RESPIRATORY DISEASE

Short-term exposure to respirable particles (PM_{10}) in urban areas increases deaths and respiratory and cardiovascular hospital admissions. The primary source of PM_{10} in urban areas is motor traffic. Nitrogen dioxide modifies the effect of PM_{10} such that daily mortality increases further when high long-term concentrations of PM_{10} are in combination with nitrogen dioxide. Nitrogen dioxide is also produced by motor vehicle exhausts.

Increases in ozone also lead to increases in deaths and respiratory hospital admissions. Ozone is created by the action of sunlight on nitrogen dioxide in the presence of volatile organic compounds (VOCs). Artificial sources of VOCs include cleaning solvents and some constituents of petroleum fuels.

Spatial planning can modify the total volume of traffic as well as congestion of traffic at certain locations, thereby reducing air pollution.

There is evidence that residents are more likely to report exacerbations of asthma, coughs and respiratory infections following exposure to flooding. Avoiding development in areas at risk of flooding or designing site layout and buildings to minimise flood risk may reduce flood-related respiratory infections.

Example strategic objective 3: Respiratory disease

To set a spatial planning framework for addressing Respiratory disease in the borough. This will be achieved by:

1. Reducing the need to and length of travel and promote a sustainable transport system.

2. Integrating sustainable modes of transport to access and move around new developments.

Example policy 3: Respiratory disease

The borough will aim to reduce the incidence of respiratory disease by tackling air pollution from road traffic emissions by encouraging the use of more sustainable modes of transport. This will also help reduce the number of cardiovascular hospital admissions related to air pollution.

4.2 GOOD PRACTICE HEALTH POLICY WORDING

Road traffic emissions

The borough will develop and promote a high quality and sustainable transport system and will reduce the need to and length of travel through spatial planning and design, including:

- Improving accessibility. New development which generates significant demand for travel should be provided in locations well served by a variety of modes of travel, including public transport. Higher densities of development will be required near to public transport interchanges.
- Safeguarding land for strategic public transport infrastructure. Land to be safeguarded will be identified in Area Action Plans and the Site Allocations Development Plan Documents.
- Promoting walking and cycling. Development of a network of safe walking and cycling will be promoted, connecting transport interchanges, and linking communities, services, facilities and recreation areas. Minimum cycle parking standards will be applied to ensure that new development provides adequate provision for cycling as a sustainable mode of transport.
- Promoting water transport. Development of new water transport infrastructure will be supported.
- Demand management. Development proposals will be assessed in relation to car parking standards set by the borough. These will set a maximum level of provision for different types of proposal.

Proposals for new development that generates frequent trips to and from a site must include provision for sustainable forms of transport to access the site, and within the development. Where provision is required, measures must be incorporated as an integral part of the design of all development proposals, and should include where appropriate:

- Footpaths and cycleways linked to the wider green network;
- Safe provision for cycle parking and cycle shelters;
- Bus stops/shelters and live transport information;
- Support for sustainable forms of transport, e.g. community transport schemes;
- Preparation and implementation of Green Travel Plans for major developments which consider and promote alternatives to car use; and
- Minimal levels of car parking, commensurate with road safety, the reduction of congestion, and the availability of alternative means of transport.

Flooding

The borough will follow the requirements set out in **Example policy 1: Mental health** in designing to avoid flooding.

EXCESS WINTER (COLD) AND SUMMER (HEAT) MORTALITY

In England approximately a third of excess deaths in winter (18 excess deaths per 100,000 adults) are related to low indoor temperatures and 90% of these occur in those more than 65 years of age. Three thousand pensioners in London died in winter 2006 of cold related illnesses. Poor home insulation and fuel poverty contribute to the problem.

Measures can be incorporated into building design to improve insulation and maximise the heat retained through solar gain.

Urban areas generate a 'heat island' effect and London can be up to 8% warmer than rural areas and night temperatures in the city can remain above 19°C. Mortality increases in hot weather and elderly people are particularly vulnerable; in the 1995 heatwave in London there was a 16% excess in deaths for all ages and those aged over 85 had a 20% excess mortality. Climate change will further exacerbate this problem.

Measures can be incorporated into the layout of development and buildings to reduce overheating and hence the likelihood of heat mortality.

