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TOWER HAMLETS

Tower Hamlets Council EIA Scoping Guidance

January 2012

EIA Scoping Guidance V2

**Prepared for London Borough of
Tower Hamlets
by
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CONTENTS

1. INTRODUCTION	1
2. THE SCOPING PROCESS	2
Why Request a Scoping Opinion?	2
Statutory Scoping Procedures.....	3
LBTH’s Scoping Procedures	5
Information to be Submitted by Applicants as Part of a Request for a Scoping Opinion.	7
3. THE ENVIRONMENTAL STATEMENT	10
Information to be Included in the ES	10
4. ASSESSMENT OF ENVIRONMENTAL IMPACTS	13
Introduction	13
Cumulative Impacts	13
Secondary impacts	14
Climate Change	15
Townscape and Visual Impacts.....	17
Traffic and Transport	19
Microclimate	20
Air Quality	22
Noise and Vibration	23
Water Resources, Hydrology and Flood Risk.....	26
Soils and Ground Contamination	28
Ecology	30
Archaeology and Cultural Heritage	33
Health and Wellbeing	34
Socio-Economics.....	37
Waste Management.....	38
Telecommunications and Aviation.....	39
Summary of impacts, mitigation measures and residual impacts	40
Outline of Environmental Management Plan	40

BOXES

Box 2.1: An Overview of Scoping Procedures.....	4
Box 3.1: Schedule 4 (Parts 1 and 2) of the EIA Regulations: Information for Inclusion in Environmental Statements.....	11

APPENDICES

Appendix 1: Administrative Requirements
Appendix 2: Standard EIA Consultees
Appendix 3: IEMA ES Review Criteria

1. Introduction

- I.1. This document provides guidance for applicants on the scoping stage of Environmental Impact Assessment (EIA) for developments within the London Borough of Tower Hamlets (LBTH). It explains what scoping is, why it is useful to the applicant, and how to go about it.
- I.2. The scoping procedures followed by LBTH are set out, including the information required at each stage. While references are provided for key guidance documents the applicant remains responsible for ensuring that the most up to date and relevant guidance is followed. **Where the applicant chooses not to follow this Scoping Guidance Note, the reasons for any divergence should be explained to LBTH as part of any request for a Scoping Opinion.**
- I.3. An important element of the scoping process is to agree what should be included within the Environmental Statement (ES), the document which sets out the results of the EIA. As well as general guidance on the contents of the ES, this document provides topic based guidance on identifying the likely key issues for developments within LBTH, and how to choose methods to assess the current baseline environment and the impacts of the development.

- I.4. If you have any queries please contact:

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2. The Scoping Process

WHY REQUEST A SCOPING OPINION?

“Defining its scope is one of the most critical parts of an [EIA] in that it sets the context for what follows” - DOE (1995)¹

“Scoping is generally accepted to be one of the main factors in a successful EIA” - European Commission (1999)²

- 2.1. Scoping is a key aspect of the Environmental Impact Assessment (EIA) process. Submitting a request for a Scoping Opinion enables an applicant to determine the content and extent of matters to be covered in the Environmental Statement (ES), and to discuss the primary concerns of LBTH and stakeholders at an early stage in the process. This has a number of benefits for the applicant and other interested parties including:
- Potentially providing a different perspective on the likely environmental effects;
 - Identifying available baseline data;
 - Identifying appropriate surveys that need to be conducted;
 - Agreeing scoping and assessment methods prior to submission of the application;
 - Ensuring a concise ES is produced focussing on key issues of concern and focussing on the most potentially significant impacts, minimising the need to request further information thereby accelerating the decision process³ and promoting cost effectiveness;
 - Promoting confidence in consultees and the public that environmental issues are being dealt with in a fair and comprehensive manner.
- 2.2. Negotiations and decisions made at the scoping stage are of fundamental importance to the project as they determine what will follow.

¹ DoE, 1995. *Preparation of Environmental Statements for Planning Projects that Require Environmental Assessment: A good practice guide*

² European Commission, 1999. *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions*

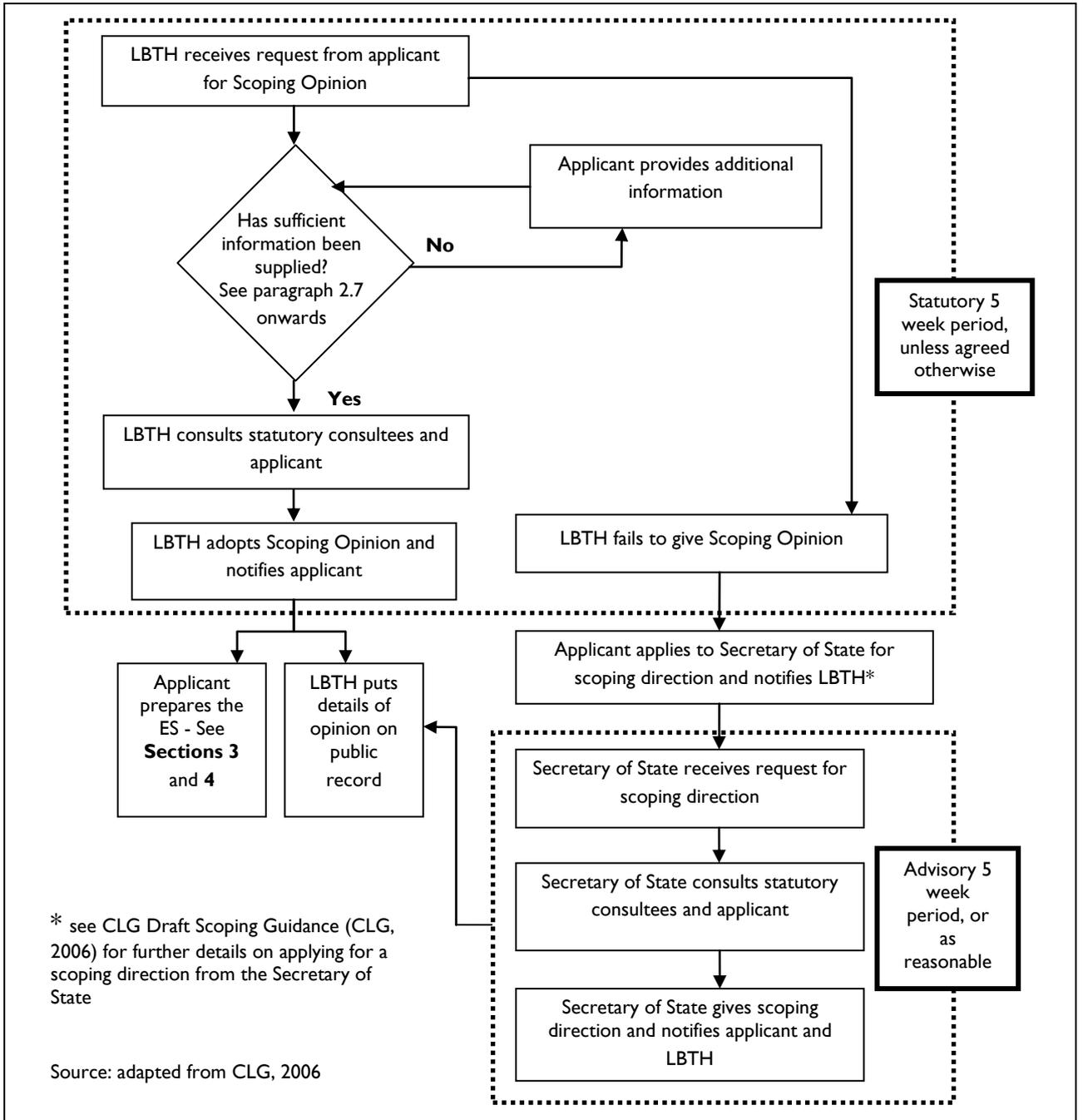
³ The issuing of a Scoping Opinion does not prevent LBTH from requesting further information at a later stage under Regulation 19 of the EIA Regulations

STATUTORY SCOPING PROCEDURES

- 2.3. EU Directive (11/97/EC), Regulation 13 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2011 (referred to here as the EIA Regulations), and paragraph 86 onwards in Circular 02/99⁴, provide a mechanism for applicants to agree the scope of the EIA formally through the request for a Scoping Opinion.
- 2.4. Although not a mandatory stage of the UK EIA process, scoping is good practice and the benefits outlined in this guidance illustrate the importance of the scoping procedure to the EIA process.
- 2.5. The statutory scoping procedures are set out in **Box 2.1** below, followed by explanatory text for key stages of the procedure in relation to LBTH. The Administrative Requirements are included in Appendix I.

⁴ DCLG have stated their intention to replace Circular 02/99 with guidance to accompany the 2011 Regulations.

Box 2.1: An Overview of Scoping Procedures



LBTH'S SCOPING PROCEDURES

- 2.6. The following section sets out the scoping process followed by LBTH, which closely follows the procedures set out in **Box 2.1**, and provides advice to the applicant.

Pre-Scoping Consultation

- Applicants should consult with LBTH officers, statutory bodies and other consultees as appropriate to inform their request for a Scoping Opinion.
- It may be necessary to arrange a scoping meeting involving LBTH, the applicant, and selected consultees to facilitate the scoping process through the discussion of key issues associated with the proposed scheme. It is recommended that this meeting occurs prior to the applicant submitting a request for a Scoping Opinion. Where the applicant intends to deviate from the guidance contained within this document they should agree any changes at the meeting, and before submitting their request. This would typically form part of a pre-application meeting, which would be charged in accordance with LBTH's Development Team Service Toolkit – A developer's guide to our pre-application advice service⁵.
- Since microclimate impacts from new developments are a major impact within LBTH, and are best mitigated through design, developers may be asked at the pre-application stage to undertake an envelope study of their proposed development. This involves an initial assessment of the microclimate implications of a block version of their proposed building envelope, i.e. the entire volume within which their buildings could be designed, in order to give LBTH a chance to review the likely daylight and sunlight effects on surrounding residential buildings. Potential cumulative effects with other developments in the vicinity may also be required by LBTH using the same method, i.e. by including a block version of these buildings. This will give LBTH an early view of possible impingement by new developments and allow them to advise on the need to consider the issue further as part of the EIA. It should also assist the developer to modify their building envelope (layout, height, massing) accordingly.

LBTH Receives Request from Applicant for Scoping Opinion

- LBTH will acknowledge receipt of the Scoping Opinion request and indicate a date by which the Scoping Opinion will be issued. This is usually five weeks after the request was received unless otherwise agreed in writing between the applicant and LBTH.
- It is good practice for the Applicant to submit a Scoping Report with the scoping request (see paragraphs 2.8-2.12 for further information). If insufficient information has been provided, LBTH can request additional information from the applicant⁶. A request for further information does not stop the five week time period allocated for a Scoping Opinion response, however, LBTH may wish to agree a later date in writing with the Applicant.

⁵ http://www.towerhamlets.gov.uk/lgsi/601-650/608_development_control/pre-application_advice.aspx

⁶ The applicant is not under obligation to provide the additional information requested by LBTH but this may later hamper the application if the ES does not consider the issues that are felt to be important to LBTH.

LBTH Consults Statutory Consultees and Applicant

- Consultation is a mandatory part of the Scoping Opinion process. LBTH will consult statutory consultees (see list at Appendix 2) and will also take a view as to whether it would be advantageous to consult more widely, with interested non-governmental parties in the local area.
- In addition to a ‘pre-scoping meeting’, it is good practice to hold a meeting between the applicant and LBTH directly after the Scoping Opinion has been issued. This meeting may be used to discuss any additional key issues raised by consultees, or instances where the Scoping Report has deviated from LBTH’s guidance – these should be agreed with LBTH prior to submission of the ES to avoid unnecessary requests for additional information⁷. This would typically form part of a pre-application meeting which would be charged in accordance with LBTH’s Development Team Service Toolkit – A developer’s guide to our pre-application advice service⁸.
- Alongside the statutory consultation undertaken by LBTH, the applicant may wish to carry out their own consultation with the local community and other stakeholders, depending on the scale and nature of the proposed development.

