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1- Introduction

The protection and promotion of public health and well-being is fundamental in creating a thriving and dynamic society. One way this can be achieved is through the consideration of health issues in the strategic planning process. The choice of strategic – level alternatives (for policies, plans and programs) is critical because it establishes a decision pathway that determines future project level alternatives (Steinmann, 2000). The focus of this study will be on two assessment processes that can be used in strategic decision making, strategic environmental assessment (SEA) and sustainability appraisal (SA). The content of this report looks to review how health issues are considered in these two types of assessment on a practical level in England and identify the limitations and opportunities responsible for achieving good practice. It will also aim to make recommendations as to how such limitations can be overcome and opportunities promoted. This research has been carried under the supervision of the West Midlands Public Health Observatory (WMPHO).

This section of the report (chapter 1) defines the key terms used in the study and provides an overview of the research topic.

1.1- Definition of health

Health is defined by the World Health Organization (WHO) as;

“A state of complete physical, mental and social wellbeing and not merely the absences of disease or infirmity”, pg 100, WHO (1946)

It has been argued however, that this definition should be broadened to include aspects such as spiritual wellbeing (Larson, 1996). This classic WHO definition of health has also been criticised for not indicating which aspects of health should take priority in situations where resources are limited to address health issues (Saracci, 1997). Despite some opposition this particular definition has been incorporated in to a number of health studies (Mackay et al., 1998, Skevington, 1999, Lumsdaine et al., 2005), policies and strategies in the UK and on an international level.
1.2 - Definition of Strategic Environmental Assessment (SEA)

SEA is the systematic process for evaluating the environmental consequences of a proposed policy, plan or programme (PPP) initiative in order to ensure they are fully included and appropriately addressed at the earliest stage of decision making on par with economic and social considerations (Sadler and Verheem, 1996).

1.3 – Definition of Sustainability Appraisal (SA)

Sustainability Appraisal seeks to evaluate the performance of a strategy in relation to a series of sustainable development objectives and identify opportunities for improving strategy performance in relation to these (Smith and Sheate, 2001a).

To ensure that decisions made at the strategic level make a valid contribution to sustainability, assessment in the form of SEA and SA is required. As will be discussed in more detail in the literature review, health considerations are required to be incorporated in these forms of assessment. In some situations however, a separate Health Impact Assessment (HIA) may be carried out alongside an SEA/SA report.

1.4 - The importance of good public health and well-being

Good public health is an important factor in achieving sustainable development (Schirnding, 2002). Ensuring and promoting good public health should be a priority for decision makers as it ultimately influences the overall wellbeing and productivity of a given population or community. A positive effect of adult survival rate (ASR) on gross domestic product (GDP) growth rates has been found in low income countries (Bhargava et al., 2001). In developed countries such as the England, morbidity rather than mortality rates can have a greater economic impact. For example, 24.1% of production losses were attributable to mortality and 75.9% to morbidity related to coronary heart disease (Liu et al., 2002). There are also social implications of ill health. These often not only impact on the individual affected but also on their family and those which may be dependent on them. For example, the emotional impact looking after a parent with a mental illness can have on a young carer (Aldridge and Becker, 2003).
1.5- Prevention of ill health

In terms of dealing with ill health the focus has often been on the curing and caring for of those affected. Although this is an important part of ensuring good public health, the need for methods of prevention should not be underestimated. Over the last two centuries in the UK, improvements in sanitation, health care and working conditions have reduced communicable disease and increased life expectancy. Although many of the old diseases have been controlled, their place seems to have been taken by others such as cancer, heart disease, arthritis and mental illness (Kemm and Close, 1995). Correlations have been identified between socio-economic factors and life style choices and the relative risk of an individual being affected by such diseases. One relationship in particular being coronary heart disease and deprivation (Diez Roux et al., 2001, Lawlor et al., 2005, Sundiquist et al., 2004).

Chronic illnesses now pose the biggest challenge to health planners and those on the front line of health care. If socio-economic determinates of health can be accurately indentified and a general consensus agreed upon, resources can be justifiably allocated to protect against them. It is at this point that planning and health authorities can work in partnership with each other in order to create an environment in which health and well-being are protected from the determinants that are possible to address. To go one step further, an ideal planning process would also incorporate strategies to actually promote and improve the current health of a population. A proactive approach to considering health issues in the planning stage of PPPs can ultimately reduce future economic burdens on health authorities.

1.6 - Stakeholders involved in the consideration of health in SEA/SA

At the present time, the new coalition government have abolished Regional Spatial Strategies (RSS). In a recent letter to Council Leaders (27/05/2010), the Secretary of State for Communities and local Government stated a desire to “return decision making powers on housing and planning to local councils”. Changes in the structure of health authorities are also likely to take place in the future along with proposed budget cuts. For the purpose of this report the organisational structure of authorities in England pre May 2010 will be discussed.
1.6.1- Responsible Authorities (RA)

RAs are those responsible for initiating out SEA/SA reports. They are often planning authorities; however they may also be from the private sector depending on the type of PPP being subjected to SEA/SA. RAs can sometimes hire private consultancy companies to undertake SEA/SA on their behalf. Table 1 below gives examples of PPPs that require an SEA/SA report and the authorities that are responsible for them. Figure 1 demonstrates the key aspects of the planning system in England pre May 2010.

Table 1: Examples of PPPs where SEA/SA may apply and the regulatory authorities

<table>
<thead>
<tr>
<th>Example</th>
<th>Regulatory Authority</th>
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<tbody>
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<td>National</td>
<td>Oil and Natural Gas licensing rounds, Offshore wind farm licensing rounds</td>
</tr>
<tr>
<td>Regional</td>
<td>Regional Spatial Strategy (RSS) Regional Economic Strategy (RES) River Basin management National Park management</td>
</tr>
<tr>
<td>Local</td>
<td>Local Development Documents (LDD) Local Air Quality Action Plans Local Housing Strategies Municipal Waste Management Strategies (MWMS) Local Transport Plans</td>
</tr>
</tbody>
</table>

(Williams and Fisher, 2007)
1.6.1 - Health Authorities in England

Figure 2 demonstrates the organizational structure of health authorities and bodies in England and how they interact with each other. RAs should be aware of the different levels of health authorities and their functions in order to utilize and incorporate their expertise in the decision making process. Similarly it is important for health
authorities to be aware of the SEA/SA process and the benefits it can potentially offer to public health and well-being.

Figure 2: Organisation of health authorities in England

**National Level**
- **Department of Health (DH)**
  Sets national standards and objectives for development and delivery of health and social care services. It has published the NHS plan and numerous policy documents.
- **Special Health Authorities or arm’s length bodies**

**Regional Level**
- **DH Regional Public Health Groups**
  Responsible for the development of cross-government and cross-sector approaches to tackling wider determinants of health and ensuring proper health input in to LSPs.
- **Public Health Observatories**
  Monitor health and disease trends and advise on methods for improving health and health inequalities as well as providing early warnings of future health problems.
- **Strategic Health Authorities (SHA)**
  SHAs are responsible for: Performance management of NHS trusts in their area. Consultation on major service reconfigurations. Ensuring that public surveillance, population screening and needs assessment are carried out (with PCTs).

**Local Level**
- **Shared services and local procurement agreements**
- **Primary Care Trusts (PCTs)**
  Responsible for both commissioning and delivery of local health services. Lead on the development of Local Delivery Plan to show pattern of local service provision, a framework for the delivery of primary care and the improvement of health for local people. PCTs are often members of LSPs.

(Cave and Molyneux, 2004)

In terms of strategic planning, primary care trusts (PCT) are particularly important as they can offer valuable knowledge with regards to the specific health concerns and needs of a population. As they are often part of LSPs this enables them to communicate with authorities from other sectors in a local area including planning.
2- Literature review

2.1 - Interactions between health and the environment

A vast amount of literature and research exists concerned with how the environment in which people live influences their overall health and wellbeing. Figure 3 demonstrates how biophysical and socio-economic components of the environment can impact upon health. It shows the range of factors strategic planners have to consider when undertaking SEA/SA. Factors that contribute to overall health and wellbeing are extremely broad ranging and causal pathways are often difficult to determine (DH 2008). Obtaining an in depth knowledge and understanding of such a variety of health influences is just one of the tasks faced by those carrying out SEA/SA.

Figure 3: Wider determinants of health and well-being


2.1.1 - Biophysical determinants of health and wellbeing

A number of studies have been conducted on the biophysical aspects of the environment and their influence on human health for example; exposure to radon (Bowie and Bowie, 1991), air quality (Ezzati and Kammen, 2002) and exposure to UV radiation and its relationship with incidence of Melanoma (de Gruiji, 1999,
Gilchrest et al., 1999). Epidemiological studies have also helped to identify relationships between the environment and the spread of disease and illness. Many of these studies have carried out case control or cohort studies to determine causal links to specific health impacts. Data sources such as cancer registers, GP records and census data are particularly useful when conducting this type of research in order to determine significant relationships. Empirical evidence of causal links and in particular thresholds can be used to drive policies and legislation. One of the earliest of such examples was carried out by the epidemiologist John Snow. In 1854 he identified the water pump in Broad Street London that was responsible for a cholera outbreak. His findings provided a justification for the pump handle to be removed by the public authorities at the time (Paneth, 2004). A more recent example of the implementation of legal national standards is the UK Environment Act 1995 which required the National Air Quality Strategy (NAQS) to be published (Beattie et al., 2001).