Example strategic objective 4: Excess winter (cold) and summer (heat) mortality

To set a spatial planning framework to reduce the incidence of winter and summer related mortalities:

1. Ensure that site layout and the design of buildings adapts to and mitigates for the effects of climate change.

2. Ensure that improvements are made to existing housing stock to reduce winter mortality.

4.2 GOOD PRACTICE HEALTH POLICY WORDING

Example policy 4: Excess winter (cold) and summer (heat) mortality

Excess winter (cold) mortality

The borough will identify areas where winter mortality and/or levels of cold-related illness are highest. This will provide a means to prioritise regeneration schemes and/or housing improvements.

Boroughs will seek to ensure that regeneration schemes and/or housing improvements maximise internal insulation and opportunity for solar gain.

Excess summer (heat) mortality

Boroughs will identify existing areas where retrofitting climate change adaptation measures should be prioritised.

The borough will ensure that new developments and regeneration schemes adapt to and mitigate for the effects of climate change, in particular over-heating.

Support will be given to proposals which:

- Maximise opportunities for natural ventilation in buildings.
- Maximise areas of exposed thermal mass in buildings.
- Incorporate adequate shading.
- Incorporate heat-absorbing plant species e.g. through green roofs, gardens etc.
- Ensure landscaping takes account of hotter, drier summers.

Principles set out in **Example policy 7: Designing for health** should be adhered to when designing and determining planning applications.

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INJURIES

Injuries account for 3% of annual deaths in the UK and were ranked the 14th leading cause of death in 2004. Injury is the greatest threat to life in children and young people (road traffic accidents cause the most deaths). Road Traffic Accidents (RTAs) show substantial inequalities between groups of differing social class.

In London, RTAs disproportionately affect pedestrians. Inequalities exist between differing socio-economic and ethnic groups.

Department for Transport statistics for the Metropolitan Police Force Area in 2006 reported a total of 29,775 road casualties, of which 226 were fatalities. The cost burden of every fatality in London is £1.4 million.

Injuries can also occur during or following flood events. Injury rates associated with flooding are in the order of 0.4%.

Annually, injuries lead to 720,000 admissions to hospital and 6 million emergency department visits.

There is good evidence that area-wide traffic calming reduces child pedestrian injury rates and also reduces the differential in rates based on inequalities in social groups.

Minimising flood risk may help reduce the incidence of injuries arising from flooding.

Example strategic objective 5: Injuries

To set a spatial planning framework to address rates of road traffic injury and avoid the risk of injury from flooding within the borough. This will be achieved by:

1. Encouraging development and regeneration schemes which minimise dependence on the car.
2. Encourage developments and regeneration schemes which promote greater road safety and reduce vehicle speeds.
3. Designing site layout and buildings to minimise flood risk.

4.2 GOOD PRACTICE HEALTH POLICY WORDING

Example policy 5: Injuries

The borough will aim to reduce RTAs (and inequalities between different social groups) by encouraging developments and regeneration schemes which minimise dependence on the car, promote greater road safety and reduce vehicle speeds.

Minimising flood risk may help reduce the incidence of injuries arising from flooding.

Road Safety

The borough will identify areas where rates of pedestrian injuries are highest. Road safety measures should be targeted in these areas.

Support will given for new developments and regeneration schemes which:

- Maximise road safety through the provision of:
  - Traffic management/calming measures
  - Homezones
  - Speed limits and road signage
  - Safe walking and cycling routes linked to the wider green network
- Reduce dependence on the car e.g. by locating in areas accessible by walking and cycling and well served by public transport.

Designing to avoid flooding

All those proposing new development and regeneration schemes will aim to avoid areas at risk of flooding or areas likely to increase the risk of flooding elsewhere.

If new development or regeneration schemes are in areas at risk of flooding appropriate design will help to reduce the likelihood of exposure to flood events and hence injuries. This may include the design of functional parts of properties above the likely flood level.

HEALTHCARE PROVISION

Improvements in health and wellbeing will be achieved through the safeguarding and enhancement of existing healthcare facilities and the creation of new facilities (healthcare facilities are taken to include hospitals, primary healthcare centres, GP practices and dentists).