LBTH Adopts Scoping Opinion and Notifies Applicant

- LBTH will issue the Scoping Opinion to the applicant. The opinion will comprise the considered view of LBTH taking into account the responses received from consultees. The original consultee responses will also be included in an appendix to the Scoping Opinion.
- It is the applicant’s responsibility to take the advice in the Scoping Opinion into account when preparing the ES. Failure to provide information requested in the Scoping Opinion could result in a request for further information under Regulation 22 of the EIA Regulations when the application has been submitted. Therefore it is recommended that disagreements with regard to the scope of the ES are resolved prior to undertaking the assessment. It should be noted that LBTH may still require information under Regulation 22 irrespective of what is contained in the Scoping Opinion.

LBTH puts Details of Opinion on Public Record

- LBTH will keep the Scoping Opinion on the public register for two years, alongside the applicant’s Scoping Opinion request.

Outline and Reserved Matters Applications

- 2.7. In the case of an outline application, applicants should be aware that LBTH are required to screen reserved matters applications to determine whether EIA is required and that there may be a need for an additional scoping stage where the reserved matters applications require EIA.

⁷ Regulation 22 requests under the EIA Regulations

⁸ http://www.towerhamlets.gov.uk/lgsi/601-650/608_development_control/pre-application_advice.aspx

INFORMATION TO BE SUBMITTED BY APPLICANTS AS PART OF A REQUEST FOR A SCOPING OPINION

- 2.8. The EIA Regulations set out the minimum requirements for the information to be submitted as part of a request for a Scoping Opinion⁹; these are the same as the information required for a Screening Opinion:
- Brief description of the nature and purpose of the development (including the number of storeys, height in meters AOD, and the Easting and Northing coordinates);
 - Objective description of the possible effects of the development on the environment;
 - Plan showing the development site.
- 2.9. However, the more information that is provided, the more useful the response will be from consultees. It is good practice, as identified in Draft Guidance from CLG¹⁰, to provide this information as a structured Scoping Report which will inform the EIA process and save time later.
- 2.10. The applicant should submit to LBTH, three electronic copies (CD) and two hard copies of their Scoping Report (along with any additional information), when requesting a Scoping Opinion.

Contents of the Scoping Report

- 2.11. The Scoping Report should include the following information, which draws on the Draft CLG Guidance:
- A description of the development, providing as much detail as is available at the time of writing. This should include any information on climate change mitigation and adaptation and other sustainability measures which are to be included as part of the scheme, for example, water conservation measures, renewable energy generation etc., in order that any impacts associated with these measures may be assessed as part of the EIA. Where the development will comply with the Code for Sustainable Homes, BREEAM etc., details should be provided of the level of compliance to be attained.
 - A summary of the conditions present on the site and surrounding area, based on information collated to date.
 - Details of how alternatives are being considered; Schedule 4 to the EIA Regulations requires an outline of the main alternatives studied by the applicant and the reasons for their selection to be included in the ES. A brief outline of the approach to be used should be included in the Scoping Report, for discussion and agreement with LBTH – for example, the alternative building forms considered for a particular site and details of any site selection exercise. For advice on how to consider alternatives see the IEMA review guidance at **Appendix 3**.

⁹ Regulation 13 of the EIA Regulations

¹⁰ CLG, 2006. *Environmental Impact Assessment: A Guide to Good Practice and Procedure, A Consultation Draft*.

- An initial assessment of the microclimate implications of a block version of the proposed building envelope, i.e. the entire volume within which the buildings could be designed, in order to give LBTH a chance to review the likely daylight and sunlight effects on surrounding residential buildings.
- A list of cumulative developments for inclusion in ES for prior agreement with LBTH. As part of the scoping process the applicant should agree with LBTH which other developments will be considered to assess any cumulative impacts that are likely to occur with the addition of the proposed scheme. These will include any submitted schemes in the vicinity of the development, and schemes which are known to be coming forward but which have not yet been the subject of a planning application, with an indication of a 'cut-off' time for which schemes to assess. Tower Hamlets is unusual in this regard due to the high number of applications for tall buildings which can give rise to significant cumulative impacts. Therefore, early agreement on which schemes to include in a cumulative impacts study will be important;
- Methodology and terms of reference for the ES as a whole, noting any reasons to deviate from accepted assessment methodologies.
- The organisations / people consulted as part of scoping.
- A topic by topic assessment of the key impacts of the development; this should include:
 - details (as known) of the baseline conditions;
 - consideration of the potential impacts of the development;
 - where impacts are not considered to be significant, a justification of why they should be 'scoped out' of the ES;
 - where impacts are considered to be potentially significant, details of the baseline information to be collected (including methods and appropriate study areas), likely sensitive receptors and proposed survey and assessment methodology; these should be informed by the guidance in this document, or where they differ, agreed in advance with the relevant statutory bodies and LBTH;
 - consideration of the development's effects on climate and climatic factors, as part of each topic;
 - consideration of cumulative and secondary impacts as part of each topic;
 - how significance criteria are defined for each topic;
 - this should be informed by the guidance contained within this document, reference to key local plans and policies and any consultation with statutory bodies and LBTH undertaken prior to submission of the Scoping Report.
- Any other details of supporting material to be submitted with the ES (for example, figures, visualisations etc.).

- The Scoping Report should set out the proposed contents of the ES - see **Section 3** for more details.
- 2.12. Applicants should also refer to the following guidance for more detailed advice on identifying topics and preparing the Scoping Report. Additional topic-specific guidance will also be relevant (see **Section 4**).
- ODPM (January 2000) *Environmental Impact Assessment: A Guide to Procedures* [particularly Appendix 4 and Appendix 5]
 - The environmental topic areas referred to at Appendix A of the Draft CLG Guidance (2006)
 - DOE Good Practice Guide 1995 - *Preparation of Environmental Statements for Planning Projects that Require Environmental Assessment*
 - The European Commission has also published guidelines: - *Environmental Impact Assessment – Guidance on Scoping, 2002*.

3. The Environmental Statement

INFORMATION TO BE INCLUDED IN THE ES

- 3.1. The ES is the output from the EIA process and as such it should be comprehensive, clear, objective, and be accessible to planning officials, statutory consultees and members of the public.
- 3.2. LBTH requires the ES to include, at minimum, the information set out in Schedule 4 (Parts 1 and 2) of the EIA Regulations (see **Box 3.1**). It is good practice for the applicant to augment the information required by the EIA Regulations, informed by the EIA guidance sign-posted below.
- 3.3. The level of detail, format and content of the ES will vary depending on the nature and scale of the development and should reflect the contents of the Scoping Opinion. The ES should focus on the results of the EIA.
- 3.4. The applicant should familiarise themselves with the ES review criteria (in Appendix 3) against which LBTH reviews each ES submitted with a planning application. The LBTH review forms the basis for any requests for further clarification or additional environmental information.

Format and Presentation of the ES

- 3.5. The ES should be able to be read as a stand-alone document with no significant reliance on external documents. Large ESs can be split into volumes for ease of use but the relationship of the documents to each other should be clear to the reader.
- 3.6. LBTH is keen to encourage the sustainable use of resources when compiling an ES. As such it is recommended that ES documents are printed double sided on paper from recycled or other sustainable sources.
- 3.7. Upon submission of the application, LBTH require 4 hard copies of the ES and its appendices, along with 20 electronic copies (CD/DVD).

EIA Guidance

- 3.8. The following EIA guidance is available and should be consulted during the preparation of the ES. Issue specific guidance is referred to in **Section 4**:
 - European Commission (May 1999) *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions*
 - HMSO (2011) *Town and Country Planning (Environmental Impact Assessment) Regulations*
 - DOE (December 1995) *Preparation of Environmental Statements for Planning Projects that Require Environmental Assessment*
 - ODPM (March 1999) *Circular 02/99: Environmental Impact Assessment* [particularly Appendix C]

- ODPM (January 2000) *Environmental Impact Assessment: A Guide to Procedures* [particularly Appendix 4 and Appendix 5]
- Institute of Environmental Management and Assessment (2004) *Guidelines for Environmental Impact Assessment*
- Department for Communities and Local Government (June 2006) *Environmental Impact Assessment: A Guide to Good Practice and Procedures - Consultation Draft*
- Essex Planning Association (2007) *The Essex Guide to Environmental Impact Assessment*

Box 3.1: Schedule 4 (Parts 1 and 2) of the EIA Regulations: Information for Inclusion in Environmental Statements

PART I
<p>1. Description of the development, including in particular:</p> <p>(a) a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases;</p> <p>(b) a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used;</p> <p>(c) an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc..) resulting from the operation of the proposed development.</p> <p>2. An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for his choice, taking into account the environmental effects.</p> <p>3. A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.</p> <p>4. A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from:</p> <p>(a) the existence of the development;</p> <p>(b) the use of natural resources;</p> <p>(c) the emission of pollutants, the creation of nuisances and the elimination of waste, and the description by the applicant of the</p>

forecasting methods used to assess the effects on the environment.

5. A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.
6. A non-technical summary of the information provided under paragraphs 1 to 5 of this Part.
7. An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

PART II

1. A description of the development comprising information on the site, design and size of the development.
2. A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects.
3. The data required to identify and assess the main effects which the development is likely to have on the environment.
4. An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for his choice, taking into account the environmental effects.
5. A non-technical summary of the information provided under paragraphs 1 to 4 of this Part

Determining Significance

- 3.9. The ES should set out how 'significant effects' in the context of the EIA Regulations are determined as part of the EIA and described in the ES. It is important to ensure that the way in which significance has been determined is transparent and repeatable, and also to clearly state what constitutes a significant environmental impact, with a clear justification.

Framework Environmental Management Plan

- 3.10. Guidance published by the Institute of Environmental Assessment and Management (IEMA)¹¹ recommends that a Framework Environmental Management Plan (EMP) is included as part of the ES. The EMP should set out a programme of any mitigation measures and monitoring to be carried out as a result of the proposed development, and define who will be responsible for implementing the programme and for carrying out any necessary remedial measures. LBTH require the framework for an EMP to be included within the ES, based on the findings of the EIA.

¹¹ IEMA, 2008. *Environmental Management Plans*.

4. Assessment of Environmental Impacts

INTRODUCTION

- 4.1. This section provides guidance on individual topics and how they should be addressed as part of the EIA. Each topic is considered under two headings:
- ‘Issues to be considered’ lists the type of impacts likely to arise as a result of development projects in LBTH.
 - ‘Methodological requirements’ sets out how potential impacts should be addressed, with reference to established methods and guidance as appropriate.
- 4.2. The information has been provided to assist in establishing the scope of assessment for each topic. However, before turning to individual topics, an overview of how to consider cumulative and secondary impacts is provided. Cumulative impacts are a key issue in Tower Hamlets and attention is drawn to the requirement to establish the scope of any assessment of cumulative impacts early in the EIA process.

CUMULATIVE IMPACTS

- 4.3. Cumulative impacts can occur either when different impacts from one development interact to exacerbate effects on sensitive receptors, or when the magnitude of an impact of a development is augmented or exacerbated by impacts from other existing or future neighbouring developments, thus creating a more significant impact, on a receptor.

Issues to be considered

- Combined effect of individual impacts from proposed development, e.g. when air quality impact caused by increased vehicle emissions combines with a microclimate impact of reduced wind speed causing a reduction in dispersion, resulting in adverse air quality (and possibly health) impacts.
- Impacts from proposed development with those from planned or reasonably foreseeable other developments, for example, traffic from a proposed residential development together with traffic from another planned mixed use development nearby could cause adverse congestion, noise and air quality impacts.
- Cumulative impacts of particular concern within LBTH and which should be addressed within the EIA include:
 - Transport impacts.
 - Microclimate impacts.
 - Townscape and visual impacts.
 - Construction impacts, particularly HGV movements, dust and noise.
 - Impacts on health and wellbeing.

- Other impacts should be considered on a case by case basis.