2.1.2 – Influence of the built environment on health and well-being

Although biophysical factors can have a significant impact on health, the built environment in which an individual or community resides can also be extremely influential. Land use and transportation interact with many aspects of human activity, for example heavy reliance on cars increases air pollution and also reduces physical activity (Frumkin et al., 2004). Spatial planning has the potential to influence such reliance on cars by, for example, incorporating provisions for active transport in the form of cycle paths and safe routes to walk. Poor housing conditions are also associated with a wide range of health conditions, including respiratory infections, asthma, lead poisoning and mental health (Krieger and Higgins, 2002).

Exposure to noise has also been found to induce hearing impairment, hypertension and ischemic heart disease and sleep disturbance (Passchier-Vermeer and Passchier, 2000). To address such detrimental impacts on health and wellbeing it has been suggested that policies and plans should be informed by psychological and social factors that determine how and at what level noise impacts negatively on health, rather than mathematical and statistical models (Staples, 1997). This also
allows for the consideration of vulnerable receptors that may be particularly sensitive to noise, for example children.

2.2 - Socio-economic determinants of health and health inequalities

Socio-economic factors have also been identified as having a significant influence on health and wellbeing. The DH (2008) identified inequalities in health to be one of the key issues that needs to be addressed in the UK. Their specific aim was to reduce health inequalities by 10% by 2010 as measured by infant mortality and life expectancy at birth. It has been argued that national socio-political-economic trends and policies have widened the gap between the business and working classes, leading to high disparities in relative rather than absolute income and consequently health (Coburn, 2004). The provision for protection and promotion of health in deprived areas is therefore of particular importance.

It has been found that personal poverty in affluent areas has no negative health consequences, however living in a deprived neighbourhood has the most negative impact on the poorest residents due to their dependency on local and collective resources (Stafford and Marmot, 2003, Lavin et al., 2006). These findings suggest the ineffective consideration of health in strategic planning is likely to impact the most on the most vulnerable in society. Figure 4 below demonstrates how poor health and access to health facilities is associated with the self-perpetuating poverty cycle.
Empirical evidence with regards to socio-economic determinants of health and health inequalities can be difficult to obtain. Even in a data rich environment, the consideration of all possible health effects (direct, secondary, cumulative, synergistic, short, medium and long term, permanent and temporary, positive of negative) is likely to be elusive if not impossible given the underlying complexity, for example, as many health effects will only show after long periods and are influenced by other factors (Nowacki et al., 2009).

The previous Secretary of State commissioned an evidence based review of health inequalities in England entitled, *Fair Society, Healthy lives* (2010) and concluded that if health inequalities are to be reduced, action is required on six policy objectives. These included:

- Ensure a healthy standard of living for all
- Create and develop healthy and sustainable places and communities
- Strengthen the role and impact of ill health prevention

The report also recognises that if these objectives are to be achieved, involvement and coordination between central and local government, the NHS, the private sector
and the community is needed. The literature highlights the importance of considering health issues in planning strategies in order to address the significant problem of health inequalities and deprivation in England.

2.3 -Sustainable Development

Reaching a state of sustainability has become a long term goal of many governments and organisations. This aim can be achieved through the adoption of sustainable development strategies. Sustainable development can be defined as;

“Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (Brundtland, 1987)

2.3.1 – European and UK sustainable development strategies

In 2006 the European Council adopted the renewed Sustainable Development Strategy (SDS) for an enlarged EU. The accompanying report incorporated the aims of the strategy which are; to promote a dynamic economy with full employment and a high level of education, health protection, social and territorial cohesion and environmental protection in a peaceful and secure world, respecting cultural diversity. The review also sets out a number of key areas of concern:

- Climate change and clean energy
- Sustainable transport
- Sustainable consumption and production
- Conservation and management of natural resources
- Public health
- Social inclusion, demography and migration
- Global poverty and sustainable development challenges

The EU SDS clearly states public health as an integral factor that needs to be addressed if sustainable development is to be achieved.

- sustainable consumption and production
- climate change
- natural resource protection
- sustainable communities
- a new indicator set

The difference in emphasis between the UK and EU strategies highlights the problem of the interpretation of what is meant by sustainable development. The term sustainable development can have different meanings in different contexts and to different groups or individuals. It can be open to subjectivity or possibly shaped to fit the objectives of the situation it is applied to. If the concept of sustainability as a desirable state that society is working to achieve is not emphasised, assumptions may be implicitly made that any arbitrary environmental, social and economic objectives collectively represent sustainability, irrespective of how they are defined or how much improvement they actually represent (Pope *et al*., 2005). Therefore if sustainable decisions are to be made, assessment is needed to ensure all relevant social, economic and environmental issues are considered on an equal level. Assessment for sustainability requires a clear definition of sustainability and corresponding criteria against which the assessment can be conducted (Pope *et al*., 2004).

**2.3.2 – Planning and sustainable development in the UK**

The UK government has identified the land use planning system as, and development plans in particular as potentially powerful instruments for incorporating national sustainability objectives into strategic decision making at local levels (Benson and Jordan, 2004). Local Authorities are required to produce a Sustainable Community Strategy (SCS) following consultation with their local communities and key local partners through the LSP (CLG 2008). The SCS sets out the strategic future vision for a community by considering social (including health), economic and
environmental issues in a collective way. The LDF provides the spatial expression of the SCS (DH 2008). It is here that SA and SEA can be used to aid decision makers in selecting courses of action that are the most beneficial to the community and the environment.

2.4– Strategic Environmental Assessment (SEA)

2.4.1 – The EU SEA Directive

The EU SEA Directive 2001/42/EU was transposed into UK law by the Environmental Assessment of Plans and Programmes Regulation Act 2004. The aim of the Directive is to ensure all EU member states apply SEA to plans and programmes which are likely to have a significant effect on the environment. On a broader level the Directive looks to contribute towards Europe’s sustainable development goals. The plans and programs that apply to the Directive are highlighted in a Commission of the European Communities report (2009):

Plans/programs prepared from the following sectors; agriculture, forestry, fisheries, energy, industry, transport, waste and water management, telecommunications, tourism, town and country planning, land use and which set the framework for future development consent in respect of projects under the EIA Directive 85/337/EEC (1997).

The Environmental Assessment (Scotland) Act 2005 which came into force 20/02/2006, superseded the regulations for Scotland, and widens the requirement for SEA in Scotland to a range of plans and programmes not subject to the Directive and also to strategies (Therivel and Walsh, 2006).

2.4.2 – The stages of SEA

SEA has a number of distinct stages that are required to be carried out, as shown below in figure 5.
Figure 5: Stages of SEA

<table>
<thead>
<tr>
<th>Stage A: Setting the context/objectives, establishing the baseline and deciding on the scope</th>
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<tbody>
<tr>
<td>• Collecting baseline information</td>
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<td>• Identifying environmental impacts</td>
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<td>• Develop SEA objectives</td>
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<td>• Consulting on the scope of the SEA</td>
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<tr>
<th>Stage B: Developing and refining alternatives and assessing effects</th>
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<tr>
<td>• Testing plan against objectives</td>
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<td>• Developing strategic alternatives</td>
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<td>• Predicting effects plus alternatives</td>
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<td>• Evaluating effects</td>
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<td>• Mitigation</td>
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<th>Stage C: Preparing the environmental report</th>
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<th>Stage D: Consulting on the draft plan and report</th>
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<tr>
<td>• Consultation with the public and other stakeholders</td>
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<tr>
<td>• Assessing significant changes</td>
</tr>
<tr>
<td>• Making decisions and providing information to stakeholders</td>
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<tr>
<th>Stage E: Monitoring the significant effects of implementing the plan/programme on the environment</th>
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<tr>
<td>• Developing aims and methods for monitoring</td>
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<tr>
<td>• Responding to adverse effects</td>
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Source: Adapted from the ODPM – A practical guide to the SEA Directive (2005a)

The EU Directive requires information in the environmental report and responses to the consultation to be taken into account in the preparation of the plan or program and the final decision is taken to adopt it.

Consultation with health authorities is needed to fully consider health issues in strategic assessment. Even though consultation with the public and other
stakeholders is clearly stated as a requirement of the Directive, it does not offer any specific methods as to how this should be done. The EU Directive requires the information in the Environmental Report (ER) and responses to consultation to be taken in to account in the preparation of the plan or program and before the final decision is taken to adopt it (DH 2008). Therefore there is a need for those carrying out the EA to effectively communicate findings to decision makers.