In order to meet the demands of an increasing population and to identify areas of deficiency, an assessment will be undertaken of local healthcare infrastructure to identify locations for new facilities. This assessment will be based on a robust methodology, which takes account of local context, population and access to healthcare facilities. Access to facilities is a key factor in health status; high transport costs may prohibit certain socio-economic and ethnic groups from accessing facilities. Appropriate models to assist this process include the Social Infrastructure Framework (SIF) Toolkit [see http://www.healthyurbandevelopment.nhs.uk/pages/integrating_social_infrastructure/social_infrastucture.htm]. New healthcare provision should focus on the delivery of high quality Primary Care services which are accessible to all sectors of the community.

PCTs should provide assistance in assessing the existing healthcare infrastructure of the borough and in providing recommendations on where new facilities should be located.

Example strategic objective 6: Healthcare provision

To set a spatial planning framework to support the appropriate provision of healthcare facilities by:

1. Protecting existing healthcare facilities in accordance with an appropriate assessment of need.
2. Supporting high quality appropriate new healthcare facilities in accordance with an appropriate assessment of need.

4.2 GOOD PRACTICE HEALTH POLICY WORDING

Example policy 6: Healthcare provision

New development and regeneration schemes will only be permitted if an appropriate assessment has been undertaken of local healthcare infrastructure needs.
Support will be given for new healthcare facilities which:

- Integrate health and leisure in one facility.
- Are accessible by walking and public transport and
- Are accessible to all sectors of the community.

The requirement for new healthcare facilities will be considered as part of proposals for large-scale residential sites.

Proposals involving the loss of health care facilities will only be permitted where adequate alternative provision is made to meet the needs of the community affected, resulting in high quality, accessible and locally appropriate facilities.

This policy will be implemented in the following ways:

- By working in partnership with the Health Authority, NHS and PCTs.
- Through identification of sites to support the implementation of the LIFT initiative, GP-led initiatives and others.
- Use of Planning Contributions to secure healthcare facilities as part of new development proposals and regeneration schemes.

Sites will be set out in [*a relevant*] Area Action Plan (AAP).

DESIGNING FOR HEALTH

Good design is a key component of promoting healthy outcomes and a firm aspiration of *[your]* borough.

More detailed guidance on design requirements will be contained in the Development Policies DPD. In addition, all those proposing development are advised to consult the Government guidance document *'By Design'* (the companion to PPS 1) and the Mayor's Sustainable Planning Guidance Documents *'Sustainable Design and Construction' and 'Housing'.*

The type of health impacts encountered will differ between development schemes. Therefore, the health impacts of development should be considered early on the design process (refer to **Example Policy 8: Health Impacts**).

Example strategic objective 7: Designing for health

To set a spatial planning framework to support the provision of well-designed developments that optimise healthy outcomes by:

1. Considering the health impacts of new developments and regeneration schemes through the design process.
2. Appropriately locating new developments.
3. Promoting high-quality development.
4. Ensuring provision for future management and maintenance of new development.
5. Monitoring the provision of well-designed developments.

Example policy 7: Designing for health

A design-led approach should be followed to optimise healthy outcomes in new developments and regeneration schemes. Support will be given for proposals that are consistent with the LDF's detailed design policies and meet all the principles for *'healthy design'* set out below.

Health impact

The health impacts of new development and regeneration schemes will be considered throughout the design process. Refer to: **Example policy 8: Health impacts.**

Location

- Development should be located in areas well served by public transport, in existing mixed use areas wherever possible and in areas with good access to social infrastructure and green/open spaces.
- Avoid developing in areas at risk of flooding or likely to increase the risk of flooding elsewhere.