Methodological requirements

- 4.4. Potential impacts identified for each relevant environmental topic during scoping should be assessed for their cumulative effect when combined with other potential impacts. The scope of the cumulative effects assessment of the proposed development should be agreed with LBTH at this stage.
- 4.5. A list of cumulative developments should be agreed with LBTH at pre-application or scoping stage, to include those already within the planning system or under construction, and those known to LBTH to be likely to be subject to application within the foreseeable future. The scope of the cumulative effects assessment for these developments should also be agreed with LBTH at this stage.
- 4.6. Where specific cumulative effects assessment methods are available, these should be followed (at present, these are only published for visual assessment of wind farms). Otherwise, potential cumulative impacts should be identified for construction and operational phases and assessed quantitatively, where practicable, using the methods set out for each topic detailed within this document. Where insufficient data are available to undertake a quantitative assessment, a qualitative judgement should be made as to the nature, magnitude and significance of the impacts and mitigation proposed to reduce any adverse impacts identified.
- 4.7. As a broad guideline, any significant adverse cumulative impacts that are predicted to occur from developments that are further advanced in the planning and construction process than the applicant's own proposals should be mitigated by the applicant. Any impacts identified cumulatively with developments that are less advanced than the applicant's should be flagged for consideration by LBTH.

SECONDARY IMPACTS

- 4.8. Secondary or indirect impacts are those which are not a direct result of the project but which can be produced away from or as a result of a complex pathway from the project. Secondary impacts need to be considered on both a broad scale and locally to the project itself, as indicated below.

Issues to be considered

- Impacts from potential associated development, for example, regeneration projects need to consider potentially negative environmental impacts that may arise through further related development that is subsequently attracted to the area, especially in terms of transport and infrastructure.
- Impacts from scheme design, for example the specification of certain types of building materials such as stone may give rise to impacts elsewhere through traffic generation. The EIA should cover any impacts due to construction traffic required to serve the scheme itself, but the impacts associated with quarrying (for example) would not form part of the EIA.
- Impacts from any mitigation measures proposed for a development, for example:

- visual impacts of noise barriers;
- aesthetic impacts of Sustainable Drainage Systems (SuDS) measures such as surface water storage ponds which can suffer from debris, littering etc..

Methodological requirements

- 4.9. Potential secondary impacts should be identified and assessed quantitatively where practicable using the methods set out for each topic detailed within this document. Where insufficient data are available to undertake a quantitative assessment, a qualitative judgement should be made as to the nature, magnitude and significance of the impacts and mitigation proposed to reduce any adverse impacts identified.

CLIMATE CHANGE

- 4.10. The development's effect on climate change should be assessed within each relevant EIA topic (not as a standalone chapter), with possible mitigation and adaptation measures explored following guidance in IEMA's Climate Change & EIA series^{12,13}.

Issues to be considered

- 4.11. The government has expressed support for carbon emissions to be considered in EIA and reported in the ES, saying, "Local planning authorities should not require specific and standalone assessments [of climate change] where the requisite information can be provided through...environmental impact assessment."¹⁴
- 4.12. At an early stage in planning, the EIA process should influence the location and basic design of a proposed development in order to limit its carbon emissions and this should be reported in the Alternatives and Scheme Design section of an ES. Climate change mitigation (i.e. reducing effects of climate change) and adaptation measures (i.e. increasing resilience to climate change) should be detailed within the proposed development's Energy Assessment¹⁵ and Sustainability Statements and summarised in the relevant topics of the ES. Even if an Energy and/or Sustainability Statement is not provided, these issues will still need to be assessed within the relevant topics of the ES.

Impacts

- Effects on the environment arising from carbon emissions at each stage of the development, including embodied energy in the manufacture of construction materials; emissions from construction traffic and on-site plant; operational emissions from development including e.g. CHP; and emissions related to decommissioning, where relevant.
- The potential in-combination effects of both the development and future climate change on the receiving environment.

¹² IEMA, 2010. *Principles Series: Climate Change Mitigation and EIA*.

¹³ IEMA, 2010. *Principles Series: Climate Change Adaptation and EIA*.

¹⁴ PPSI *Delivering Sustainable Development: Supplement to PPSI on Climate Change*.

¹⁵ London Plan (2011) SPG: *Sustainable Design and Construction*.

- Effects of future climate change on the development and hence its fitness for purpose.

Climate change mitigation measures

- Provisions for renewable energy on site, the use of decentralised CHP and other low-carbon fuel sources.
- Provision of energy efficiency measures (e.g. insulation, motion-activated lights) and water efficiency measures (e.g. low water use fittings and white goods; rainwater harvesting) to reduce consumption.
- Designing for reduced transport (e.g. minimising the need for personal travel, locating housing developments near work centres, car-free commitments.)
- Provision for natural or passive cooling and ventilation, use of green roofs and green spaces to minimise urban heat island effects and overheating.

Climate change adaptation measures

- Resilience of the development's design features to climate change impacts, including the influence of massing, density and mix on future energy consumption and the living environment for occupiers; flood resilience etc.
- Resilience of infrastructure and emergency services to new climatic conditions. Emergency procedures and equipment must be capable of handling increased risks due to climate change.
- Provision for increasing the resilience of the food supply (e.g. urban gardening, farmers markets, raised beds on green roofs.)
- Resilience of open space and landscaping to effects of climate change, including the use of drought resistant species.

Methodological requirements

- 4.13. Significance of climate change impacts should be evaluated based on:
- an impact's likelihood under a range of climate scenarios;
 - a receptor's vulnerability to existing climatic variations;
 - a receptor's ability to absorb such disturbance and continue to function (resilience).
- 4.14. A proposed development and surrounding environmental receptors' capacity to resist and recover from climatic variability should be considered. The receptors' vulnerability should be reflected in the sensitivity rating assigned to them.

- 4.15. The assessment should consider future climate scenarios such as the latest UKCIP projections¹⁶ to provide future baseline conditions against which to assess the impact of a proposed development.
- 4.16. The performance of the development, and its impact on the baseline environment, should be assessed based on the predictions set out in the UKCIP's medium emissions (SRES A I B) projections.
- 4.17. Methodological guidance for assessing climate change impacts given by IEMA¹⁷ should be followed.

TOWNSCAPE AND VISUAL IMPACTS

Issues to be considered

- Impacts of the development on the physical characteristics of the site and its surroundings and on landscape and townscape character. There is a diversity of character areas within the Borough, as set out in LBTH's Core Evidence Base: Character Area Assessments (2006)¹⁸ and LBTH's Urban Structure and Characterisation Study (September 2009)¹⁹. In addition, 'London's Natural Signatures'²⁰ provide a landscape character framework.
- Impacts of the development on regionally important views, as defined within The London View Management Framework,²¹ and locally important views as defined within LBTH's Interim Planning Guidance Schedule²² and the reasons for which these views are designated.
- Impacts of the development on people (visual receptors) in the surrounding areas.

Methodological requirements

- 4.18. The assessment methodology and principles from the 'Guidelines for Landscape and Visual Impact Assessment,' Landscape Institute and IEMA 2002²³ should be used to guide the assessment of both landscape and townscape character and visual impacts.
- 4.19. The study area for the Townscape and Visual Impact Assessment should include all areas likely to be affected (either directly or indirectly) by the development.
- 4.20. The baseline should include an historical context (which may overlap with the Cultural Heritage section) and a description of the site and its surroundings in terms

¹⁶ UKCIP, 2009. *UK Climate Projections 09*.

¹⁷ IEMA, 2010. *Principles Series: Climate Change Mitigation and EIA*; IEMA, 2010 *Principles Series: Climate Change Adaptation and EIA*.

¹⁸ London Borough of Tower Hamlets, 2006. *Submission Document, Core Evidence Base: Character Area Assessments* .

¹⁹ http://www.towerhamlets.gov.uk/lgs/851-900/856_local_development_framework/evidence_base.aspx

²⁰ *London's Natural Signatures: The London Landscape Framework, Prepared for Natural England* (January 2011)

²¹ Mayor of London, July 2010. *The London Plan (Spatial Development Strategy for Greater London) Revised Supplementary Planning Guidance: London View Management Framework*.

²² London Borough of Tower Hamlets, 2007. *Tower Hamlets Interim Planning Guidance, Core Strategy and Development Control Plan*.

²³ Note that this guidance is currently being updated.

of physical features, townscape character, and designated sites and areas (setting out clearly the reasons for their designation). There may be some overlap with the Cultural Heritage section of the ES here, for example the mapping and recording of Conservation Areas, Listed Buildings, Historic Parks and Gardens and World Heritage Sites. Impacts on these heritage assets may be covered in either the 'Townscape and Visual' or 'Archaeology and Cultural Heritage' section. For the purposes of this guidance they are covered in the section dealing with 'Archaeology and Cultural Heritage'. The baseline should also map relevant regional and local views (and set out reasons for their designation), and describe existing visual character of the site and surrounds including representation of a zone of theoretical visibility (ZTV) of the development (if appropriate) and identification of visual receptors and existing visual amenity. English Heritage's 'Seeing the History in the View' (2011) explains how the heritage significance of historically important views can be assessed.

- 4.21. A number of representative viewpoints should be selected as a basis for the visual assessment, choosing publicly accessible viewpoints that represent the various types of receptors and locations that will experience views of the development. Choice of viewpoints should particularly consider well visited areas, users of important open spaces (for example, Victoria and Mile End Park) and the Thames National Trail, and views from designated areas. The viewpoints should be agreed with LBTH before detailed assessment is undertaken.
- 4.22. The assessment should include an appraisal of sensitivity of the resources/receptors set out in the baseline.
- 4.23. Magnitude of change to the resources/receptors identified in the baseline should be assessed drawing on guidance contained in the IEMA Guidelines and the London View Management Framework (LVMF) SPG²⁴. For regionally important views, the assessment should set out how the proposal relates to the visual management guidance set out in the LVMF.
- 4.24. Significance of impacts should be determined by considering the sensitivity of the affected townscape resource or visual receptor, and the magnitude of change acting on that resource/receptor.
- 4.25. The townscape and visual impact assessment should be accompanied by Accurate Visual Representations (AVRs) to demonstrate the likely impacts. Locations for visual representations should be agreed with LBTH, but should include regionally and locally important views where these are affected. AVRs should be prepared in accordance with guidance contained in the LVMF SPG. The Landscape Institute's Advice Note 01/11 'Photography and photomontage in landscape and visual impact assessment' should also inform methods for production of visualisations.^{4.25} Where tall buildings are proposed, all relevant issues within the EH/CABE Guidance on Tall Buildings²⁵ should be fully addressed.

²⁴ Mayor of London, 2007. *The London View Management Framework The London Plan Supplementary Planning Guidance*

²⁵ English Heritage and CABE, 2007. *Guidance on Tall Buildings*.

- 4.26. All development on or adjacent to the Blue Ribbon Network, including the Thames Policy Area must be considered in terms of townscape and visual issues in respect to its water location.

TRAFFIC AND TRANSPORT

Issues to be considered

- Existing baseline traffic flows and junction capacities on the main highways surrounding the development site and the wider highway network where appropriate. Bus routes and stops, London Underground and Docklands Light Railway stations (lines and frequencies) and present patronage of these local public transport services, existing pedestrian and cycle journeys and facilities.
- The current land use of the development site, the existing trip attraction and travel mode to the site including car parking and cycle parking. Where the site has been disused for up to 12 months, a second baseline scenario may be provided showing trip attraction and travel modes for the current permitted use (clearly stating any assumptions). Any departure from this procedure should be agreed in advance with Strategic Transport as part of EIA scoping discussions.
- Impacts of demolition and construction traffic on the local and wider highway network including the routing of construction traffic, effects on pedestrian routes/footway and access to the site.
- The potential movements to, from and within the proposed development when operational considering:
 - public transport services;
 - pedestrians and cyclists;
 - vehicle access, including for emergency vehicles;
 - access for servicing (including vehicle size/type, frequency and location of unloading);
 - car parking.
- Impacts of trip generation movements on the road network (including the percentage increase in trips over the baseline and the impact on junction capacity), public transport systems and pedestrian and cycling facilities during the operation of the development.
- Environmental impacts as set out in the IEMA Guidelines for Environmental Assessment of Road Traffic²⁶ which include residential disturbance, severance, pedestrian and vehicle delay, noise and vibration, dust and dirt and air pollution (unless addressed elsewhere in the Scoping Report).

