Health Resource Unit. Ten questions to help you make sense of reviews. Critical Appraisal Skills Programme (CASP). 2006. England. Available at www.phru.nhs.uk/Doc_Links/S.Reviews%20Appraisal%20Tool.pdf
45. Public Health Resource Unit. Ten questions to help you make sense of qualitative research. Critical Appraisal Skills Programme (CASP). 2006. England. Available at www.phru.nhs.uk/Doc_Links/Qualitative%20Appraisal%20Tool.pdf
46. International Association for Impact Assessment. Principles of Environmental Impact Assessment Best Practice. 1999. Available at www.iaia.org



Ben Cave Associates Ltd

company registered in england and wales. 103 clarendon road, leeds, ls2 9df. company number 04578866. vat 797 8252 63.