2.4.3 – The need for SEA

Strategic actions lead to and shape projects so appraising the strategic action offers the chance to influence the kinds of projects that are going to happen, not just the details after projects are already being considered (Therivel, 2004). Therefore SEA has the ability to affect the types of projects that will be subject to Environmental Impact Assessment (EIA) at the project level and the alternatives that can be considered. Decision making at the strategic level therefore has the potential to influence long term public health and wellbeing, whether that be positive or negative. If carried out effectively, SEA can also avoid costly mistakes with regards to unforeseen environmental impacts and make sure the PPP adheres to all relevant environmental legislation.

2.4.4 – The Kiev Protocol

SEA is focused towards assessing potential impacts on biophysical factors such as air, land, water and wildlife. These considerations have tended to take preference over socio-economic factors, including health. To try and address this issue, in 2003 36 member states of the EU and the United Nations Economic Commission for Europe (UNECE) signed the Kiev Conference SEA Protocol, which came in to force on the 11th July 2010. The aim of the conference was to promote the benefits and improve the standards of the SEA process. It also widens the scope of SEA to include legislation and policies and specifically identifies public health as an issue than required further consideration.
A document reviewing the Kiev protocol was published in 2004 in conjunction with the Budapest conference side event, organised by the WHO, UNECE and the Regional Environmental Centre for Central and Eastern Europe. It includes the main issues covered in a speech given by Jaroslav Volf (Director of National Institute of Public Health, Czech Republic). A major concern of his was the lack of empirical evidence available with regards to health impacts created by certain PPPs due to their broad and complex nature. Volf also expressed the importance of environmental and health agencies working in conjunction with each other, in order to share expertise and overcome the problems faced by this area of decision making. A lack of experience with incorporating health in SEA was also found to be a problem for many authorities across the states that signed the protocol.

2.4.5 – Guidance for considering health in SEA

In response to theses problems outlined the Resource manual to the application of the UNECE Protocol on strategic Environmental Assessment (2007) was published. The manual includes a specific section on health in Annex/Chapter A7: Health and provides information on how best to assess health effects. It terms of qualitative assessment the manual states the need for relative and reliable expert judgment. It also refers to A Guide for Reviewing Published Evidence for use in Health Impact Assessment (2006) as a useful resource for assessing health evidence. Although the manual encourages the integration of health in to the SEA process itself, it does recognise the benefits of conducting a separate HIA in terms of providing in depth information to decision makers on the health implications of a PPP.
Draft guidance on how best to integrate health in SEA has also been published by the Department of Health (2008) which provides a framework for good practice. The DH guidance distinctly outlines the benefits for PCTs in engaging in the SEA process, mainly the opportunity to prevent ill health and promote good health through planning. The guidance highlights the importance of considering the wider determinants of health in SEA. Recommendations are also made for planners to seek out information through consultation with relevant health authorities dependent on the type of plan or program being assessed. While many health determinants are directly affected by activities of other sectors (including those in which SEA is applied), the health sector is not often involved in decision making processes of other sectors, especially at the strategic level (Bonvoisin et al., 2007, Nowacki et al., 2009).

2.4.6 – Limitations of SEA

Even though as mentioned previously, the emphasis of SEA is on environmental impacts, it is still a valuable tool for assessing the potential health implications they may arise due to a PPP. There are of course limitations to SEA that are also true for other types of strategic assessment. It obviously requires up front costs and resources and is only one input into the decision making process which may not actually have a significant effect on the final outcome (Therivel, 2004). SEA methodologies will need to be adaptive to the existence of different agendas, actors, discourses, knowledge requirements (substantive issues; qualitative versus quantitative information) and bargaining styles within different policy-making sectors (Brown and Therivel, 2000). The availability of health data resources has been identified as an area for potential weakness.

2.5 - Sustainability Appraisal (SA)

SA evolved in response to a perceived need to assess the economic, social and environmental implications of a strategy so that progress could be made on the path towards sustainable development, an ideal in which economic, social and environmental concerns are wholly reconciled (Smith and Sheate, 2001a). SA has
been implemented in the UK planning system as during a period of policy reform. It was made a mandatory under the Planning and Compulsory Purchase Act 2004, for revised RSS, new or revised DPDs and new or revised SPDs. It also looks to create a more holistic approach to achieving sustainable development by giving an equal weighting to environmental, social, and economic issues. A more efficient planning system in the UK where decisions on major infrastructure plans and programmes were made more rapidly was also seen to be needed.

2.5.1 – SA and planning

SA has also been used as a tool to better understand the impacts of infrastructure design on the wellbeing of local communities. Plans and programmes that have been designed in way sensitive to the specific needs of a population can have significant positive impacts and public health and general wellbeing (Pretty et al., 2007, Evans, 2003). Conversely the opposite is also true, poorly considered plans can create negative impacts on health along with exacerbating existing issues, such as inequalities in health. Figure 6 below demonstrates the stages involved in SA and how they relate to the RSSs.

Figure 6 - Incorporating SA in the RSS revision process

<table>
<thead>
<tr>
<th>RSS Stage 1: Identify the issues for a RSS revision and prepare a project plan, including a statement of public participation</th>
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<td>SA Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope</td>
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<td>• <strong>A1:</strong> Identifying other relevant policies, plans, programmes and sustainability objectives.</td>
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**SA Stage B: Developing and refining options and assessing effects**

- **B1:** Testing the RSS revision objectives against the SA framework.
- **B2:** Developing the RSS revision options.
- **B3:** Predicting the effects of the RSS revision.
- **B4:** Evaluating the effects of the RSS revision.
- **B5:** Considering ways of mitigating adverse effects and maximising beneficial effects.
- **B6:** Proposing measures to monitor the significant effects of implementing the RSS revision.

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<th>SA Stage C: Preparing the Sustainability Appraisal Report</th>
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- **C1:** Preparing the SA Report.

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- **D1:** Consulting on the draft RSS revision and SA Report.

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<th>RSS Stages 6 and 7: Publication of proposed changes and issue of revised RSS</th>
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- **D2:** Appraising any significant changes proposed by the Secretary of State.
- **D3:** Making decisions and providing information.

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<th>RSS Stage 8: Implementation, monitoring and review</th>
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- **E1:** Finalising aims and methods for monitoring.
- **E2:** Responding to adverse effects.

Source: Adapted from ODPM (2005b)
Health issues can be firstly be considered during the collection of baseline data, at this point the general health of a population can be identified along with any concerns or issues specific to the area. Such information can help when setting objectives that are relevant to the needs of the community and identifying if these objectives conflict with those of other sustainability issues. Ensuring the baseline data is complete and relevant is important, as it can set the tone for the rest of the assessment. The principle features of SA were laid out in a government document, *Sustainable Communities: Delivering through planning* (2002). The document outlined the aims of the SA process, one in particular being to increase community and other relevant stakeholder involvement and consultation. This statement is of particular relevance to the effective consideration of health issues. Such consultation is important when creating mitigation measures for possible health impacts that may arise from a PPP

2.6 – The relationship between SA and SEA

SA fully incorporates the requirements of the EU SEA Directive. Provided it is carried out following guidelines set out in; *A practical guide to the Strategic Environmental Assessment Directive* (2005) and the *Plan making manual*, there will be no need to carry out a separate SEA (DCLG 2008). The Government guidance on SA (ODPM 2005b) also incorporates the legal requirements of the EU SEA Directive (2004). This allows for RAs to carry out one form of assessment for a plan or programme, increasing efficiency and speeding up the decision making process whilst complying with relevant legislation.

Scott Wilson Consults (2010) conducted an independent research report for the DCLG on the integration of SEA and SA as a single impact assessment process. The report found there to be four specific factors that can influence the efficiency and effectiveness of SEA and SA:

- Informed and enthusiastic decision makers;

- Fear of legal challenge – this affects efficiency particularly as people are spending more time and resources than they should in order to avoid it;
• Constant changes in the planning system (negative effect); and
• Timing – of the SA / SEA in relation to the plan making process.

These factors may therefore influence how well and to what extent health is considered in SEA/SA. Constant changes in the planning system are of particular relevance due to the recent change in the UK government. According to the findings of the report, changes in the structure of the planning process will have a negative impact on the quality of SEA/SA as planners and consultants will need time to adjust.

As SA is carried out during the decision making process, it has the potential to influence the outcome of the course of action taken. It also increases transparency and provides justification to the public and stakeholders for the final decisions that are made. It has been observed however that some SAs have lacked key elements that have been stated in good practice guidance, particularly the assessment and comparison of alternatives (Smith and Sheate, 2001b).

2.7- Health Impact Assessment (HIA)

2.7.1 – Benefits of HIA

One of the other ways in which health issues can be considered in strategic planning is through the application of HIA. The WHO (1999) describe HIA as a developing process that uses a range of methods and approaches to identify and consider the potential – or actual – health and equity impacts of a proposal on a given population. HIA is a tool that can be used in conjunction with a SEA/SA report to consider potential health impacts which is a specific requirement of both forms of assessment.