²⁶ IEMA, Undated. *Guidelines for Environmental Assessment of Road Traffic Institute of Environmental Management and Assessment*.

Methodological requirements

- 4.27. The Transport for London (TfL) Transport Assessment Best Practice Guidance²⁷ and/or the IEMA Guidelines for Environmental Assessment of Road Traffic²⁸ should be used to guide the traffic and transport assessment.
- 4.28. Baseline data and forecast trip generations should be collected and/or estimated in line with best practice guidance. Up to date travel surveys and/or databases should be used. TRAVL (Trip RAte Valid for London) is recognised as the most common and often most useful database of travel survey data in London,²⁹ additional data could also be obtained from the TRICS database where there are insufficient sites on TRAVL (as long as the choice of site is appropriate and the survey data is multimodal³⁰). Data collection methods should be agreed with LBTH including the current use of the site for the purpose of determining the baseline. Accident data (including safety aspects) and road speeds should also be considered.
- 4.29. The assessment should cover predicted construction/demolition phase traffic which can be estimated by reference to the Buildings Research Establishment (BRE) document 'Construction Site Transport, The Next Big Thing.'³¹ Other acceptable methods used to estimate construction/demolition traffic include prediction of trips based on a recent, comparable scheme, although this would need to be fully justified. Likely construction traffic routes should be established.
- 4.30. Appropriate computer based road traffic modelling package(s) (the appropriate model(s) will be dependent on the level and nature of the effect) should be identified and agreed with LBTH to assess junction capacity at baseline and forecast levels.

MICROCLIMATE

Issues to be considered

- Daylight/sunlight.
- Shadowing – permanent and transient.
- Light pollution – glare/solar glare, sky glow, light trespass, light ingress.
- Wind.

Methodological requirements

- 4.31. An envelope study should be carried out (see guidance in relation to the Pre-Scoping and Scoping stages above, at paras. 2.6 and 2.11).

²⁷ Transport for London, 2010. *Transport Assessment Best Practice – Guidance Document*.

²⁸ IEMA, undated. *Guidelines for Environmental Assessment of Road Traffic Institute of Environmental Management and Assessment*.

²⁹ Transport for London, 2010. *Transport Assessment Best Practice – Guidance Document*.

³⁰ The TRICS website www.trics.org provides good practice guidance on using TRICS.

³¹ Building Research Establishment (BRE), 2003. *Construction Site Transport, The Next Big Thing?*.

- 4.32. Assessment of daylight and sunlight effects should be undertaken with reference to the BRE report “Site Layout Planning for Daylight and Sunlight. A Guide to Good Practice”³² and BS 8206-2:2008.
- 4.33. The scope of the assessment should include those windows/rooms in both the proposed development and existing neighbouring properties which are likely to be affected by the new development (as defined in the BRE Guidance).
- 4.34. For daylight, the following parameters should be calculated:
 - 1) Vertical Sky Component (VSC)
 - 2) No Sky Line (NSL)
- 4.35. These should be used as the primary methods of measurement and should be presented on an absolute scale followed by a comparative scale measuring the percentage reduction.
 - 3) Average Daylight Factor (ADF)
- 4.36. This should be presented on an absolute scale for testing the adequacy of proposed new dwellings and can also be submitted to supplement, but not in place of, VSC and NSL for measuring the impact on neighbouring properties. In calculating the ADF values, the input variables for glazing transmittance, reflectance values and frame correction factors should be agreed with LBTH beforehand.
- 4.37. For sunlight, the annual probable sunlight hours (APSH) in summer and winter should be assessed for windows that face within 90 degrees of due south.
- 4.38. Permanent and transient overshadowing caused by the new development should be modelled using a suitable application, for example, the sun-path tracking feature within a CAD modelling package. Shadowing should be assessed hourly for 21 March (spring equinox) and analysed to show which areas of amenity space would be in shadow throughout the day.
- 4.39. The results of daylight, sunlight and shadowing assessments should be interpreted in relation to the acceptable limits suggested in the BRE Guidelines.
- 4.40. All data should be submitted in a form which can be independently verified and should include digital copies of any drawings, 3D models, calculation sheets, etc.
- 4.41. Lighting effects should be considered in relation to the Institute of Lighting Engineers (ILE) 2005 publication “Guidance Notes for the Reduction of Obtrusive Light”. Potential effects of lighting on both human and ecological receptors should be considered within the ES.
- 4.42. Assessment of wind effects should be undertaken using wind tunnel modelling (for buildings over 10 storeys high³³) and CFD or desk study (for buildings less than 10

³² Building Research Establishment, 2011. *Site Layout Planning for Daylight and Sunlight. A Guide to Good Practice.* (BRE 209).

³³ Sustainable Design and Construction, 2006. *The London Plan Supplementary Planning Guidance.*

storeys high) to determine whether the pedestrian level wind microclimate meets the Lawson Comfort Criteria for the uses for which it is intended.

- 4.43. Microclimate effects should be assessed for the operational phase of the development, but consideration should also be given to any temporary effects during construction for example, light pollution from floodlighting of construction sites; or shading by cranes, sheeted scaffolding or other temporary plant or structures.

AIR QUALITY

Issues to be considered

- Identification of sensitive receptors and sources of emissions (during demolition, construction and operational phases). Qualitative and quantitative evaluation of existing and opening year air quality having due regard to the entire borough's declaration as an Air Quality Management Area.
- Impacts of dust during the demolition and construction phases of the development.
- Impacts of vehicle and plant emissions during the demolition and construction phases of the development on air quality including both on-site plant and vehicles and vehicles accessing the site by the public highway.
- Impacts of road traffic emissions from traffic generated by the development in its operational phase including consideration of traffic congestion.
- Impacts of emissions from any plant operating as part of the development on air quality, for example, combined heat and power (CHP) plant.
- Impact of the development on LBTH's Air Quality Action Plan (AQAP).
- Odour from any wastewater storage facilities, pumping stations or waste storage/transfer facilities of significant size.

Methodological requirements

- 4.44. The methodology for the air quality assessment must be agreed with LBTH's Air Quality Officer (Environmental Protection) prior to any assessment work being undertaken.
- 4.45. The assessment should be undertaken in the context of the LBTH Air Quality Action Plan and the Environmental Protection UK 2010 guidance.³⁴
- 4.46. Air quality impacts from construction/demolition should be subject to a screening assessment based on London Councils guidance³⁵ and other best practice guidance³⁶.

³⁴ EPUK, 2010. *Development Control: Planning for Air Quality (2010 Update)*.

³⁵ Defra, 2009 Local Air Quality Management Technical Guidance. LAQM. TG(09)

³⁶ GLA and London Councils, Nov 2006. *The control dust and emissions from construction and demolition: Best Practice Guidance*.

- 4.47. Baseline air quality could be determined by reference data from LBTH's monitoring stations. Baseline monitoring at selected locations may be necessary in some cases; the need for baseline monitoring should be established in consultation with LBTH's Air Quality Officer.
- 4.48. Where air quality impacts are potentially significant, or the development or its settings are complex, an atmospheric dispersion model should be used to predict air pollutant concentrations including assessing the impact of road traffic emissions, and where relevant, odour and emissions from industrial plant or developments.
- 4.49. Recent meteorological data sets (within last five years) should be used to support the modelling. A minimum of one year's hourly-sequential data representing the worse case 'polluted year' should be used.
- 4.50. The model should be used to predict air pollutant concentrations which are comparable with the current air quality and UK Air Quality Objectives. Predicted concentrations for the period of construction and the year of completion and full operation of the development, both with and without the development, should be presented. The assessment should provide a transparent account of the modelling undertaken, all assumptions made and all input data (for example, traffic flows) used.
- 4.51. Emissions particularly for PM10, PM2.5 and NO2 must be quantified for the energy strategy. Details of energy centre developments should be provided including the fuel type to be used, the thermal rating and the location of the boiler plant.
- 4.52. Appropriate measures should be proposed to mitigate any significant impacts on air quality (demolition, construction and operational phases) and the significance of the residual impacts should be stated.
- 4.53. Mitigation of air quality impacts of construction/demolition should reflect the London Councils Best Practice Guidance³⁷. Other sources of information include the BSI Code of Practice for Demolition³⁸ and LBTH's Code of Construction Practice.
- 4.54. The requirements for air quality monitoring and provision for air quality monitoring equipment should be set out in the Framework EMP.

NOISE AND VIBRATION

Issues to be considered

- Noise (includes ground borne noise where relevant) and vibration impacts of demolition and construction works on sensitive receptors, including proposed working hours and the duration of particularly noisy activities.
- Impacts of vibration caused by piling works, demolition, vibrating rollers and other similar heavy engineering activities.

³⁷ Mayor of London, 2006. *Best Practice Guidance: The control of dust and emissions from construction and demolition*.

³⁸ British Standards Institution BS6187, 2000. *Code of Practice for Demolition*.

- Where the development is itself a noise or vibration generator (for example, a commercial or industrial development, new road or railway), noise and vibration impacts of its operation on sensitive receptors.
- Where the development is a residential or mixed residential/commercial development, the noise impact of nearby noise sources on the development.
- Where the development generates significant construction traffic, a road traffic noise and vibration assessment to predict impacts on sensitive receptors.
- Where the development generates significant additional traffic during its operational phase, a road traffic noise and vibration assessment to predict impacts on sensitive receptors.

Methodological requirements

- 4.55. The suitability of a site for residential development should be assessed according to PPG24³⁹ and mitigation measures proposed using guidance in BS8233⁴⁰ to ensure an acceptable level of protection to residents against noise. Commercial premises may need a BS4142 assessment and kitchen extract systems will need to follow the Defra Guidance. Control of odour and noise from commercial kitchen exhaust systems.
- 4.56. Demolition and construction noise and vibration levels should be predicted using the methods in BS 5228.⁴¹ Noise impacts should be predicted based on the actual plant, vehicles and machinery that are likely to be used and the use of noise maps for easy assessment is advisable. Impacts during the noisiest periods should be considered and addressed in terms of “Best Practicable Means” (see S72 Control of Pollution Act 1974). Where the types of plant are not known, a worst case assumption should be assumed, a sound power level of 125 dB(A) may be adopted for works not requiring piling, demolition or heavy engineering. These works may have a greater noise impact than above and will need to be assessed accurately. A sound power level of 125 db(A) is equivalent to several noisy machines, including dozers, excavators and drilling rigs working side by side together. The cumulative effect of all works, including any other works in close proximity not necessarily under the developer’s control, will need to be taken into account.
- 4.57. Predicted noise and vibration levels at sensitive receptors should be compared with the limits specified in LBTH’s Code of Construction Practice or other limits agreed in consultation with LBTH’s Environmental Health Officer. Mitigation measures, examples of which are given in the Code of Construction Practice, should be proposed to ensure compliance. Further guidance can be sought through BS5228; Code of Practice for noise and vibration control on construction and open sites.
- 4.58. A baseline noise survey should be undertaken at the nearest noise-sensitive receptors to establish current ambient levels of noise during the day, in the evening and at night. The methodology of the baseline noise survey should be agreed with

³⁹ Department for Communities and Local Government. *Planning Policy Guidance 24: Planning and Noise*: www.communities.gov.uk/documents/planningandbuilding/pdf/156558.pdf.

⁴⁰ BS 8233, 1999. *Sound Insulation and Noise Reduction for Buildings. Code of Practice*.

⁴¹ BS 5228-1, 2009. *Noise and Vibration Control on Construction and Open Sites. Noise*.

LBTH's Environmental Health Officer. The survey should be carried out over at least four days and include the days that works are likely to be carried out. These should include at least three typical week days and ideally monitoring over a seven day period. The parameters and metrics should include: $LA_{eq(1\text{ hour})}$, $LA_{90,t}$, where t is the agreed assessment time period, $LA_{10,t}$, $LA_{max(\text{slow time weighting})}$.