4.2 GOOD PRACTICE HEALTH POLICY WORDING

Design Quality and type

- Safeguard, enhance and make provision for an adequate supply of social and community infrastructure which is accessible to all.
- Safeguard, enhance and make provision for an adequate supply of open and green spaces which is accessible to all.
- Provision should be made for walking and cycling, including the provision of footpath links, cycleways and cycle parking facilities.
- Provision for or enhancement of a mix of uses, including access to shops providing a range of food choices.
- Ensure high density housing in new and regeneration schemes:
  - (i) Is of a density appropriate to location, reflecting the Mayor's density Matrix.
  - (ii) Minimises high-rise deck-access buildings.
  - (iii) Minimises overlooking between properties.
  - (iv) Is a mix of household types and tenures.
  - (v) Is designed to avoid neighbour noise.
  - (vi) Includes escape facilities (e.g. green/open spaces, social & community infrastructure).
  - (vii) Includes provision for future management and maintenance.
- Adapt to and mitigate for the effects of climate change:
  - (ii) Maximise opportunities for natural ventilation in buildings.
  - (iii) Maximise areas of exposed thermal mass in buildings.
  - (iiii) Incorporate adequate shading.
  - (iv) Incorporate green roofs.
  - (v) Ensure landscaping takes account of hotter, drier summers.

Management and Maintenance

- Those proposing new developments and regeneration schemes will include provision for future management and maintenance.

Monitoring

- Boroughs will monitor new developments and regeneration schemes to ensure that the design principles proposed to achieve healthier outcomes have been delivered.
- Boroughs will monitor resident's self-rated health before and after the completion of regeneration schemes.

HEALTH IMPACTS

Regeneration and development proposals can have significant impacts on public health and health inequalities. Health impacts must be considered at the outset of all development proposals to ensure positive health outcomes and avoid health impacts.

Environmental Impact Assessment (EIA) is a well-established, statutory assessment process. Most developments in London will fall under Schedule 2 of the EIA Regulations, for which EIA is only required if a particular project is judged likely to give rise to 'significant' environmental effects. Schedule 4 of the EIA Directive sets out the list of information which should be included within an Environmental Statement. This includes *"...A description of the aspects of the environment likely to be significantly affected by the development, including,* **population**...*"*

EIA should be used to assess the effects (arising during both construction and operation) of development and regeneration schemes on population and human health. Planners should ensure that applicants have considered the likely public health effects of development during the **'Screening'** and **'Scoping'** phases of EIA.

Health Impact Assessment (HIA) is a tool to identify the likely public health impacts of developments and could be used to inform the identification of public health effects and the public health chapter of Environmental Statements. PCTs do not have a statutory role to play in EIA but can provide advice and guidance on health impacts during the **Screening** and **Scoping** phases and in the drafting health chapters in Environmental Statements. PCTs can also provide training in the use of HIA.

It is recognised that not all major developments will require EIA and HIA should be used to assess the health impacts of these.

Example strategic objective 8: Health impacts

To set a spatial planning framework to minimise the health impacts of new development by:

1. Requiring planners to work in partnership with health practitioners.
2. Considering the public health impacts of development as part of the EIA process.
3. Requiring major development proposals and regeneration schemes (which do not fall under the EIA Regulations) to be subject to an HIA.

4.2 GOOD PRACTICE HEALTH POLICY WORDING

Example policy 8: Health impacts

Planners will work in partnership with healthcare practitioners from the outset of development proposal formulation to ensure that health impacts and health opportunities are maximised in **all** new development and regeneration schemes.

EIA is a **statutory** requirement for certain types of projects. The public health effects of development **will** be considered as part of the EIA process. For example, planners **should** ensure that applicants have:

- Considered the likely public health effects during the Screening and Scoping of proposals.
- Incorporated a public health chapter within the Environmental Statement.

All major development proposals and regeneration schemes not subject to EIA will be accompanied by a HIA.

This policy will be implemented through the consideration of health within Screening and Scoping Opinions and Environmental Statements.

Box 4.5 Testing the 'soundness' of the Core Strategy in relation to policies[91]

In preparing policies, has the LPA:

- Provided a robust and credible evidence base from which to base their policies?
- Addressed specific health issues?
- Correctly and effectively set objectives for policies in line with SMART principles?
- Formulated policies which can deliver the proposed objectives?
- Set mechanisms for implementing and monitoring the policies?

4.2.4 How to be locally distinctive

The policy framework presented above should be tailored to local circumstances. The box below provides a series of questions to help formulate locally distinctive policies for health.