HIA is based on a broad model of health which proposes that, economic, political, social, psychological and environmental factors determine population health (Lock, 2000). Ultimately the aim of HIA is to inform decision makers on the potential impacts a given course of action will have on all aspects of human health, allowing them to identify the strategy the best protects and promotes public health. An example of an effective HIA is that which was carried out to assess six major long term development strategies in London’s Kings Cross area, between 2002 and 2005.
The HIA was directly attributed to not allowing 24 hour working at King’s Cross Central based on the evidence put forward by the PCT during consultation (Wismar et al., 2007).

There are a number of guidance documents available to planners and consultants carrying out HIA such as those by the West Midlands Directors of Public Health Group (2003), the Public Health Commission (1995) and the NHS Executive London (2000), to name but a few. The HIA Gateway website, which is managed by the WMPHO, also provides information and resources for planners on the application of HIA. Such guidance outlines best practice for the implementation of a successful and efficient HIA.

2.7.1 – Limitations of HIA

One limitation however, is HIA is not a legal requirement in the UK unlike SEA and SA. Due to this, there is no single legislative framework that can be used by planners and therefore the quality of HIAs can vary considerably. HIA also has a pragmatic need to make recommendations to decision makers despite that fact that reliable and complete data sources may not be available (Mindell et al., 2004). Often a HIA’s capacity to support the decision making process is not analysed; in many cases it is arguable whether the impact assessment has been completely detached from the decision making process (Wismar et al., 2007).

Another limitation of HIA is it has been found not to perform well in a competitive, dynamic and often opportunistic policy making environment (Wright et al., 2005). This finding suggests health issues can be overlooked in favour of environmental and economic considerations. It has also been noted that the interpretation of health impacts can be restrictive in HIA as consultation tends to take place within LPAs rather than in conjunction with the NHS (Burns and Bond, 2008). Consideration of socio-economic influences on health may be less so than those from biophysical factors (air, water, contaminated land etc), possibly due to a greater accessibility to expertise in these fields.

Determinants of mental health and well-being are often difficult to identify and therefore specific expert knowledge and consultation is required. Mental Well-being
Impact Assessment (MWIA) has been developed in order to consider mental health in decision making. This highlights the importance of including all aspects of health and well-being when undertaking SEA/SA.

2.8 - Conclusion of the literature review

This study aims to review the consideration of health issues in SEA and SA. The relationship between health and the environment, whether that be human or biophysical, has been clearly identified by the existing literature. It is also clear that socio-economic factors can determine the health and well-being of an individual or population. Reviewing the existing literature, guidance and legislation surrounding the research topic, it is clear that SEA and SA have the potential to facilitate the prevention of ill health and promotion of good health.

In order to take full advantage of the opportunities presented by SEA/SA it is obviously important that best practice is achieved. The DH (2008) and UNECE Annex 7(2007) documents provide specific health guidance for SEA/SA for RAs. Summarising the guidance and literature allows for the key aspects of incorporating health in SEA/SA to be identified. The literature has highlighted factors that contribute to good practice being achieved, for example, consultation with relevant health authorities and the consideration of health inequalities. A variation in the quality of SEA/SA reports with regards to considering health has however been found. In order to understand these variations and consequently reduce them, the factors that cause them need to be further investigated. . A report by Nowacki (2009) referenced in the literature review, summarise the discussions and conclusions of an international consultation meeting on “Health and Strategic Environmental Assessment” organised by the WHO in Rome. It discussed some limitations and opportunities that influence the consideration of health in SEA. The discussions that took place reflected evidence from across Europe. This was also the case in the Volf speech, which identified limitations with regards to data, experience and consultation. This study will therefore investigate the limitations and opportunities that influence the consideration of health in SEA/SA in England specifically.

Drawing on these findings this study will further investigate factors that inhibit good practice from being achieved along with those which promote it. If this is to be
achieved, relevant stakeholders will need to be included in the research for this study. Evaluating the existing literature has enabled the objectives of this study to be determined;

2.8.1 - Objectives of the study

A) Identify the key aspects that influence the effective consideration of health issues in SEA/SA in England.

B) Obtain the views and experiences of different groups involved in incorporating health in SEA/SA in England.

C) Develop a further understanding of the practical implications of considering health in SEA/SA.

D) Provide recommendations of ways to overcome the identified limitations and promote the opportunities for achieving good practice.
3 – Research methodology

Evaluating the success of a SEA/SA can be problematic as strategic decisions have a long time frame and often apply over a large geographical area and are therefore difficult to measure (Noble, 2004). This creates a difficulty in quantifying outcomes (particularly for health) and identifying casual links between a PPP and its impact on health. There are a number of criteria that can be used to assess the content of an SEA/SA report, for example the IEMA SEA criteria review. However such criterion do not necessarily explain why the assessment was carried out well, or not as the case may be. It therefore does not explain why variations exist between SEA/SA reports in achieving good practice with regards to how health is considered. In order to achieve the objectives of this study, a more in depth review is needed.

3.1 – Data collection method

Firstly, existing, relevant literature was summarised and reviewed in order to establish information relating to objectives A and C. Data was complied from existing peer reviewed literature and guidance documents published by relevant governing bodies.

A study by Stienmann (2000) aimed to investigate how, why and to what extent environmental impact assessment (EIA) addressed impacts on human health. Firstly a content analysis of 42 EIS reports similar to that used by Bonde and Cherp (2000), was used to evaluate the quality of content. Secondly, a contextual analysis was carried out which included site visits and interviews with those involved in carrying out each EIA report. The contextual analysis was found to ‘provide a richer understanding of the circumstances surrounding the EIA, especially the factors that influenced how and why health impact assessments were conducted’. Stienmann’s (2000) are relevant to this study as the reasons for good practice were identified.
In order to gather data that enables the objectives of this study to be met, a contextual analysis of a sample of SEA/SA reports was carried out in the form of interviews. Interviews allow for both parties to explore the meaning of questions and the answers involved, which is not so central, and not so often present, in other research procedures (Brenner et al., 1985). A semi-structured interviews with individuals involved in each SEA/SA case study were carried out. Semi-structured interviews are commonly carried out where there is a desire to hear what informants have to say on the topics and areas identified by the researcher (Arksey and Knight, 2009). The semi-structured format allows for the interviewee to elaborate on areas they feel have particular relevance or importance. This enabled a greater depth and range of information to be provided by the interviewee. It is therefore less restrictive than a structured or closed questionnaire which may not have been as suited to interviewing experts.

In order to achieve the objectives of this study, it is important that topic areas for the interview are carefully considered to gain relevant data for analysis. To do this two points need to be addresses, firstly the quality of the SEA/SA case study needs to be established. A review of the literature demonstrated a number of guidance documents which highlighted the key aspects required for good practice in considering health in SEA/SA. Identification of these key aspects was required in order to achieve objectives A and C. The key aspects were identified as:

- Data sources to establish the baseline and identify potential health impacts that could arise from the PPP
- Consultation with relevant health authorities
- The consideration of health inequalities
- The promotion of health and well-being
- Communication and the influence of health considerations on the final decisions that were made with regards to the PPP

Throughout the interview respondents were encouraged to discuss the factors that had prevented or enabled them to address these aspects and to what extent.
Respondents were also asked their opinion on the general standard of the consideration of health in SEA/SA in England. Finally in order to understand how practice can be improved and to achieve objective D, respondent were asked about their thoughts on what could assist them in improving the consideration of health in SEA/SA in the future. A full list of the interview questions used in the study is located in Annex 1 of this report.

3.2 – Sampling of SEA/SA case studies

When selecting the SEA/SA case studies that were to be reviewed in this study, the following variants were considered:

- The planning region where the assessment was carried out
- The type of PPP SEA/SA was applied to
- Who carried out the SEA/SA (i.e. internally in a LPA or private consultancy)

It is important to gain a diverse range of case studies so that variations in practices can be incorporated. Reviewing the SA/SEAs from one planning region or one consultancy firm would not be representative of practice in England as a whole. It also provided the opportunity to identify any trends between the consideration of health in SEA/SA and the variables mentioned above. As there is no single database of UK SEA/SA reports, case studies were selected by firstly researching government (Regional and local) and private consultancy websites.

As the stakeholders interviewed were experts as opposed to members of the general public, it was particularly important to have a prior knowledge of the organization they worked for. Interviewing experts from different professional background allowed for the opportunity to gain a variation in perspectives and ideas on the research topic and the study includes information from planners, health professionals and consultants. This was also done to try and minimise biases in the final outcomes of the analysis. In order to gain as much relevant information from the interview as possible, it was also important to have a comprehensive understanding of health issues and SEA.

3.3. – Interview procedure
The experts were firstly contacted via an email which outlined:

- My own background and credentials
- The purpose of the interview and the estimated time it would take
- How the research would be used and its potential benefits
- The time and date of the interview could be flexible in order to fit in with their other commitments

It was not feasible to conduct face to face interviews with all respondents\(^1\), as they were based around the country; therefore telephone interviewing was the next best option. Telephone interviewing usually has a higher response rate than questionnaires, especially when people have been informed first (Arksey and Knight, 2009).