- 4.59. The assessment of operational noise from fixed sources should be based on BS 4142.⁴³ Operational noise at any sensitive receptor should ideally be inaudible. Vibration and structure borne noise transmission should be taken into account. However, this may be difficult to achieve in practice and a rating level will need to be agreed with the local authority. BS 4142 suggests that the greater this difference is above the background noise level, the greater the likelihood of complaints. A difference of around +10 dB or more indicates that complaints are likely. A difference of around +5 dB is of marginal significance. If the rating level is more than 10 dB below the measured background noise level then this is a positive indication that complaints are unlikely.
- 4.60. Changes in road traffic noise levels resulting from demolition, construction or operational traffic should be assessed using the Calculation of Road Traffic Noise (CRTN) methodology. Noise changes of greater than 1dB(A) (a 3 dB change would be equivalent to doubling the road traffic flows) are considered significant.
- 4.61. Vibration assessments should follow the guidance in BS 6472,⁴⁴ which deals with human response to vibration in buildings; BS 5228⁴⁵, which deals with construction vibration; and BS 7385,⁴⁶ which deals with buildings. Construction sites should measure in terms of peak particle velocity (PPV) and vibration dose value (VDV) should be used to assess the human response to vibration for other activities.
- 4.62. Noise mapping, if required, should be undertaken using WS Atkins "Noise Map" software or equivalent.
- 4.63. Appropriate measures should be proposed to mitigate any significant noise or vibration impacts and the significance of the residual impacts should be stated. For any noise and vibration during the demolition and construction phase the applicant will have to commit to applying for a Section 61 under the Control of Pollution Act (COPA) 1974.
- 4.64. The requirement for noise and/or vibration monitoring and the provision of monitoring equipment should be set out in the Framework EMP.

⁴² $LA_{eq(1\text{ hour})}$ is the Equivalent Continuous A-Weighted Sound Pressure Level. The L_{Amax} is the maximum value that the A-weighted sound pressure level reaches during a measurement period. The L_{A90} is the noise level exceeded for 90% of the measurement period and is generally used to quantify the background noise level,

⁴³ BS 4142, 1997. *Method for Rating Industrial Noise Affected Mixed Residential and Industrial Areas.*

⁴⁴ BS 6472, 2008. *Guide to Evaluation of Human Exposure to Vibration in Buildings, Parts 1 and 2.*

⁴⁵ BS 5228-2, 2009. *Noise and Vibration Control on Construction and Open Sites. Vibration.*

⁴⁶ BS 7385-2, 1997. *Evaluation and Measurement for Vibration in Buildings. Guide to Damage Levels from Ground-borne Vibration.*

WATER RESOURCES, HYDROLOGY AND FLOOD RISK

Issues to be considered

- Demand for water for potable and non-potable (for example, bathing, washing and landscape irrigation) in a development and whether the water supply system has adequate capacity to meet this demand in providing water of the appropriate quality.
- Wastewater arisings from the development and whether the foul or combined sewer system has capacity to convey and treat the predicted flows and loads.
- Flood risk to the development (from pluvial, fluvial and tidal (undefended/defended/breached), surface water, groundwater, drain and sewer, reservoir/canal sources) and the risk of increased flooding to third parties resulting from:
 - loss of flood storage volume due to the construction of the development in a floodplain;
 - impedance of floodwater conveyance routes; and
 - Increased surface water runoff from the development compared to existing or greenfield levels.
- Impacts on surface and groundwater from construction and operation, including pollution control (silt, hydrocarbons, clays and groutings for example, bentonite, alkaline runoff from concreting operations, etc.), impacts on groundwater flow and levels (foundations or basements impeding flow; dewatering during construction etc.); contamination issues (leachate from contaminated soils; piling providing a contaminant pathway to aquifers, etc.).
- Water efficiency and reuse/recycling incorporated into the scheme design to reduce the demand for water and the volumes of surface and foul water discharged from the site.
- Appropriate attenuation and discharge arrangements for surface and foul water during both construction and operation to avoid adverse impacts on surface water abstractions, groundwater source protection zones, other sensitive receptors, utilities infrastructure, and blocking/surcharging of existing drainage systems, which can lead to sewer flooding.
- Potential for the development to contribute to the improvement of nearby surface water bodies; for example, through deculverting, dredging, and other aesthetic and ecological improvements.
- Impacts on surface and groundwater from construction and operation, including pollution control (silt, hydrocarbons, clays and groutings e.g. bentonite, alkaline runoff from concreting operations, etc.), impacts on groundwater flow and levels (foundations or basements impeding flow; dewatering during construction etc.); contamination issues (leachate from contaminated soils; piling providing a contaminant pathway to aquifers, etc.).

- Impacts on groundwater level and temperature caused by re-injection Ground Source Heat Pump (GSHP) schemes during operational phase.

Methodological requirements

- 4.65. When considering flood risk, reference should be made to the Strategic Flood Risk Assessment for LBTH (2008). The need for and scope of a Flood Risk Assessment (FRA) should be determined and carried out in accordance with the requirements of PPS25⁴⁷ and in consultation with the Environment Agency. Allowance should be made for climate change within the FRA. Mitigation measures should include (but not be limited to) design of the development to locate all or the most vulnerable parts of the development in Flood Zone 1 and less vulnerable uses for example retail, amenity space or parking in Flood Zones 2 or 3; design of floor levels and access/egress above flood levels; development of evacuation plans if necessary; and the use of SuDS⁴⁸ to control surface water runoff.
- 4.66. The development design should include the use of water efficient fixtures and fittings; greywater reuse; rainwater harvesting; and other methods as appropriate to reduce the demand for piped water to the building, in accordance with The Code for Sustainable Homes⁴⁹. Examples of such measures are given in publications such as the East of England Water Partnership's Water Efficient Buildings – A Developer's Guide⁵⁰. The assessment should take the effects of these into account when calculating the residual water demand for the development.
- 4.67. Water supply and wastewater treatment capacity and information on the existing drainage network should be established through consultation with Thames Water. The applicant may in some cases need to fund studies to ascertain whether the proposed development will lead to overloading of the existing water infrastructure. The drainage design should, where possible, avoid the use of combined sewers in order to reduce the potential for sewer flooding.
- 4.68. All water sensitive receptors should be identified and their current condition established. Short, medium and long term impacts on each receptor from construction and operation of the development should be predicted and the significance of impacts both before and after mitigation should be assessed. An example of how to assess impacts on water is given in the Department of Transport's TAG Unit 3.3.11: The Water Environment Sub-Objective⁵¹.
- 4.69. Consideration should be given to the suitability and effect of re-injection GSHP or non re-injection schemes upon aquifers, specifically groundwater level and temperature following guidance such as Managing Open Loop Ground Source Heat Pumps (GSHP)⁵². The Environment Agency should be consulted on the scheme and

⁴⁷ DCLG, 2006. *Planning Policy Statement 25: Development and Flood Risk*; DCLG, 2009 *Planning Policy Statement 25: Development and Flood Risk Practice Guide*.

⁴⁸ CIRIA Guidance C697, 2007. *The SuDS Manual*.

⁴⁹ DCLG, 2008. *Code for Sustainable Homes: Technical Guide*.

⁵⁰ http://www.water-efficient-buildings.org.uk/?page_id=418

⁵¹ http://www.dft.gov.uk/webtag/webdocuments/3_Expert/3_Environment_Objective/3.3.11.htm#1_2_7

⁵² Environment Agency, 2010 *Managing Open Loop Ground Source Heat Pumps (GSHP) Thames Region, North East Area*.

the cumulative effect of the scheme should be assessed in conjunction with other local GSHP schemes.

- 4.70. Mitigation measures for construction impacts should be specified with reference to relevant guidance for example, LBTH's Code of Construction Practice; CIRIA Guidance C532 Control of Water Pollution from Construction Sites and the Environment Agency Pollution Prevention Guidelines as appropriate. Examples of methods for mitigating construction impacts on water are given on CIRIA's Compliance Plus website⁵³.

SOILS AND GROUND CONTAMINATION

Issues to be considered

- Current, recent and former industrial uses of the development site which may have led to soil contamination.
- Current, recent and former industrial uses of adjacent and nearby sites which may have led to soil contamination outside the site boundary which poses a hazard to the development site through migration of contaminants.
- Geological, hydrogeological, hydrological and topographical conditions of the site and its surroundings that could influence the impacts of soil contaminants.
- Impacts of soil contaminants on construction workers during demolition and construction works.
- Impacts of soil contaminants on sensitive receptors beyond the development site boundary, for example through migration of contaminated dust emissions or hazardous gases during construction and demolition.
- Impacts of soil contaminants on controlled waters, including site drainage and run-off, surface waters and groundwater, during construction and demolition.
- Requirements for treatment and/or disposal of contaminated soil during demolition and construction, including an assessment of impacts on the waste management facilities involved.
- Alternative mitigation measures for soil contaminants, including containment on site.
- Impacts of soil contaminants on end users of the site during the operation of the development, including impacts from further construction/extension work, installation, repair and maintenance of services and other below-ground works.

Methodological requirements

- 4.71. LBTH is the relevant authority for the management of land affected by contamination through the development planning process and well as land defined as Contaminated Land under Part 2A of the Environmental Protection Act 1990 and the Contaminated

⁵³ http://www.ciria.org.uk/complianceplus/4_guidance2.htm?g_id=k

Land (England and Wales) Regulations 2000. The Environment Agency is the relevant authority for Special Sites designated under Part 2A, for surface water and groundwater pollution and for waste management and disposal.

- 4.72. When considering contaminated land impacts, the site should be assessed according to the advice within PPS23: Planning and Pollution Control, Annex 2⁵⁴ and reference should be made to the guidance in CLR 11⁵⁵. When the proposed development is a residential or mixed residential/commercial development, the guidance in The NHBC and Environment Agency R&D Publication 66⁵⁶ on “Guidance for the Safe Development of Housing on Land Affected by Contamination” should be followed.
- 4.73. As a minimum, a Phase I Environmental Site Assessment (ESA) should be undertaken to support the ES. This should identify and assess potential hazards from contamination and where there is the possibility that the site could be contaminated⁵⁷. The ES should identify the potential contaminants and the health risks they could pose to the end users of the proposed development. The scope of the Phase I ESA should include as a minimum a walkover survey, a comprehensive review of historical maps, photographs and public domain information relating to industrial uses of the land, pollution incident registers, licences and permits and other data relating to ground conditions held by LBTH, the Environment Agency, British Geological Survey and others. The ESA should include a preliminary risk assessment based on a source-pathway-receptor approach. Where pollutant linkages are identified within the preliminary risk assessment, details of how to isolate the source of contamination or break pathways should be provided in a proposed Phase 2 Site Investigation.
- 4.74. In many cases, applicants may not have had the opportunity to undertake Phase 2 site investigations prior to submission of the ES. However, where such investigations have taken place a Phase 2 Site Investigation report should be provided to support the ES. Phase 2 site investigations should be undertaken in accordance with published best practice guidance such as BS10175⁵⁸. Please note that CLR 7-10 and CLEA UK software have been withdrawn by the Environment Agency since August 2008. The risk assessment methodology should therefore be consistent with current guidance available on the Environment Agency’s website.
- 4.75. If the Phase I ESA report indicates potentially significant risks and developers are not able to submit a Phase 2 Site Investigation report with the ES, a requirement to undertake the Phase 2 work and subsequent stages in the investigation and remediation process will normally be made in the form of planning conditions.
- 4.76. Phase 2 investigations should include a risk assessment of the contamination at the site. Risk assessment can be undertaken by comparing measured levels of soil contamination with generic assessment criteria, such as the UK Soil Guideline Values

⁵⁴ DCLG, 2004. *Planning Policy Statement 23: Planning and Pollution Control Annex 2: Development on Land Affected by Contamination*.

⁵⁵ Environment Agency and Defra, 2004. *Model Procedures for the Management of Land Contamination*. CLR 11.

⁵⁶ NHBC and Environment Agency, 2008. *Guidance for the Safe Development of Housing on Land Affected by Contamination*. R&D Publication 66.

⁵⁷ As defined by HMSO, 1990. Environmental Protection Act: Part 2A.