How to be locally distinctive in relation to health

- What are the major health issues affecting the borough?
- Are there ward level differences in the extent to which health effects are experienced?
- Can these differences be teased out further e.g. between neighbourhoods?
- Do certain groups suffer from health issues more than others?
- What role can borough planning play in addressing these health issues and health inequalities?
- Is there evidence to support the links between spatial planning and health?
- Have planning interventions for health issues been reflected in objectives and policy?
- Are mechanisms in place to monitor the outcomes of objectives and policy?

4.2 GOOD PRACTICE HEALTH POLICY WORDING

4.2.5 Health as a Cross-Cutting Issue

Sections 4.2.1 – 4.2.4 have set out health as an individual topic within a Core Strategy. The matrix below provides a means to identify the links between health issues and conventional Core Strategy topics for those adopting a cross-cutting approach. For example, access to green space/ open space (often considered under the 'Natural Environment' topic) would be of benefit to a number of the public health issues we have identified; Mental Health, Obesity and Cardiovascular disease.

The HUDU Watch-Out for Health Checklist provides a more comprehensive source of such linkages. (20)

Beyond the Matrix: How to incorporate Health as a Cross-cutting Issue

Those undertaking a cross-cutting approach should be aware that merely noting the links between health and plan topics in a matrix is not enough.

Planners and others **must**:

- Identify locally-specific health issues.
- Quantify what health outcomes the plan is seeking to achieve.
- Demonstrate which health outcomes will be achieved by each policy where the intersection with health is identified in the matrix.
- Ensure that **ALL** health issues and outcomes have been addressed under appropriate plan topics and reflected in objectives and policy.

Adopting the cross-cutting approach still means that the approach outlined in section 4.2 **must** be followed:

Evidence –> Issues –> Vision –> Objectives -> Policy

(20) See **http://www.healthyurbandevelopment.nhs.uk/documents/checklist_for_health/Watch_Out_For_Health_Planning_Checklist.pdf**

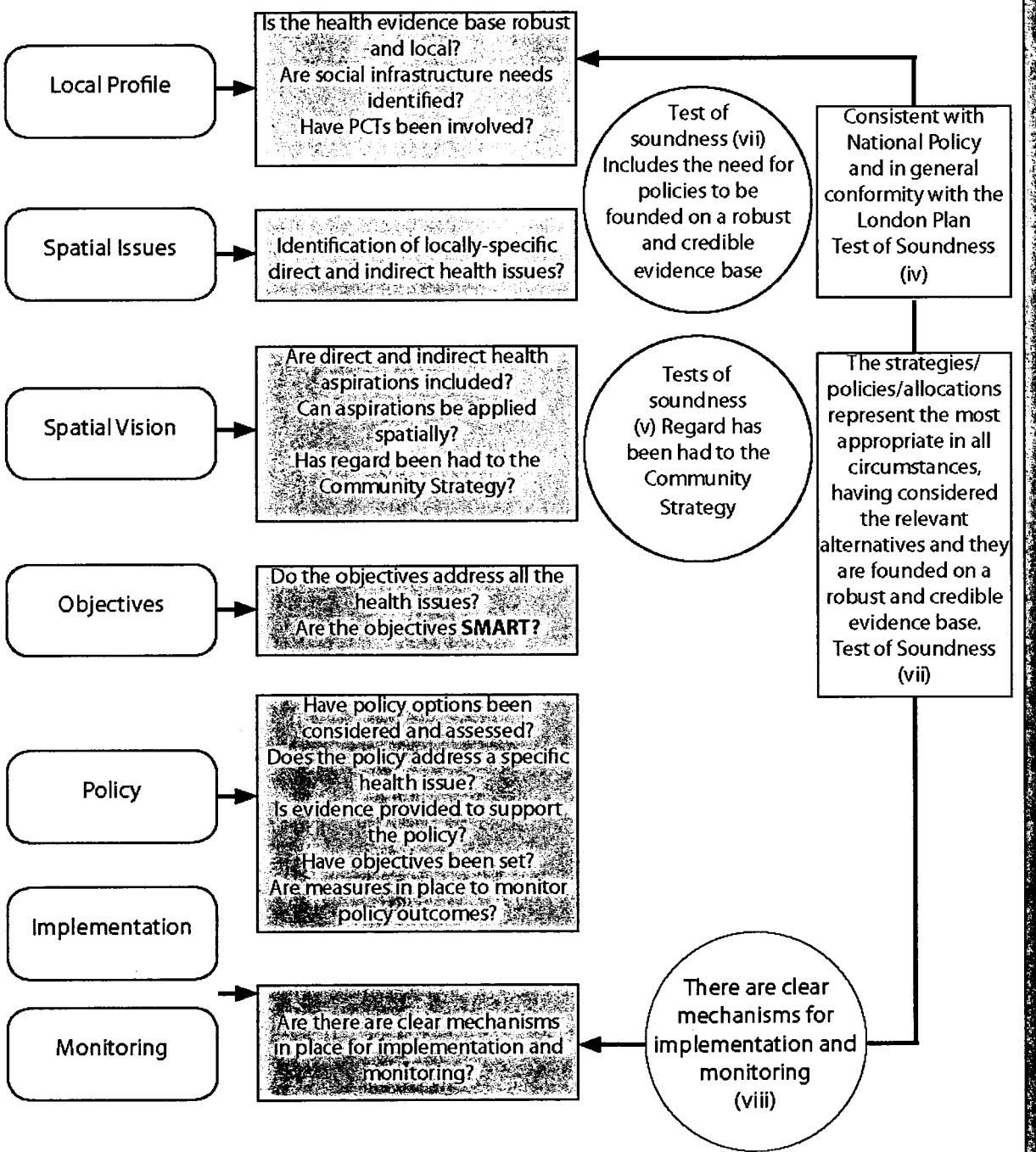
Matrix identifying links between health issues and Core Strategy Topics