### 3.4 – Analysis of data

Existing literature was evaluated in order determine the key aspects of good practice for considering health in SEA/SA and the relationships between health and the environment. The data collected from the interviewees conducted for this study was in the form of transcripts and therefore qualitative. Qualitative data, especially from semi-structured interviews can be notoriously difficult to analyses and therefore provide meaningful outcomes (Arksey and Knight, 2009). Throughout the interviewing process, transcripts were continuously reviewed to look for emerging themes and relationships between statements. These themes were then coded in to categories which related to the key aspects covered in the interview to highlight similarities between interviewee responses. Where possible, categories were subdivided in to; limitations, opportunities and recommendations in order to achieve objectives A, B, C and D. In order to reduce subjectivity in the coding process, an independent person was asked to code the transcripts under the proposed category headings.

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\(^1\) with the exception of the Norfolk LTS SA case study which was conducted face to face. This was the first interview to be carried out and therefore any confusion over the meanings of the questions could be identified more easily and amended for the telephone interviews.
3.5 - Summary of data collection and analysis methods

Table 2 below summaries the methods used to collect and analyse the data required to meet each specific objective of this study.

**Table 2: Research Objectives**

<table>
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<tr>
<th>Objective</th>
<th>Data Collection Method</th>
<th>Data Analysis</th>
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| A – Develop understanding of the practical implications of incorporating health in SEA/SA in England | Summarise existing literature  
Phone interviews with relevant stakeholders | Review existing literature  
Categorise and code interview transcripts |
| B – Obtain the views and opinions of different groups of stakeholders involved in considering health in SEA/SA, i.e. planners, consultants and health professionals in England | Phone interviews with relevant stakeholders | Categorise and code interview transcripts |
| C – Identify the limitations and opportunities that influence the key aspects of the consideration of health in SEA/SA. | Summarise existing literature  
Phone interviews with relevant stakeholders | Review existing literature  
Categorise and code interview transcripts |
| D – Provide recommendations of ways to overcome the identified limitations and promote opportunities for achieving good practice | Phone interviews with relevant stakeholders | Categorise and code interview transcripts |
3.6 – Limitations

- The interviews were conducted via telephone which has some disadvantages as non-verbal communication, such as body language can not be evaluated. It is also harder to build up a rapport with the interviewee. This was particularly important as short comings in practices needed to be discussed and therefore a potentially sensitive issue.

- As there is no central database of SEA/SA reports the sampling strategy was somewhat subjective although an effort was made to include a wide variety of respondents.

- The response rate and therefore the number of experts included in the study could not be guaranteed.

- There is a degree of subjectivity in the coding of interview scripts even though efforts were made to address this limitation.
4– Analysis and Discussion

The qualitative information provided by the interviewees was divided into the following topics;

- Health Authority engagement and consultation
- Communication of health issues to decision makers
- Wider determinants of health
- Inequalities in health and deprivation
- Resources

Ten of the sixteen experts contacted replied to the initial email and were consequently interviewed, they consisted of; two planners (P1 and P2), five consultants (C1 to C5) and three health professionals (HP 1 to HP3).

This section (chapter 4) aims to identify emerging themes in the aggregate data and evaluate their meanings and in doing so, achieve objectives A, B, C and D. Findings will be related to existing literature where appropriate and overarching themes and opinions will also be discussed.

4.1 - Health Authority engagement and consultation

Respondents were asked to discuss their thoughts and opinions on how consultation with relevant health authorities was carried out in the SEA/SA process. One respondent outlined the importance of such communication;

“Good contacts and relationships [between planners and health authorities] are very important” (C2)
4.1.2 - Limitations

Some respondents gave their opinion on what they regarded to be limitations in achieving effective communication between health authorities and those responsible for carrying out the SEA/SA. It was stated that of lack of capacity within health authorities themselves was an issue;

“The NHS has not been as active in being involved in local planning and design as they could be due to resource limitations. Planners and consultants are usually the ones to approach health authorities; there is not a strong sense of the NHS taking the lead possibility due to a lack of capacity. Reorganisation in local health authorities prevented earlier consultation in the Broadland and Thetford planning strategies” (HP2).

“PCTs usually drive HIA but there are not many champions for it. With the recently proposed budget cuts, resources available for promoting HIA and involvement in planning maybe diverted towards the actual treatment of ill health” (C1).

It was believed by some respondents that a lack of understanding with regards to the planning process was to blame for poor consultation practices;

“Health authorities are less well versed in the planning process” (HP3).

“Health authorities are not clued up on the timeframe and the process of planning” (C4).

These statements suggest health authorities need to be more aware of the planning processes that an SEA/SA report applies to if they are to be effectively involved. If health authorities have an understanding of the planning and SEA/SA process, they can provide relevant information at an early stage. This will enable them to have a greater influence on the final outcome of the PPP.

“There is a lack of an institutional links, as PCTs are set to be abolished any established relationships [between planners and PCTs] are under threat. There are big questions over the future structure and organization of local health authorities” (C4).
These statements are consistent with previous literature which states health authorities sometimes lack the capacity to be fully involved in the planning process (Bonvoisin et al., 2007, Nowacki et al., 2009). Other respondents stated limitations in the SEA/SA process itself as reasons why consultation may not be carried out appropriately. It was felt by some respondents that a lack of consistency was a problem;

“There are not statutory consultees for health and therefore health authorities are consulted as good practice. However this creates a huge variability in how consultation takes place due to no legal framework” (HP1).

“There are variations between areas in terms of engagement between public health authorities and local planning authorities” (HP3).

This suggests a need for consultation with a relevant, specified health authority in order to make it clear to both health authorities and planners where their responsibilities to each other lie.

4.1.3 - Opportunities

Some respondents provided examples of opportunities that they believe improve the links between health authorities and planners therefore improving the consultation process. One respondent stated;

“Consultation through integrated assessment allows for the opportunity to raise issues but not to promote health of mitigation, HIA is a wider process with a greater capacity for participation” (HP1).

This health professional therefore believes that carrying out a separate HIA is more effective in promoting public health and mitigation strategies than integrating health considerations in the SEA/SA process. Another respondent also agreed a separate HIA enables the consideration of mitigation strategies, however its influence on design is dependent on when it is carried out;

“The late introduction of HIA in the planning process has little influence over the design, but can provide mitigation ideas” (C1).
An initiative was recommended by a health professional to improve the effectiveness of communication between actors involved in planning and public health;

“The idea of joint team planners brings together forward planners for public health, developers and those from relevant voluntary sectors. It allows for capacity building and creates a formal situation for communication between groups. There is a need for a shared language and understanding” (HP1).

Such an initiative provides the opportunity for stakeholders in the SEA/SA process to come together in a structured environment and discuss specific subjects and communicate their own objectives. It may also allow for groups to ask questions and address gaps in their knowledge, for example health authorities may be able to gain a better understanding of the planning process. The lack of understanding between health authorities and planners will be discussed further in section 5.1. One respondent gave an example of engagement at the higher level of health authorities which can provide an opportunity for improved consultation;

“In the South West [of England] the regional director for public health has been particularly proactive in looking at health issues and the environment and encouraging links between the two, however his position is currently under review” (C4).

If directors have a comprehensive understanding of the links between planning and public health, they may be more likely to promote capacity building to enable health authorities to be effectively involved in SEA/SA. This kind of top down approach could be used to create prominent HIA champions, which was an issue raised by respondent C1.

4.1.4- Recommendations

Some respondents gave recommendations as to how consultation with relevant health authorities should be carried out in order to gain the most out of their expertise and therefore enable the more effective consideration of health issues in SEA/SA.
“PCTs have their own health issues and objectives and should therefore be engaged from the start [of the SEA/SA process] as to what they want, it maybe the case they recommend a separate HIA to take place” (C1).

This statement above highlights the need for consultation at the scoping stage in order to incorporate the specific concerns of health authorities and in particular PCTs. In the case of the Norfolk Local Transport Strategy (NLTS) SEA, consultation with health professionals actually prompted a second scoping round based on the recommendations made on what should be included with regards to health issues. Early consultation with relevant health authorities was thought to be needed in order to effectively influence the final outcomes of a PPP.

“Consultation with PCTs is also needed to supplement statistics in order to balance the public – private relationship during development, planners and local authorities need to appear to be impartial to private developers to gain public trust” (C1).

It is in the interest of developers and planners to appear impartial in order to maintain good public opinion; therefore they should be encouraged to see health as a high priority. Communicating the benefits of consultation to planners and those carrying out SEA/SA may encourage them to create and improve communication pathways with relevant health authorities. An example given by the respondent was that of waste incineration. Perceived health issues associated with such a development are of particular concern to the general public and there has been opposition against their development by some communities. Consultation with health authorities with regards to design and mitigation measures may reduce fear or uncertainty felt by the community and consequently reduce opposition. It is possible that more time and resources will be allocated to the consideration of health in the planning process if the incentive to do so is understood by planners and developers.