⁵⁸ British Standards: BS10175, 2001. *Investigation of potentially contaminated sites. Code of practice*.

or by deriving site-specific assessment criteria. Specific guidance on the use of these criteria is available on the Environment Agency website.⁵⁹

- 4.77. Where the risk assessment indicates that remediation is required a report or series of reports setting out the remedial objectives, remedial options, selected remedial strategy and implementation plan should be submitted for approval. Occupation of the completed development will generally not be permitted until a Verification Report to demonstrate effective implementation of the agreed remediation strategy is submitted and approved. This should include a description of the remedial works, analytical data used to verify that the works have achieved the agreed remedial objectives, photographs and as-built drawings of the works, records of consultations and agreements with regulatory authorities, records relating to waste management and disposal held under the Duty of Care Regulations (see section on Waste in this Guidance), environmental monitoring data, a description of any residual contamination and arrangements for any post-remediation management/monitoring.
- 4.78. Intrusive site investigations are subject to the Construction (Design and Management) Regulations 2007 and an associated Approved Code of Conduct. For all investigations a health and safety risk assessment should be carried out.

ECOLOGY

Issues to be considered

- Impacts on statutory protected sites (such as SSSIs, LNRs and sites designated under European Legislation) and non-statutory protected sites (SINCs)⁶⁰. For example, development activity occurring close to the River Thames should consider potential effects, such as pollution, on the River Thames and Tidal Tributaries SINC. If there is a possibility that there could be significant impacts on a European Site (for example a development in the north of the borough which could have impact on air quality in the Epping Forest Special Area of Conservation), a Habitats Regulations Assessment will be required. The ES should provide information sufficient for the competent authority to undertake the assessment.
- Impacts on habitats including those listed on the UK Biodiversity Action Plan (BAP)⁶¹, London BAP⁶² and the Tower Hamlets BAP⁶³. For example, former industrial sites may contain habitats which are rich in plants and insects species. This habitat type is listed in both the UK and London BAPs.

⁵⁹ <http://www.environment-agency.gov.uk/research/planning/33706.aspx>

⁶⁰ SSSI = Site of Special Scientific Interest; LNR = Local Nature Reserve; SINC = Site of Importance for Nature Conservation

⁶¹ UK Biodiversity Action Plan, undated. *UK List of Priority Species and Habitats*. [on-line] <http://jncc.defra.gov.uk/default.aspx?page=5705> (accessed May, 2011).

⁶² London Biodiversity Partnership, undated *London's action plan*. [on-line]. <http://www.lbp.org.uk/londonap.html> (accessed May, 2011).

⁶³ London Borough of Tower Hamlets, 2009. *Tower Hamlets Local Biodiversity Action Plan (LBAP) Sept 2009 – Sept 2014*. LBTH <http://www.towerhabitats.org/5/LBAP/LocalBiodiversityActionPan.pdf> (accessed May, 2011)

- Impacts on legally protected species and other notable species (such as those in the UK, London and Tower Hamlets BAPs; Red Data Book invertebrates⁶⁴; and Birds of Conservation Concern⁶⁵). For example, bats are protected under European legislation and certain bat species are listed on the UK, London and Tower Hamlets BAPs. Bats may roost within buildings and mature trees on development sites across Tower Hamlets. Another example is the black redstart: a bird listed on the Schedule I of the Wildlife and Countryside Act, 1981 (as amended). This nationally rare species inhabits areas of sparse ‘wasteland’ vegetation and stony ground with nesting ledges. The London population is concentrated along the Thames east of Tower Bridge, extending over the majority of the Borough of Tower Hamlets.
- Opportunities for delivery of biodiversity enhancement in the final development scheme should be explored (for example, installation of green roofs, living walls and other wildlife friendly planting; SuDS; and roosting features for bats and birds). This may contribute to credits available under the Building Research Establishment Environmental Assessment Method (BREEAM⁶⁶) and Code for Sustainable Homes (CSH⁶⁷) for ecological enhancement and improvements in ecological value.

Methodological requirements

- 4.79. A detailed account is provided by the Institute of Ecology and Environmental Management (IEEM) of the scoping process for Ecological Impact Assessment (EclIA)⁶⁸.
- 4.80. Reference should be made to the legislative and planning policy framework, including:
- relevant European (for example, EC Habitats Directive⁶⁹) and UK legislation (for example, the Wildlife and Countryside Act, 1981 as amended⁷⁰) including relevant case law⁷¹;
 - national, regional and local planning policy (for example, but not restricted to Planning Policy Statement 9⁷², the London Plan^{73, 74} and the Mayor’s Biodiversity Strategy⁷⁵; Tower Hamlets planning policy);

⁶⁴ JNCC, undated. *Red data books*. [on-line] <http://www.jncc.gov.uk/page-2133> (accessed May, 2011).

⁶⁵ Eaton MA, Brown AF, Noble DG, Musgrove AJ, Hearn R, Aebischer NJ, Gibbons DW, Evans A and Gregory RD, 2009. Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds*. 102: 296–341.

⁶⁶ <http://www.breeam.org/index.jsp>

⁶⁷ <http://www.communities.gov.uk/planningandbuilding/sustainability/codesustainablehomes/>

⁶⁸ IEEM, 2006. *Guidelines for Ecological Impact Assessment in the United Kingdom*. IEEM. <http://www.ieem.net/ecia/> (accessed May, 2011. Note that at the time of writing, IEEM was in the process of reviewing and, if appropriate, updating the guidance document).

⁶⁹ Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora which is transposed to UK law by the [Conservation of Habitats and Species Regulations 2010](http://www.jncc.defra.gov.uk/page-1379) www.jncc.defra.gov.uk/page-1379 (accessed May, 2011).

⁷⁰ HMSO, 1981. *Wildlife and Countryside Act*.

⁷¹ www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/legislation.aspx

⁷² ODPM [now DCLG], 2005. *Planning Policy Statement 9: Biodiversity and Geological Conservation*. DCLG. London.

- relevant Biodiversity Action Plans (BAPs) (for example, the UK BAP, the London BAP and Tower Hamlets BAP);
 - Natural England standing advice⁷⁶ for Local Planning Authorities which includes advice regarding when surveys may be required and the appropriate level of survey effort.
- 4.81. Information should be provided about ecological baseline conditions so that it can be determined whether the context of the site is sufficiently understood to justify the proposed EclA approach. Dependent on the complexity of the site, the proposed development activities and the project programme this may include the following information:
- Publicly available biological records such as those available on the National Biodiversity Network⁷⁷ (NBN for biological records); and Natural England and Joint Nature Conservation Committee (JNCC) data sources⁷⁸. Please note that the data providers for the NBN biological records may need to be contacted at this stage to obtain permission for use of this data (for example, Greenspace Information for Greater London (GiGL), the local biological records centre for London, is the main data provider for the National Biodiversity Network).
 - GiGL or other local or regional wildlife groups, who may hold relevant information, should be consulted.
 - Recent aerial photography.
 - Preliminary consultation with consultees if appropriate (for example, Natural England⁷⁹ and local wildlife groups).
 - Preliminary site visits and/or a Phase I Habitat Survey.
 - Further ecological surveys which may be required to enable determination of a robust ecological baseline.
- 4.82. The IEEM Guidelines⁸⁰ detail a framework for valuation of ecological receptors, the determination of impact magnitude and a rationale for the determination of impact

⁷³ Mayor of London, February, 2008. *The London Plan: Spatial Development Strategy for Greater London (Consolidated with Alterations since 2004)* [on-line]. <http://www.london.gov.uk/thelondonplan/> (accessed May, 2011).

⁷⁴ Mayor of London, October, 2009. *The London Plan: Spatial Development Strategy for Greater London: Consultation draft replacement plan* [on-line]. <http://www.london.gov.uk/shaping-london/london-plan/strategy/download.jsp> (accessed May, 2011).

⁷⁵ Mayor of London, July, 2002. *Connecting with London's nature The Mayor's Biodiversity Strategy*. [on-line] http://legacy.london.gov.uk/mayor/strategies/biodiversity/docs/strat_full.pdf (accessed May, 2011).

⁷⁶ http://www.naturalengland.org.uk/regions/south_east/ourwork/standingadvice/

⁷⁷ On-line: <http://data.nbn.org.uk/> (accessed September, 2009).

⁷⁸ On-line: <http://www.magic.gov.uk/>; <http://www.jncc.gov.uk/>; <http://www.naturalengland.org.uk/publications/maps/default.aspx> (accessed May, 2011).

⁷⁹ Refer to Natural England standing advice in the first instance)

⁸⁰ IEEM, 2006. *Guidelines for Ecological Impact Assessment in the United Kingdom*. IEEM. <http://www.ieem.net/ecia/> (accessed May, 2011. Note that at the time of writing, IEEM was in the process of reviewing and, if appropriate, updating the guidance document).

significance. However, it should be noted this framework has no legal standing and should not substitute for professional judgement. It may be appropriate to elevate the value given to local nature conservation priorities such as those detailed in the London and Tower Hamlets BAPs. The proposed ecological surveys and methods should be stated referencing best practice guidance. IEEM maintains a directory of sources of ecological survey methods/best practice guidance on ecological survey⁸¹.

- 4.83. A range of best practice documents have been prepared to offer guidance on biodiversity enhancement, for example, *Design for Biodiversity: Guidance for Development in London*⁸². LBTH has also published a report detailing broad opportunities for biodiversity enhancement across the Borough⁸³. The study provides an ecological evidence base and recommendations for areas where biodiversity enhancement should be targeted, including 14 Biodiversity Enhancement Zones (BEZs). Reference should also be made to the LBTH Biodiversity Action Plan.

ARCHAEOLOGY AND CULTURAL HERITAGE

Issues to be considered

- The presence of designated areas of cultural heritage value at a national, regional or local level such as Conservation Areas, Listed Buildings (including the local list) Registered Historic Parks and Gardens (and Battlefields) and World Heritage Sites (the Tower of London World Heritage Site is situated in the Borough).
- Significant areas of Tower Hamlets have been recognised as having archaeological potential. The archaeological importance, potential and history of the site including any designations (Scheduled Ancient Monuments, designated Area of Archaeological Priority) should be established and contingencies for unknown archaeological features considered. Reference to sensitivity in the area should also be considered with regard to past development on the site significantly removing any archaeological potential.
- Whether the development will have an impact on architectural and historic heritage assets and archaeological features and their settings.

Methodological requirements

- 4.84. The presence of designated areas of cultural heritage should be established through data held by LBTH. LBTH has Character Appraisals and Management Guidelines for each of the Conservation Areas in the Borough and a register and interactive map of listed buildings. English Heritage hold and maintain the Register of Parks and Gardens and information on Battlefields. Impacts upon the World Heritage Site should include how the proposal would impact on the Outstanding Universal Value of this Heritage

⁸¹ IEEM, no date. *Sources of Survey Methods*. [on-line] <http://www.ieem.net/surveymethods.asp> (accessed May, 2011).

⁸² On-line: <http://www.d4b.org.uk/index.asp> (accessed May, 2011).

⁸³ Land Use Consultants and the National Energy Foundation, 2008. *Opportunities for Sustainable Energy and Biodiversity Enhancement within the London Borough of Tower Hamlets - Final Report*. London [on-line] http://www.towerhamlets.gov.uk/lgs/851-900/856_local_development_framework/evidence_base.aspx (accessed May, 2011).

Asset, with reference to the Tower of London World Heritage Site Management Plan⁸⁴, the Draft SPG, London World Heritage Sites – Draft Guidance on Setting⁸⁵, Circular 07/09 on the Protection of World Heritage Sites and the accompanying English Heritage guidance to Circular 07/09 on The Protection and Management of World Heritage Sites in England.

- 4.85. When documenting the general historical background to the site, reference should be made to English Heritage's National Monuments Record (NMR), The Greater London Historic Environment Record (HER) (formerly the Greater London Sites and Monuments Record), the London Archaeological Archive and Resource Centre (LAARC), the London and Metropolitan Archives and the Royal Institute of British Architects Library which contain extensive collections on archeology and architecture.
- 4.86. Consultation with the Greater London Archeology Advisory Service who provide archeological advice to LBTH should be undertaken and reference should be made to their guidance document 'Standards for Archeological Work'.⁸⁶
- 4.87. Further guidance on how to address archaeological and cultural heritage issues is included in Planning Policy Statement 5 (PPS 5): Planning for the Historic Environment. Guidance on assessing impacts on the setting of Heritage Assets is contained in English Heritage's guidance on 'The Setting of Heritage Assets'⁸⁷ In addition, English Heritage's 'Seeing the History in the View' (2011) explains how the heritage significance of historically important views can be assessed and the 'building in context' website [<http://www.building-in-context.org/toolkit.html>] provides useful information on how integrate development into historically sensitive contexts.