Health Issue	Health as a Cross-Cutting issue										
	Employment	Community	Economy	Shopping	Public Services	Housing	Natural Environment	Minerals	Waste	Transport and Communication	Climate change
Mental Health	✓ [Sense of well-being through work]	✓ [Crime, social cohesion/ social capital]	✓ [Sense of well-being through buoyant economy]	✓ [Access to local, good quality food]	✓ [Access to Education, Culture] [Access to healthcare]	✓ [Poor quality housing]	✓ [Flooding] [Access to greenspace]			✓ [Improve accessibility to services]	✓ [Flooding]
Obesity				✓ [Access to local, good quality food]	✓ [Access to healthcare]		✓ [Access to greenspace]			✓ [Reduce car dependency] [Encourage walking and cycling?]	
Cardiovascular Disease	✓ [Sense of well-being through work]		✓ [Sense of well-being through buoyant economy]	✓ [Access to local, good quality food]	✓ [Access to healthcare]	✓ [Poor quality housing]	✓ [Access to greenspace]			✓ [Reduce car dependency] [Encourage walking and cycling]	
Respiratory Disease	✓ [poor quality buildings]				✓ [Access to healthcare	✓ [Poor quality housing]	✓ [Flooding] [Access to greenspace]			✓ [Reduce traffic volumes and improve air quality]	✓ [Flooding]
Excessive Summer and Winter Mortality	✓ [poor quality buildings]					✓ [Poor quality housing]	✓ [Greenspace as shading]				✓ [Warmer summers include adaptation measures to reduce overheating]
Injuries	✓ [poor quality buildings]	✓ [Crime]				✓ [Poor quality housing]	✓ [Flooding]			✓ [Road Traffic Accident]	✓ [Flooding]
General Health Benefits	✓	✓	✓	✓	✓ [Access to healthcare]	✓	✓	✓	✓	✓	✓

4.3 MEETING THE TESTS OF SOUNDNESS

The flow-chart below draws together the steps required to help prepare a "Sound" plan as set out in **Part 2: Why Plan for Health** and **Part 4: A Spatial Plan for Health**. Planners should use this as a guide to follow when beginning their plan-making process to ensure that health issues are adequately identified from the outset, are based on robust evidence and clearly drive the formulation of policy objectives and policy wording.

The steps involved to help prepare a 'Sound' Plan



4.4 CHECKLIST FOR PLANNERS AND HEALTH PRACTITIONERS

A checklist has been developed to ensure that developers and others integrate health considerations into new developments and regeneration schemes.

It draws together the recommendations from Part 3 of this document and the policy framework set out earlier in this chapter.