The UNECE Protocol on SEA resource manual (2007) highlights the need for information sharing between planners and health authorities in order for those carrying out SEA to develop an in depth understanding of health determinants. The guidance also recommends that health authorities that should be consulted, however as the Protocol applies to a number of plans and policies across a variety of European countries it is somewhat vague. One respondent commented;
“Consultation with health professionals should be made a requirement as the upcoming budget cuts will mean more SEAs will be carried out internally” (P1).

This suggests planners may need more specific guidance with regards to identifying health authorities that are relevant to the proposed PPP that is being assessed.

4.2 – Wider determinants of health

The scoping stage and the determinants of health that should be included in an SEA/SA report was an area of slight contention between some respondents. It is however an extremely important stage of SEA and SA as it ultimately determines the aspects of health that will be more closely investigated.

4.2.1 - Limitations

Some respondents believed that the current scope of determinants of health considered in the SEA/SA process is too limited;

“Wider determinants of health should be considered, i.e. housing. There is a need for planners to look past the obvious” (HP1).

“Wider determinants of health should be looked at, for example, housing and green space. The outer circles [see figure 3, pg 12] are more relevant to planning” (C5).

These statements coincide with the literature outlined previously in this report. For example aspects such as transport provisions (Frumkin et al., 2004), housing (Krieger and Higgins, 2002), and noise (Staples, 1997) have all be found to impact upon health and well-being. It is therefore appropriate for these aspects to be considered in SEA/SA. It was suggested however in the previous statements that planners are not fully aware of the potential impacts such wider determinants can have on health and have therefore not always been fully considered.

Lack of knowledge and experience with regards to health issues was stated as a limitation to the appropriate consideration of health in SEA/SA. It was identified that environmental consultants and planners sometimes do not have sufficient expertise and background knowledge of health issues needed to fully address them. One respondent stated;
“There is a lack of SEA experts who also have specific health knowledge and consequently it [incorporation of health issues in SEA] hasn’t been dealt with well in the past, therefore there is a need for more expertise in the area” (C1).

“There is a need to build capacity; planners generally don’t understand the wider determinants of health” (HP1).

Again it has been highlighted that an incomplete understanding of health issues and their causes can be a limiting factor in achieving good practice. Although some respondents focused on the importance of incorporating wider determinants of health, others stated the importance of including health issues that are relevant to the PPP;

“For health issues to be relevant and useful, health aspects that will be influenced by the plan or programme need to be identified, i.e. a transport strategy’s influence on air quality or active transport. The question needs to be asked – will there be a change in the baseline due to the proposed project or plan, i.e. in mortality and morbidity data?” (C3).

“Specific health aspects need to be targeted that are relevant. Planners need the confidence to be direct and only incorporate significant issues” (C4).

Due to the complex nature of determinants of health with regards to the environment, it could be argued that this point of view is too simplistic to create valid and reliable outcomes in an SEA/SA report. It also is the case however, that in practice there are a number of time and resource limitations that will restrict the scope of the assessment and therefore it is important to identify those determinants of health that are most relevant to the specific PPP. This will direct resources towards the determinants that may potentially have the greatest impact and also those that can be influenced by the alternative courses of action available to decision makers.

4.2.2 - Recommendations

It was recommended that the NHS provide clear guidelines as to the aspects of health that should be incorporated in the SEA/SA process;
“The NHS should compile a checklist of its main priorities, this may lead to a loss in richness but it would focus assessment along with the minds of the planners and PCTs” (C4).

“There is a need for a more holistic NHS definition of health that can be used as a standard” (P1).

“Health Authorities need to be clear on their health objectives for specific communities” (HP2).

A standardised NHS definition of health could be useful to planners as the UNECE SEA Protocol resource manual(2007) does not give an explicit definition of health, rather it states that health issues relevant to the plan or program need to be identified and considered through consultation with relevant health authorities. The DH guidance on health and SEA does however make reference to the WHO (1946) definition as stated on page 6 of this report. The idea of a checklist approach to assessing determinants of health does have advantages and disadvantages as mentioned in the statement. It could however be used as a starting point for planners who may not have a great amount of experience with health issues. Providing a list of health issues that are seen as a priority by the NHS and also the DH, may enable planners to begin to consider how the proposed PPP will impact on health from the start of the SEA/SA process. It is important to remember the findings with regards to health issues will ultimately be presented to decision makers who will require clear and relevant information, which will be discussed further in the next section.

4.3 - Communication of health issues to decision makers

When questioned about communicating health issues to decision makers, respondents appeared to have mixed experiences and opinions. This is an important aspect of incorporating health in to the planning process as it ultimately determines whether the final course of action taken will protect and promote public health.

4.3.1 - Limitations
Some respondents identified particular limitations of this stage, one of them being that consultants and planners lack the capacity to effectively communicate health issues;

“Discussion with decision makers can be done throughout the process but it can be difficult to communicate health issues as SEA/SA tends to be carried out through environmental consultants” (HP3).

“There is a problem of environmental consultants lacking the knowledge and experience of health issues to accurately communicate them, i.e. they are less eloquent” (C3).

“Health needs to be articulated on the same par as environmental issues” (HP1).

These statements suggest that those communicating the influence of a proposed PPP on public health lack an in depth knowledge of these issues. For decision makers to understand the link between development plans and health they need to be accurately informed. If health issues are not communicated in a sufficient and knowledgeable way there is the possibility of that they will not be considered as important as other aspects of the SEA/SA i.e. economic and environmental. In which case the course of action decided upon may not protect and promote public health as well as it could have done. One respondent noted a particular problem when communicating health issues to decision makers;

“There is the issue of promoting physical benefits to health, i.e. more opportunities for active transport, but these need to be related to the actual health benefits, i.e. reducing obesity” (HP2).

In this case it is the issue of making the connection between recommendations of strategies for promoting health and the actual health benefits they will create for a population. If decision makers are clear about such relationships, it is possible they will be more likely to fully consider them when deciding on the final alternative that will be implemented.

4.3.2 - Opportunities
A respondent from a consultancy identified the requirements and objectives of decision makers;

“Decision makers firstly want to know if they adhere to legislation. However the consideration of health can help push alternatives due to their focus being on socio-economic issues” (C3).

Decision makers may tend to have a focus on socio-economic issues; however this covers a wide variety of aspects. It was found by one respondent that other socio-economic considerations can take preference over health issues;

“When sitting in meetings with decision makers I have sometimes found they show a polite interest in health issues, but ultimately we do not get anywhere, EqIA [Equality Impact Assessment] tends to get more of a response due to the legal requirements to address equity issues” (C4).

Decision makers may be more receptive to considering health issues if they are fully aware of the benefits of doing so. As mentioned previously by respondent C1, consultation with relevant health authorities can provide justification for a certain course of action and inspire public confidence. This statement again highlights the importance of providing concise information to decision makers;

“Decision makers were more receptive to health issues if they had good background information” (P2).

It was found by one respondent that the previous relationship between those carrying out the SEA/SA and decision makers was important to how the findings in the report with regards to health were taken on board;

“The internal existing relationship meant findings were better received than they possibly would have been if it were carried out by an external consultant. Health issues were seen as important and decision makers wanted to know more about them” (P1).

In this situation there was a close relationship between the planners and decision makers and therefore the findings with regards to health issues were more fully considered. For health issues to be effectively communicated and therefore fully
considered by decision makers it is important to establish a relationship that is open and creates an atmosphere of trust. It is also important for those who are communicating the information to be knowledgeable about the health issues they are addressing. They need to fully comprehend how aspects of the PPP have the potential to impact on public health in order to provide justification to decision makers with regards to mitigation measures and initiatives to promote good health and well-being. It needs to be made clear to decision makers why a certain alternative is preferable over another in terms of health considerations in order for them to come to an informed and appropriate decision.

4.4 - Inequalities in health and deprivation

Health inequalities are a significant issue for health authorities in the UK (DH 2008) therefore respondents were asked how they consider inequalities in the SEA/SA process.

4.4.1 - Limitations
One respondent identified the need for qualitative data to be used in order to fully consider issues with inequalities in health;

“Due to SEA/SA being performance driven, unquantifiable measures can be left out. It is not just a case of identifying deprivation hotspots” (HP1).

This suggests there is a problem with incorporating inequality issues in to the format of SEA/SA. Factors that influence deprivation and inequalities in health are varied and will therefore require a certain level of resources in order to consider and address them, one respondent stated the resources used in flood management SEA;

“Vulnerability to flooding was a primary concern. We used the Index of Multiple Deprivation and an in house team of experts to try and address this, however this is such a wide topic it is easy to get lost in it” (C5).
This statement again highlights the broad scope of health inequalities and the difficulty involved in incorporating them in SEA/SA. One respondent also stated the importance of considering health inequalities in SEA/SA and therefore addressing them through planning and development;

“Health inequalities were found to be significant; therefore reducing overall inequalities in the population was a main objective of the strategy so it was incorporated in each alternative” (P1).