HEALTH AND WELLBEING

- 4.88. Health and Wellbeing impacts should be assessed in a stand alone chapter within the ES. Cross-references should be made to other relevant chapters in the ES, such as Socio-Economic Impacts, Noise and Vibration, and Air Quality, etc., to make the links between impacts identified and their potential effects on health and wellbeing of existing and new residents and workers (for example, noise/stress, air quality/respiratory disease and flood risk/anxiety.)
- 4.89. The NHS London Healthy Urban Development Unit (HUDU) Checklist 'Watch out for Health'⁸⁸ should be used to screen and scope the issues and likely significant impacts. The assessment may consider particular health issues as appropriate to the scheme and location, for example mental health; obesity; cardiovascular disease; respiratory disease; injuries; excessive summer and winter mortality.

⁸⁴ Historic Royal Palaces, 2007. *Tower of London World Heritage Site Management Plan*.

⁸⁵ Greater London Authority, 2011. *Draft SPG London World Heritage Sites – Guidance on Settings* <http://www.london.gov.uk/publication/world-heritage-sites-spg> (accessed Dec, 2011).

⁸⁶ Greater London Archeology Advisory Service, 2009. *The 'Standards for Archeological Work' Consultation Draft*

⁸⁷ English Heritage, 2011. *The Setting of Heritage Assets*

⁸⁸ Healthy Urban Development Unit (HUDU) Checklist, 2009. *Watch out for Health*

Issues to be considered

- Cumulative impacts of construction and operation on existing and new residents and employees, including noise and vibration, dust, daylight and sunlight impacts, and air quality impacts, which might combine to cause significant stress or health and wellbeing impacts. These should be briefly summarised from other chapters in the ES and brought together when considering the overall cumulative impacts on health and wellbeing from the scheme alone, and in combination with other developments. A tabular approach will be helpful to clearly identify impacts on health and wellbeing across EIA topics, with a possible approach provided below.

Table 4.2: Healthy Communities - Self Appraisal Matrix⁸⁹:

	Is it relevant?	Is it significant?	Positive or negative impact?	Appraisal
Healthy Lifestyles				
Housing Quality				
Access to Work				
Accessibility				
Food Access				
Crime Reduction and Community Safety				
Air Quality and Neighbourhood Amenity				
Social Cohesion and Social Capital				
Public Services				
Resource Minimisation				
Climate Change				

⁸⁹ from HUDU, 2009, Healthy Sustainable Communities Spatial Planning Self Appraisal Checklist for London

- Impacts of residential schemes on levels of overcrowding within the Borough, for example by increasing the number of affordable homes, and on the ability of residents to live independently (for example, elderly residents or wheelchair users).
- Impacts on health services, including impacts on the quality, usability and accessibility of existing health facilities, and proposals to meet any identified need for new facilities.
- Provision of accessible open space for formal and informal recreation, play and exercise.
- Sustainable transport and movement, including the extent to which development facilitates and encourages walking and cycling, including to access public services, leisure, recreation and public transport nodes.
- Community cohesion, severance, fragmentation or isolation (for example, due to proposed land uses, urban design / layout, or other factors).
- Crime levels and fear of crime (for example, proposals to improve street safety through natural surveillance, the proposed mix of uses and/or increased activity, or increased lighting).
- Impacts of locating residential development in food deserts (areas with low proximity and access to food stores), opportunities for local food production (including allotments), and access to healthy living centres.⁹⁰

Methodological requirements

- 4.90. Baseline characteristics relating to the wellbeing of the local population should be identified using information such as local deprivation levels, health facilities, crime, obesity rates, and open space provision. The health characteristics of the borough as a whole and the London region should also be considered. Current baseline conditions should be established by undertaking a review of the latest available information sources⁹¹ and through consultation.
- 4.91. Proposed developments should be judged in terms of the balance between potential negative and positive effects on health and whether these impacts are direct or indirect, short or long term and permanent or temporary⁹².
- 4.92. Assessments of impacts relating to crime and fear of crime should be completed according to the key points set out in Secured by Design⁹³.

⁹⁰ For further guidance, see NHS London Healthy Urban Development Unit, Land Use Consultants and CREH, (2007) *Delivering Healthier Communities in London* (http://www.healthyurbandevlopment.nhs.uk/pages/key_docs/key_documents_hudu.html)

⁹¹ Key sources will include Section 4 of the Core Strategy 2025 (see above), the current Tower Hamlets Community Plan, Local Development Framework Annual Monitoring Report and Local Area Profiles derived from census data (<http://www.audit-commission.gov.uk/>)

⁹² Briggs, David J. "A framework for integrated environmental health impact assessment of systemic risks" *Environmental Health* November 2008, 7:61 <http://www.ehjournal.net/content/7/1/61>

⁹³ Secure by Design (2004) *Secure by Design Principles*. <http://www.securedbydesign.com/pdfs/SBD-principles.pdf>

- 4.93. When considering the impacts of a proposed development on open space and parks, planning policy outlined in national planning policy (PPS9 and PPG17), the forthcoming Tower Hamlets Open Space Strategy (due to be published in late 2011), and the Tower Hamlets Green Grid Strategy (April 2010), as well as parts of the London Plan (2008) relevant to Metropolitan Open Land, Blue Ribbon Network, the Children and Young People's Plan and amenity space, should be taken into account. It may also be useful to refer to the latest consultation version of the Local Development Framework Proposals Map⁹⁴ as well as the 'Parks and Green Spaces' layer of the Tower Hamlets GIS mapping tool⁹⁵.
- 4.94. In determining impacts on physical activity, Sport England's guidance on urban design to promote active recreation should be followed. WebTAG should be consulted in determining impacts on physical fitness. For example, if a proposed development includes provisions to create new cycling or walking pathways, WebTAG's *Guidance on the Appraisal of Walking and Cycling Schemes* should be used.
- 4.95. Health Impact Assessment (HIA) should not be included within the ES, but is a useful tool to help to identify potential significant effects, and inform the Health and Wellbeing chapter. Developments which may require HIA to accompany a planning application include energy facilities, transportation developments, strategic developments (as defined by the London Plan) and waste water treatment plants.
- 4.96. Assessment of a development's impacts on health will not always be quantitative. When used, qualitative assessment should be robust and based upon professional judgement.
- 4.97. Any potential significant health impacts should be monitored pre and post construction. Applicants should set out how they intend to implement and fund this monitoring.

SOCIO-ECONOMICS

Issues to be considered

- Direct impacts on the local and regional economy such as new employment opportunities during the construction and operation of the development. Indirect impacts on the local economy such as increased local spending.
- Impacts the development may have on the existing local community such as changes in the population demographic and the effect this may have on community services and facilities. Other impacts of the development may include changes in the quality of life, community cohesion and amenity; some impacts may be concentrated within particular groups in the community including vulnerable groups.

Methodological requirements

- 4.98. Baseline characteristics within the local area of the development including the local economy and local community, using information such as population information

⁹⁴ <http://moderngov.towerhamlets.gov.uk/ieListDocuments.aspx?CId=320&MId=3416&Ver=4>

⁹⁵

<http://webgis.towerhamlets.gov.uk/LBTHMapViewer/MainMap.aspx?displaylayerid=PARKSGREENSPACES&V=JS>

(size, ethnicity, occupation, age structure etc.), local deprivation, education provision, community services and facilities, crime and housing need. The socio-economic characteristics of the borough as a whole and the London region should also be considered. Current baseline conditions should be established by undertaking a review of the latest available information sources and through consultation.

- 4.99. A mix of qualitative and, where possible, quantitative measures should be used to consider both baseline characteristics and likely impacts. There are no specific technical significance criteria to assess socio-economic effects. Socio-economic effects should be considered in terms of their overall impact on local communities and the wider area in the context of policy guidance, strategies (for example, the current Community Plan^{96,97}), consultation and baseline characteristics.
- 4.100. Direct or indirect impacts which contribute to quality of life and amenity, such as noise, air quality, telecommunications etc., should be addressed elsewhere in the Scoping Report under the relevant topics. It may be relevant to cross refer to these technical chapters here as appropriate.

WASTE MANAGEMENT

Issues to be considered

- Arisings and categorisation of waste from demolition of existing structures, excavation of foundations and basements and levelling of the site. Identification of opportunities to minimise waste generation, reuse materials in the works or recycle materials for reuse in the works or elsewhere in order to minimise the quantity of demolition waste produced for ultimate disposal to landfill in accordance with the waste hierarchy outlined in the UK Waste Strategy 2007.⁹⁸
- Arisings and categorisation of waste from construction and identification of opportunities for waste minimisation, reuse and recycling in order to minimise the quantity of waste produced for ultimate disposal.
- Identification of off-site disposal sites and transfer routes for demolition and construction waste, including waste contaminated soils as appropriate (see section on Soils and Ground Contamination), together with an indication of how this will be managed in accordance with the proximity principle.
- Management of pollution caused by waste excavation, storage and handling on site, including construction/demolition dust and airborne soil contaminants (see sections on Air Quality and Climate and Soils and Ground Contamination) and runoff from stockpiles (see section on Hydrology, Water Resources and Flood Risk).
- Identification of opportunities to use recycled products, including secondary aggregates, in construction.

⁹⁶ Tower Hamlets Partnership, 2008/09. *Tower Hamlets Community Plan 2020 Vision Issue 01*

⁹⁷ Please note that the Tower Hamlets Community Plan is currently being refreshed and was consulted on in 2011: London Borough of Tower Hamlets, 2011, *Tower Hamlets Community Plan Consultation Draft*

⁹⁸ DEFRA, 2007. *Waste Strategy for England*

- Arisings and categorisation of waste from the operational phase of the development, arrangements for its storage and collection, including recycling facilities, and disposal in accordance with the proximity principle.

Methodological requirements

- 4.101. The assessment should include an estimate of total arisings of demolition waste, the proportion of this that will be reused on site and whether such reuse requires some processing (for example, concrete crushing). Where waste processing is to take place on site, the impacts of this in respect of noise and dust should be assessed. Where residual quantities of demolition waste are to be disposed of elsewhere suitable disposal sites should be identified and the impact of these wastes in the context of the disposal site capacities should be assessed. The mode of waste transfer should be identified and where this is by road the number of vehicle movements should be taken into account in the traffic impact assessment.
- 4.102. Where there is a likelihood of contaminated soil arisings, arrangements for the segregation of contaminated waste should be set out, together with the proposed means by which this waste should be temporarily stored so that air and water pollution is prevented.
- 4.103. Arrangements for dealing with excess construction materials and packaging, plant and vehicle maintenance, fuel and chemical consumables waste and waste produced by site workers should be set out.
- 4.104. Estimates of waste arisings from the operational phase of the development should be provided, together with an outline of the facilities to be incorporated within the development for the collection, storage, recycling and disposal of this waste.
- 4.105. Arrangements for the production of a Site Waste Management Plan to cover all phases of the development in accordance with the Site Waste Management Plans Regulations 2008 and identification of responsibilities under the Environmental Protection (Duty of Care) Regulations 1991 and the Hazardous Waste Regulations 2005 should be covered. The Site Waste Management Plan should be started by the designer (applicant), and a framework included within the ES, but the full plan is normally completed by the contractor and submitted post-application under planning conditions.

TELECOMMUNICATIONS AND AVIATION

Issues to be considered

- Impacts on aviation activities associated with London City Airport, including potential impact on integrity of communications and navigation systems.
- Need for lighting on tall structures such as cranes and tall buildings and the impacts of this lighting.
- Obstruction of telecommunications signals, and disruption of reception whether for TV, radio, fixed microwave link or mobile phone networks, and maritime air traffic control.