The checklist suggests how each health outcome could be achieved by planners through planning policy, conditions applied to planning applications or through the use of planning contributions.

A tick in the relevant box ☑ would demonstrate that a health outcome would be achieved. Where ticks are not provided against a health outcome, justification should be provided.

4.4 CHECKLIST FOR PLANNERS AND HEALTH PRACTITIONERS

Checklist for delivering healthier communities in London

Health Outcomes	Consideration by developers ☐✓	Consideration by planners ☐✓ How?
Mental Health		
Open/green spaces		
Retain and enhance existing open/green spaces	☐	☐ Policy Condition Agreement
Incorporate and maintain new open/green spaces in areas of deficiency	☐	☐ Policy Condition Agreement
Provide links between existing and new open/ green spaces	☐	☐ Policy Condition
Ensure open/green spaces are accessible for all	☐	☐ Policy Condition
Include provision for allotments	☐	☐ Policy Condition
Community and social infrastructure		
Identify social infrastructure needs	☐	☐ Policy Condition
Retain and enhance existing social and community infrastructure	☐	☐ Policy Condition
Incorporate social and community infrastructure including sports and leisure facilities, community centres and healthcare facilities	☐	☐ Policy Condition Agreement
Ensure social and community infrastructure is accessible for all	☐	☐ Policy Condition
Integrate health and leisure opportunities within healthcare facilities	☐	☐ Policy

Health Outcomes	Consideration by developers ☐	Consideration by planners ☐ How?
Crime		
Provide places with well-defined routes, spaces and entrances	☐	☐ Policy
Maximise active frontages	☐	☐ Policy
Clearly define public and private space	☐	☐ Policy
Provide adequate and natural surveillance	☐	☐ Policy
Promote activity that is appropriate to the area	☐	☐ Policy
Avoid creation of gated communities	☐	☐ Policy
Include provision for future management and maintenance	☐	☐ Policy Agreement
Flooding		
Locate development to avoid flood risk areas	☐	☐ Policy
Layout in Flood Risk Areas • Inclusion of Sustainable Urban Drainage Systems • Inclusion of watercourses throughout site • Development set back from existing flood defences? • Is infrastructure orientated according to flood risk vulnerability?	☐ ☐ ☐ ☐	Policy ☐ Condition ☐ ☐ ☐
Obesity and Cardio-vascular disease		
Open/green spaces		
See principles set out under mental health		
Sport and recreation facilities		
Protect, retain or enhance existing sports and leisure facilities	☐	☐ Policy
Incorporate new facilities for sports, recreation and children's play	☐	☐ Policy Condition Agreement
Ensure sport and recreation facilities are accessible for all	☐	☐ Policy Condition
Integrate health and leisure opportunities within healthcare facilities	☐	☐ Policy

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4.4 CHECKLIST FOR PLANNERS AND HEALTH PRACTITIONERS

Health Outcomes	Consideration by developers ☐✓	Consideration by planners ☐✓ How?
Respiratory disease		
Road traffic emissions		
Locate development in areas well served by public transport.	☐	☐ Policy
Promote walking and cycling	☐	☐ Policy
Promote water transport	☐	☐ Policy
Include provision for sustainable forms of transport	☐	☐ Policy
Flooding		
See design principles set out under mental health	☐	
Excess winter (cold) and summer (heat) mortality		
Maximise internal insulation and opportunity for solar gain	☐	☐ Policy
Ensure new and existing buildings are adapted to climate change, including:		Policy
• Maximise opportunities for natural ventilation	☐	☐
• Maximise areas of exposed thermal mass	☐	☐
• Incorporate adequate shading either from vegetation or building features	☐	☐
• Incorporate heat-absorbing species	☐	☐
• Ensure landscaping takes account of hotter, drier summers	☐	☐
Injuries		
Maximise road safety through provision of:		Policy
• Traffic management/calming measures	☐	☐
• HomeZones	☐	☐
• Speed limits and road signage	☐	☐
• Safe walking and cycling routes	☐	☐
Reduce dependence on the car:		Policy
• Locate development in areas accessible by walking and cycling.	☐	☐
• Locate development in areas well-served by public transport	☐	☐
Flooding		
See principles set out under mental health		