4.4.2 - Recommendations
A number of respondents stated ways in which inequalities in health should be considered in SEA/SA. It was noted that areas of deprivation should be prioritised in the planning process.

“Health inequalities are a major issue, the scale of change [resulting from the PPP] can be dependent on sensitive receptors. There must be a focus on not widening inequalities. Areas of deprivation should be identified and improved over wealthy areas, for example, improving accessibility to employment and amenities in deprived areas through a Local Transport Strategy” (C3).

This statement relates to the existing literature (Stafford and Marmot, 2003), as it acknowledges the dependency of a population on the amenities in their area. It is not merely a case of improving access to health care if their health declines. Improving their standard of living, whether that is through increasing employment opportunities or promoting healthy eating strategies. Vulnerable members of society need to be identified in order to increase their capacity and opportunity to improve their health and well being. One respondent emphasised the need for wider determinants of health inequalities to be considered;

“Assumptions should not be made about what planners understand about equality,
social determinants of health need to be explained in a qualitative way. They [those carrying out SEA/SA] need to move out of their comfort zone to determine health inequalities and decrease the angle of the social gradient” (HP1).

Here it is suggested that it is the responsibility of planners and those carrying out SEA/SA to go beyond the obvious determinants of health inequalities in order to devise alternatives that will actually result in reducing them and benefit the most marginalised groups in society. It was noted however that there are factors that can hinder groups in deprived areas from engaging in initiatives that are designed to improve their health and well-being;

“Deprived areas are less receptive to change than wealthy areas therefore socio-economic considerations that create barriers and opportunities need to be taken into account” (HP2).

It may be the case that initiatives such as provisions for active transport or green space are actually used more by those from wealthy areas. In this case those who are more likely to enjoy a good level of health and well-being will gain the benefits, further increasing health inequalities. It is therefore necessary for planners to also consider the socio-economic factors that can influence participation in strategies to reduce inequalities in health. At this point consultation with community groups from the identified deprived areas may enable such barriers to be overcome, as one respondent suggested;

“To address inequalities, academic evidence and stakeholder involvement should be used to determine how different groups of people will be affected” (C4).

The respondent makes reference to the use of academic evidence in addressing inequalities. Academic evidence is particularly useful to those carrying out SEA/SA who may lack experience with dealing with health inequality issues. For it to be effective however, planners will need to be aware of the scope of determinants of health inequalities as mentioned previously. One respondent recommended a procedural change in order to better address health inequalities;
“EqIA could possibly be aligned with HIA so they are considered together” (C4).

This idea could possibly streamline the inclusions of health inequality issues in the SEA/SA process and make it clearer to planners the importance of the issue. It could be argued however, that by incorporating EqIA in to HIA there would be a loss of detail and a possible reduction in the scope of determinants included.

The main issue raised by respondents with regards to the consideration of health inequalities is; the need for planners and those carrying out SEA/SA to be aware of the wider determinants of health inequalities. It is a complex topic that requires an in depth understanding for proposed strategies to be successful in reducing inequalities in health between deprived and wealthy areas. The social and economic factors that interact with each other to determine levels of deprivation can be understood if the resources and expertise are available to those carrying out SEA/SA.

4.5 - Resources

Respondents were asked to give their opinions on the resources available to help with the consideration of health issues in SEA/SA. Resources included guidance documents and data sources for determining baseline information and making impact predictions.

4.5.1 - Guidance documents

Some respondents felt the available guidance needed improving and made recommendations as to what is needed;

“It would be beneficial to have regional training events to promote the benefits and importance of incorporating health in SEA/SA” (P1).

The respondent highlights the need to promote the benefits of incorporating health in SEA/SA to planners. If this takes place, those carrying out SEA/SA can justify the use of resources in forming stronger relationships with health authorities. It may also encourage them to take the time to fully understand and incorporate the wider
determinants of health in the assessment. As mentioned previously, an in depth knowledge of health issues that may arise from a PPP is necessary when communicating the importance of findings to decision makers. The respondent was not aware of the HIA courses available to planners; this suggests further promotion of such events may be required in a way that targets planners and those carrying out SEA/SA.

“Guidance is sometimes conflicting on how best to incorporate health in to SEA, there is a need for consistency between different types of SEA projects, for example transport strategies, housing and core strategies” (C3).

“Planners require simple advice on cause and effect with regards to determinants of health, there is a need for clear and simple ideas” (P2).

There are separate guidance documents for SEA, SA, incorporating health in SEA and HIA (as mentioned previously in the literature review), deciding on which guidance to follow can be overwhelming for some planners, particularly those who have limited experience in carrying out SEA/SA and with health issues. There appears to be a need for a more consistent and streamlined system when producing guidance. A consistent approach to considering health in different types of SEA projects may reduce variability in good practice. It could be argued however, that this approach would limit the consideration of health determinants and causal pathways specific to a type of plan.

4.5.2 – Data sources for determining the baseline and impact prediction

Reliable and valid data sources are important for those carrying out SEA/SA in determining a baseline for the health of a population that will potentially be affected by the PPP. The baseline will ultimately be used as a benchmark to measure changes in health due to the implantation of potential alternatives. One respondent noted a problem with compiling health data;

“The area of the plan incorporated parts of different districts, so health data was hard to combine” (P1).
A number of respondents recommended data sources they had found to be useful to determine the baseline and for predicting health impacts;

“NICE and the Kings Fund provide a framework however, it is useful to firstly look at relevant policies first and then data sources, for example critical thresholds. It is important to establish and summarise existing research” (HP2).

“Information on the local profile of an area can be found on the DH website. Census and Joint Strategic Needs Assessment (JSNA) data can also be used to establish the baseline. Impact predictions can be more difficult to determine and therefore qualitative information maybe required” (C4).

These statements both make reference to the importance of using existing literature to understand determinants of health and how they may be influenced by the PPP. The two respondents below had different experiences in accessing such data;

“Health observatories can be used for baseline data, the CABE report, Health and the Built Environment is also a useful resource. I haven’t found any particular problems in accessing health data” (C5).

“Data for the baseline came from, NHS Norfolk JSNA, NHS East of England, census data and The Kings Fund, however these were hard to access without consultation” (P1).

“Some local authorities lack the confidence to ask for help, no one wants to be seen as not knowing what to do” (C1).

It would appear that some planners need encouragement to carry out consultation with those with specific expertise. It was found by Nowacki et. al. (2009), that relevant and reliable resources for health data were often hard to obtain. In the case of this study adequate data sources were found to be available, however there is an issue
of them not being readily accessible to planners, particularly those with limited experience.

It could therefore be suggested that some planners require help and guidance when determining which data sources are appropriate for coming up with a baseline and determining impact predictions. This could be due to lack of experience and further stresses the importance of consultation with those from relevant health authorities and consultants with a specific knowledge of health issues. Limited experience in incorporating health into SEA/SA can obviously be overcome through an increased involvement in the process.

The respondent above (P1) also commented on how the experience gained from carrying out in their first transport strategy SEA report, made it easier for them to consider health in issues in a subsequent transport plan SA report.

5 - Conclusions

5.1 - Significant general themes

5.1.1 – Change in government: reorganization and budget cuts

An issue that was raised in a number of interviews (C4, C1, P1, HP1, C2, HP3) was the recent change in government and how this will impact on the consideration of health SEA/SA. The abolishment of RSSs and organizational changes to health authorities are likely to impact upon any relationships that have been formed between planning and health authorities. It has been said that the new government wishes give local authorities more power with regards to decisions over planning. At the present time there is a level of uncertainty as to what will happen in the future and who will be responsible for carrying out SEA and SA. As stated by respondent HP2, a change in the organisation of local health authorities prevented them from being consulted at the start of an SEA for a housing development. This was also found to be the case in the Scott Wilson report (2010)

There is also the issue of proposed budget cuts to public sectors. This may reduce
health authorities’ ability to increase their capacity in order to be effectively encourage health prevention and promotion through SEA/SA. As mentioned by respondent P1, budget reductions could increase the number of SEA/SA reports carried out internally rather that by contracted consultants. There are potential benefits to this situation as it was found that existing relationships between those carrying out SEA/SA and decision makers encouraged health issues to be seen as a high priority and recommendations for mitigation to be taken on board. If more SEA/SA reports are carried out internally it is important that the guidance available for planners with regards to the consideration of health is accessible, coherent and non-conflicting.

5.1.2 – Lack of understanding between planners and health authorities

It is clear from the statements made by respondents (HP3, HP2, C4, C5 and C3) that there is a significant lack of understanding between health authorities and those involved in the planning process and RAs. Planners generally do not have the sufficient in depth knowledge of health issues to understand the complex interactions between them and the environment. This lack of understanding has a number of implications; firstly it makes it difficult for them to identify a wide scope of possible determinants of health that relate to a particular PPP, the scope of the determinants included and the accuracy of the impact prediction will ultimately determine the mitigation strategies put forward. It will also influence how highly health is prioritised over other social, economic and environmental factors.