- Electromagnetic interference from a transmitter or unwanted signals emitted from other equipment.
- Impacts associated with providing telecommunications infrastructure to the new development.

Methodological requirements

- 4.106. A desk study of available information on aviation traffic and telecommunications infrastructure and consultation with key stakeholders will provide information on the baseline characteristics of the development site and surrounding area, and help to identify likely impacts. Key stakeholders for aviation matters will include London City Airport and Civil Aviation Authority. Telecommunications stakeholders will include mobile phone and fixed microwave link operators and analogue, digital and satellite TV / radio broadcasters and appropriate Government Agencies, such as the Office of Communications (OfCom) and the Maritime and Coastguard Agency.
- 4.107. Where impacts on telecommunications have been predicted reference should be made to the Supporting Guidance to PPG8 Telecommunications (2001), contained in the Appendix to the PPG. The methodology used to calculate impacts should be appropriate to the impacts predicted, and the receptors affected (for example, particular blocks of flats etc.) should be identified.

SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS

- 4.108. The ES should include a chapter which provides a summary table of all the impacts (including the nature of impacts⁹⁹ and their significance) identified in the EIA, the mitigation measures to be applied, and the significance of the residual impacts which will remain following mitigation.
- 4.109. A summary of cumulative and secondary impacts should also be provided, as appropriate, for each topic area.

OUTLINE OF ENVIRONMENTAL MANAGEMENT PLAN

- 4.110. As set out at para. 3.10 above, a Framework Environmental Management Plan (EMP) is required as part of an ES. The EMP should set out the actions required to put in place mitigation measures as identified through the EIA process along with any measures required to monitor the impacts of the project (for example, noise or dust monitoring or periodic ecological survey). It should also include communications plans to ensure contractors, LBTH, statutory bodies and other stakeholders are kept informed of the progress in implementing mitigation measures and the results of monitoring. Further guidance is published by the IEMA.¹⁰⁰

⁹⁹ Impacts may be direct or indirect; secondary; cumulative, short, medium or long-term; permanent or temporary; positive or negative.

¹⁰⁰ IEMA, 2008. *Environmental Management Plans*.

APPENDIX I
Administrative Requirements

Administrative Requirements

- I.1 The following administrative information is provided for your information:
- a. The Scoping Opinion will be placed on the Planning Register.
 - b. Seven copies of the Environmental Statement (ES), are to be submitted to the Borough, two of which will go to the Secretary of State.
 - c. The Borough cannot determine the Planning Application until the expiry of 14 days from the date of the last copy being served to allow time for representations.
 - d. Where an ES is submitted after the planning application, the applicant must:
 - I. Advertise in the local newspaper a notice with the required information as set down in the Regulations (para. 14 (2) of part V).
 - II. Post a notice on site with the same information as required for the advert and allow 21 days for inspection. The notice must be posted in position for at least 7 days in the 28 days before the submission of the ES. The notice must be easily visible and readable by the public without them having to enter the land.
 - III. Submit a copy of the advert and the notice with the ES to the Borough Planning Department. Also a certificate to prove that the notice was posted on site.
 - e. All copies of the ES served by the applicant on other bodies must be accompanied by a copy of the planning application and the plans. The Applicant must inform the body where they can make representations.
 - f. The Borough must be informed of all who have been issued with a copy of the ES.
 - g. The Borough is required to suspend the determination of the planning application until 21 days after the receipt of the ES.
 - h. The Borough may request in writing “further information” as required from the applicant. “Further information” requires the same advertising procedures as outlined above.
 - i. The ES must contain the minimum requirements laid down in Part II of Schedule 4 and the relevant parts of Part I of Schedule 4 of the Regulations -Town & Country Planning (Environmental Impact Assessment) (England & Wales) 1999 (Amended) and any further information that is reasonably required to assess the environmental effects of the development as provided above.

APPENDIX 2
Standard EIA Consultees

Standard EIA Consultees

The following statutory organisations will be consulted by LBTH during the scoping process:

- LBTH Strategic Transport Planning
- LBTH Building Control
- LBTH Corporate Access
- LBTH Environmental Health
- LBTH Waste Management
- LBTH Energy Efficiency Unit
- LBTH Energy Contracts
- LBTH Development Design and Conservation
- LBTH Crime Prevention Officer
- LBTH Strategic Planning
- LBTH Environment and Ecology
- LBTH Sustainable Development
- LBTH Transport and Highways
- English Heritage / GLAAS
- Environment Agency
- Greater London Authority
- London Fire and Emergency Planning Authority
- Natural England
- Thames Water
- Transport for London

APPENDIX 3
IEMA ES Review Criteria

IEMA ES Review Criteria

Structure of the Criteria

The Institute of Environmental Management and Assessment (IEMA) have developed a new criteria based approach to review Environmental Statements. The new criteria¹⁰¹, launched in April 2011, are used to review the quality of Environmental Statements.

The criteria are split into the following sections:

COM3: addresses the EIA Regulatory Compliance of the ES as set out in Schedule 4 Parts 1 & 2 of the UK's EIA Regulations.

COM4: addresses all of the information contained within an Environmental Statement (ES) with the exception of the assessment of the impacts including the scope, consultation process and alternatives considered.

COM5: addresses the assessment of the impacts on the environment. This section covers information relating to:

- the baseline conditions;
- the evaluation of impact significance and measures designed to monitor and manage significant effects.

COM6: addresses the presentation and communication of the information. This includes a brief review of the non-technical summary.

I. COM3: EIA Regulatory Compliance

Criteria:

A) Does the ES contain a clear section, or sections, providing a description of the development comprising information on the site, design and size of the development during construction and operation?

B) Does the ES contain a section, or sections, that outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects?

C) Does the ES contain a clear section, or sections, that provides the data required to identify and assess the main effects which the development is likely to have on the environment?

D) In the light of the development being assessed has the ES identified, described and assessed effects on:

- Population

¹⁰¹ Appendix C of the EIA Quality Mark Applicant Guide, Version 1.2, April 2011, IEMA.

- Fauna & Flora
- Soil
- Water
- Air
- Climatic factors
- Landscape
- Cultural Heritage
- Material Assets
- Other

E) Does the ES attempt to set out the interaction between the factors set out under COM3 D)?

F) Does the ES contain a section, or sections, that describe the likely significant effects of the proposed development on the environment, including as reasonably required: direct, indirect, secondary, cumulative, short, medium, long-term, permanent and temporary, positive and negative effects?

G) Does the ES contain a clear section, or sections, that provides a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects?

H) Has a Non-Technical Summary been produced containing an outline of the information mentioned in COM3 A) to G)?

I) Does the ES contain a section, or sections, that outline any difficulties encountered by the developer in compiling the information presented in the ES?

COM4: EIA Context & Influence

Criteria:

A) Scoping

- i) Has the ES clearly stated what environmental topics will be addressed and how this decision was reached?
- ii) Are the main sensitive receptors and their locations clearly identified with an explanation of the risks posed from the development?
- iii) Does the ES identify the environmental topics, raised during the scoping process, that will not be assessed and explain why they are not being considered further?
- iv) For those environmental topics scoped into the EIA, is it clear that the assessment has focussed on sub-issues relevant to the proposed development effects on each topic?

B) Alternatives, including iterative design

- i) Does the ES set out the main alternatives / iterations that were considered at different points during the development of the proposal?
- ii) Are the main reasons, environmental or otherwise, for the selection of the proposal over distinct alternatives and design iterations easily identifiable?

iii) Does the ES clearly indicate how the EIA process, environmental effects and consultee responses influenced the iterative design process that led to the proposed development?

C) Consultation

- i) Does the description of any consultation include an indication of those contacted, including statutory and non-statutory consultees, and the public?
- ii) Does the main text of the ES provide a summary of the main issues, pertinent to the EIA, raised by consultees?
- iii) Does the ES set out if any of the issues pertinent to the EIA raised by consultees will not be dealt with in the ES? If so is clear justification set out as to why the issue was scoped out?

COM5: EIA Content

Criteria:

A) Baseline

- i) Does the ES describe the condition of those aspects of the environment that are likely to be significantly affected by the development?
- ii) Is the 'sensitivity'¹⁰² of the baseline environment clearly evaluated?
- iii) Where limitations in the baseline information exist, which could influence the assessment findings, are they easily identifiable?

B) Assessment

- i) Are the methods for establishing the 'magnitude'² of effects on the receiving environment clearly defined?
- ii) Where the ES sets out a generic method for evaluating significance, is this applied throughout the ES? Where an over-arching approach is not followed are the specific methods used to evaluate significance for each environmental topic clearly justified?
- iii) Does the evaluation of significance consider the different stages of development (construction, operation) and relate the effects identified to the condition of the baseline environment?
- iv) Does the ES give appropriate prominence to both positive and negative effects relative to their significance?
- v) Does the ES identify the significance of effects that are anticipated to remain following the successful implementation of any mitigation described in the ES?
- vi) Is it clear that the EIA has considered inter-relationships in order to identify secondary, cumulative and synergistic effects?

C) Environmental Mitigation & Management

- i) Does the ES describe the measures proposed to be implemented to avoid, reduce, or offset significant adverse effects of the proposed development?
- ii) Is an attempt to indicate the effectiveness of the influence of the stated mitigation measures on the significance of the environmental effects provided?
- iii) Does the ES set out how mitigation measures are to be secured and implemented and with whom the responsibilities for their delivery lies?

¹⁰² The terms 'sensitivity' (COM5 A ii)) and 'magnitude' (COM5 B i)) are used as generic descriptors of the multitude of criteria that are used in EIA practice to evaluate significance.

COM6: EIA Presentation

Criteria:

A) ES Quality

- i) Does the ES make effective use of maps, figures, tables and diagrams? In particular covering:
 - the location of the site, its boundary and site layout;
 - operational appearance (where available);
 - main environmental receptors; and
 - environmental effects (where visual representation is appropriate).
- ii) Is the proposed development site clearly described?
- iii) Are the anticipated timescales of construction, operation and (where appropriate) decommissioning of the proposed development clearly set out in the main text?
- iv) Is the ES presented in a manner that would allow a member of the public to logically locate the environmental information they were seeking?
- v) Are technical terms kept to a minimum, with a glossary (/ list of acronyms) provided?
- vi) Is the length of the main text of the ES appropriate to the: proposed development, sensitivity of the receiving environment and significant environmental effects identified?

B) Non-Technical Summary (NTS)

- i) Does the NTS provide sufficient information for a member of the public to understand the significant environmental effects of the proposed development without having to refer to main text of the ES?
- ii) Are maps and diagrams included in the NTS that, at a minimum, illustrate the location of the application site, the boundary of the proposed development, and the location of key environmental receptors?
- iii) Is it clear that the NTS was made available as a separate stand-alone document?

EIA Quality Mark Grading System

Pass: The review provided effective evidence of compliance with the requirements of the EIA Commitment / review criterion. Limited issues, inadequacies or omissions may be identified, but they do not amount to 'Concerns'.

Concerns: The review could not find sufficient evidence to award full compliance with the EIA Commitment / relevant criterion. Whilst the review found evidence of an attempt to meet the specific requirements the inadequacies, omissions or issues identified meant a 'Pass' grade could not be given.

Fail: The ES review found significant omissions or inadequacies in relation to an EIA Commitment /relevant criterion and insufficient explanation to justify the failing identified.

N/A Not applicable: [Review criteria only]: The relevant criterion was not found to be relevant during the review, as such it has not been considered within the grading of the EIA Commitment it relates to.

References

1. Lee N and Colley R, 1990. *Reviewing the Quality of Environmental Statements, Occasional Paper No 24*, EIA Centre, University of Manchester; and as updated by Lee N, Colley R, Bonde R and Simpson J, 1999. *Reviewing the Quality of Environmental Statements, Occasional Paper No 55*, EIA Centre, University of Manchester.
2. Commission of the European Communities, 1985. *Directive on the assessment of the effects of certain public and private projects on the environment (85/337/EEC)*, Official Journal of the European Communities, 175, Brussels; and as amended by the Directive 97/11/EC.
3. Department of the Environment, 1994. *PPG23 – Planning and Pollution Control*, HMSO, London.

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