It has also been suggested that an incomplete understanding of health issues has lead to the poor communication of them to decision makers. If decision makers are to view health prevention and promotion as a top priority, they need to be sufficiently informed. The same can also be said for health authorities. It appears they lack an understanding of the planning process and how they fit in SEA and SA. A better understanding would enable health authorities to provide information and guidance that is relevant to planners and can therefore be incorporated in an SEA/SA report. It
also would encourage them to become involved earlier on in the planning process, in which case they will have a stronger influence on the final outcome. Health experts need to be equipped with the information, tools and arguments to make the health in SEA case to others (Nowacki et al., 2009).

5.1.3 – Integrated approach vs. separate HIA

The merits of a separate HIA were discussed by some respondents (C3, PH1, C1 and C4). Carrying out a separate HIA gives more weight to health issues and when evaluating them on in the same context as environmental and economic considerations. Respondent C3 stated Merseyside as a good example of where health has been seen as a high priority and the LTS was subjected to a separate HIA. In some cases it may not be feasible to carry out a separate HIA due to time and resource constraints and as HIA is not a legal requirement it may not be seen as necessary.

5.2 - Recommendations

5.2.1 - Promote the benefits of incorporating health issues in SEA/SA

If good practice is to be achieved in incorporating health issues in SEA/SA, all actors must be aware of its importance and the benefits of doing so. Health authorities need to be aware of the benefits of being involved in SEA and SA. Preventing ill health and promoting good health and well-being through planning has the potential to reduce the cost and burden of preventable diseases such as obesity and respiratory diseases. Planners and decision makers also need to be aware of the importance of the sufficient consideration of health in strategic planning. It provides justification to other stakeholders for choosing a particular alternative. It can be used as evidence to reassure the public that a particular PPP will not be detrimental to their health.

5.2.2 - Develop institutional links between planning and health authorities
Although the current reorganization of health and planning authorities would make developing links difficult at the present time, it could also be seen as an opportunity. New systems could be used to promote the benefits of developing relationships between planning and health authorities. The findings from this research suggest the NHS needs to play a stronger leading role promoting good health and well-being through planning. It could therefore be recommended that the NHS explicitly state their requirements for SEA and SA. Planners need to be aware of where they can go for advice and which health authorities are relevant to their PPP. The idea of joint team planners put forward but one respondent could be used as a template for facilitating communication between planning and health authorities.

5.2.3 - Encourage the development of experts with an in depth understanding of health and SEA/SA

Due to the gap in understanding between health and planning authorities it would be beneficial to both sides to have access to experts that have a specialist understanding of both subjects and how they interrelate to each other. Such experts could encourage communication between the two groups. This could be done through specific training courses or possibly at degree level.

5.2.4 – Increase the constancy and accessibility of guidance

Planners need to have access to guidance that provides specific advice on the types of health authorities they should be consulting with and where to access health data and information that is specific to the type of PPP that is being subjected to SEA/SA. Resources such as the HIA gateway website and the DH Draft Guidance (2008) document require further promotion to planners in order for them to fully utilise the information and advice available to them.

5.3 – What makes a good case study example?

Taking in to account all the information gathered in this study it is possible to compile a list of factors that constitutes a good example of integrating health in SEA;
1. Early consultation with relevant health authorities that have a specific and in depth understanding of the health needs of the population affected by the proposed PPP.

2. Those carrying out the SEA are aware of the existing health targets and objectives of relevant health authorities.

3. The SEA/SA team includes at least one member with a clear understanding of the wider determinants of health and the SEA/SA process itself.

4. All stakeholders involved in the SEA/SA report are aware of the importance and benefits of considering health issues.

5. All stakeholders involved have an understanding of the wider determinants of health and health inequalities.

6. Existing relationships between all stakeholders provide effective channels for communication and facilitates an increased understanding of health issues.

7. The final outcome of the PPP prevents negative health impacts and provides opportunities for health promotion.

5.4 - Evaluation of the methodology

The sampling strategy changed from that stated in the methodology as many of the interviewees were contacted on the recommendation of initial respondents. Such a case is often referred to as snowball sampling. This enabled a variety of experts from both health and planning backgrounds to be contacted, some of which may not have been as easily accessible without recommendation. However recommendation can increase bias and limit the representation of case studies in terms of location and planning level (i.e. regional or local). A further limitation was that some interviewees did not have specific knowledge on certain aspects of the SEA/SA they were involved with. Many of the experts had worked on a number of SEA/SA projects and therefore more general information was gathered than specific to an individual SEA/SA case study.
The response rate limited the sample size of the study somewhat. Only two of the ten respondents were planners, therefore reducing the variety of stakeholders that were included. A higher response rate would have improved the validity of the findings and a higher proportion of planners would have increased the degree to which objectives A, B and C were met. Actually recording information and statements from the interviews was an unforeseen problem. Shorthand notes were used, however the context of some statements were not completely clear and therefore not reliable enough to include in the analysis section of this study.

5.5 - Were the research objectives met? (Table 3)

<table>
<thead>
<tr>
<th>Objective</th>
<th>Limitations of the recording method reduced the amount of useable data that could be included in the analysis. The respondents did however, provide information on what they believed to be the practical implications they had experienced when considering health in SEA/SA. It can therefore be said the objective was met.</th>
</tr>
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<tbody>
<tr>
<td>A – Develop understanding of the practical implications of incorporating health in SEA/SA in England</td>
<td>Limitations of the recording method reduced the amount of useable data that could be included in the analysis. The respondents did however, provide information on what they believed to be the practical implications they had experienced when considering health in SEA/SA. It can therefore be said the objective was met.</td>
</tr>
<tr>
<td>B – Obtain the views and opinions of different groups of stakeholders involved in considering health in SEA/SA, i.e. planners, consultants and health professionals</td>
<td>All stakeholders stated in the objective were however included in the study. It can therefore be said that the objective was met to some degree. This could have been improved with a larger sample size and a higher proportion of planners included.</td>
</tr>
<tr>
<td>C – Identify the limitations and opportunities that influence the key aspects of the consideration of health in</td>
<td>Limitations and opportunities were identified through reviewing the literature and the interview process, therefore the objective was met. This could have been improved with a larger sample</td>
</tr>
</tbody>
</table>
5.6 – Opportunity for further study

5.6.1 – How will future changes in health and planning authorities in England affect the consideration of health in SEA/SA?

As the way planning decisions are made in England is changing there is a need for further research in to how this will impact on the relationships between planning and health authorities and consequently the implications this will have on the consideration of health issues in SEA/SA. As changes become more apparent, the opportunity for further research on this topic will increase. If health and well-being are to be protected and improved through spatial planning in the future, it will be necessary for these changes to be understood by all stakeholders.

5.6.2 – What are the benefits and limitations of carrying out a separate HIA?

A number of respondents commented on the benefits of carrying out a separate HIA alongside the SEA/SA report. As HIA is not a legal requirement it is not always carried out. With the proposed budget cuts to private sectors it may be useful to further the benefits and costs incurred from carrying out a separate HIA. Such
research could be useful to planners when they are deciding how to approach a SEA/SA report.

5.7 – Concluding Statement

The findings of this study are consistent with those of existing literature, however the issues of a change in government in England and its potential impact on the consideration of health in SEA/SA is a recent occurrence and therefore requires further investigation.

The effective consideration of health issues in SEA/SA is central to preventing adverse health impacts from potential PPPs and also in promoting good health through intelligent and innovative planning. By identifying the limitations and barriers to achieving good practice in this area, health issues can be better understood and considered. The effective application SEA and SA can provide information to enable us to create sustainable communities where a high level of health and well-being are enjoyed by all. This study has looked to contribute in some way to achieving such a goal.
Reference List

Journal Articles


Documents from websites


http://tommarch.com/consulting/big_ideas/change.php. Last cited: 02/07/10


Annex 1 - Reviewing the integration of health in SEA: Interview questions

Qs 1) How many full/part time team members were involved in the SEA/SA process and what professional backgrounds were they from?

Qs 2) Overall how long did the SEA/SA report take to complete?

QS 3) Were any guidelines used to carry out the SEA/SA report, if so do they make any reference to health?

Qs 4) What data sources were used to determine the baseline health status of the population affected by the strategy?

Qs 5) Were any particular existing health issues specific to the local population identified which maybe affected by the Strategy?

Qs 6) What sources of information were used to identify potentially significant health impacts? Do you feel the information available to you was sufficient in making accurate predictions?

Qs 7) Was the effect of the strategy on health inequalities considered. If so how?

Qs8) How were health issues communicated to decision makers? Were there any difficulties involved with this?

Qs 9) Did the local PCt or any other health authorities consulted? If so, at what stages and how?

Qs10) Do you feel any changes in the final strategy were made as a result of the SEA/SA
process? Were any of these particularly relevant to health?

Qs 11) Were there any conflicts between other sustainability objectives and health issues?

Qs 12) Overall what were the main difficulties and limitations in incorporating health issues in the SEA?

Qs 13) How do you think health issues could be better considered in the SEA process?