



www.landuse.co.uk

London Borough of Tower Hamlets

Strategic Environmental Assessment for the South Quay Masterplan Supplementary Planning Document

Final Environmental Report

Prepared by LUC in association with Cascade Consulting on behalf of London Borough of Tower Hamlets
November 2014

Planning & EIA
Design
Landscape Planning
Landscape Management
Ecology
Mapping & Visualisation

LUC LONDON
43 Chalton Street
London NW1 1JD
T 020 7383 5784
F 020 7383 4798
london@landuse.co.uk

Offices also in:
Bristol
Glasgow
Edinburgh



FS 566056
EMS 566057

Land Use Consultants Ltd
Registered in England
Registered number: 2549296
Registered Office:
43 Chalton Street
London NW1 1JD

LUC uses 100% recycled paper

Project Title: South Quay Masterplan Strategic Environmental Assessment

Client: London Borough of Tower Hamlets

Version	Date	Version Details	Prepared by	Checked by	Approved by Principal
0.1	12.09.14	Internal Draft	Josh Allen Juliette Young		
0.2	14.10.14	Internal Draft	Juliette Young Jonathan Hill Emma Cartwright	Juliette Young	
1.0	16.10.14	1 st Draft to client	Juliette Young Jonathan Hill Rebecca Knight Emma Cartwright	Juliette Young	
1.1	21.10.14	Responding to client comments	Juliette Young Jonathan Hill	Juliette Young	
2.0	3.11.14	Final for Consultation	Juliette Young Jonathan Hill	Juliette Young	Jon Grantham

Contents

1	Introduction	1
	Introduction	1
	South Quay Masterplan Supplementary Planning Document	1
		4
	Content and Purpose of the SPD	5
	Structure of SEA Report	8
2	Strategic Environmental Assessment	10
	Compliance with the SEA Regulations	10
3	Methodology	13
	SEA Stages and Work Undertaken	13
	Difficulties encountered and data limitations	35
4	Review of Plans, Policies and Programmes	36
5	Baseline Information and Issues	38
	Baseline information, Sustainability Issues and their likely evolution without the Masterplan	38
6	Strategic Environmental Assessment Findings	61
	Different Amounts of Development Options	61
	Delivery of Development Options	73
	Draft Masterplan SPD	82
	Mitigation, Recommendations and Identification of Residual Effects	91
	Duration and Scale of Sustainability Effects	121
	Cumulative Effects	121
7	Monitoring	126
8	Conclusions and Summary	128
	Summary	128
	Conclusion and Recommendations	131
	Next Steps	132

Tables

Table 2.1– Requirements of the SEA Directive and where these have been addressed in this Environmental Report	10
Table 3.1– Stages in the SEA Process	13
Table 3.2 – SEA Framework	15
Table 3.3 – Alternative Growth Scenarios	32
Table 3.4– Key to SEA scores	34
Table 5.1 – GP Whole Time Equivalent (wte)	42
Table 5.2 – Residential Parking Standards	55

Table 6.1 – Summary of SEA of Different Amounts of Development Options (Pre-mitigation)	72
Table 6.2 – Summary of SEA of Delivery of Development Options (Pre-mitigation)	80
Table 6.3 – Summary of SEA of Draft Masterplan SPD (Pre-mitigation)	89
Table 6.4 – Summary of Mitigation/ Recommendations and Identification of Residual Effects for the Appraisal of Different Development Amounts and Delivery of Development Options	92
Table 6.5 – Summary of Mitigation/ Recommendations and Identification of Residual Effects for the Appraisal of the Draft Masterplan SPD	105
Table 6.6 – Draft Masterplan SPD – Summary Table of likely Cumulative Impacts	123
Table 7.1– Proposed indicators for monitoring the potential significant environmental effects of the Masterplan SPD	126

Figures

Figure 1.1– Status of development sites in the South Quay Masterplan Area	3
Figure 1.2– Masterplan SPD boundary and location within wider borough	4
Figure 5.1 – Environmental Constraints in the immediate vicinity of the South Quay Masterplan Area	58
Figure 5.2 – Environmental Constraints within 500m of the South Quay Masterplan Area	59
Figure 5.3 – Public Transport Accessibility Levels in the South Quay Masterplan Area	60

1 Introduction

Introduction

- 1.1 London Borough Tower Hamlets (hereafter referred to as 'LBTH') commissioned LUC (with support from Cascade Consulting) in May 2014 to carry out the Strategic Environmental Assessment (SEA) of the South Quay Masterplan Supplementary Planning Document (SPD) (hereafter referred to as 'the Masterplan').
- 1.2 The SEA process is concerned with assessing the potential environmental effects that may arise from the implementation of development within the Masterplan Area. The outputs from the SEA have been used to inform the development of guidance within the SPD. This report ('the Environmental Report') presents the findings of the SEA of the draft version of the Masterplan SPD (November 2014) issued by LBTH for consultation and should be read in conjunction with that document.

South Quay Masterplan Supplementary Planning Document

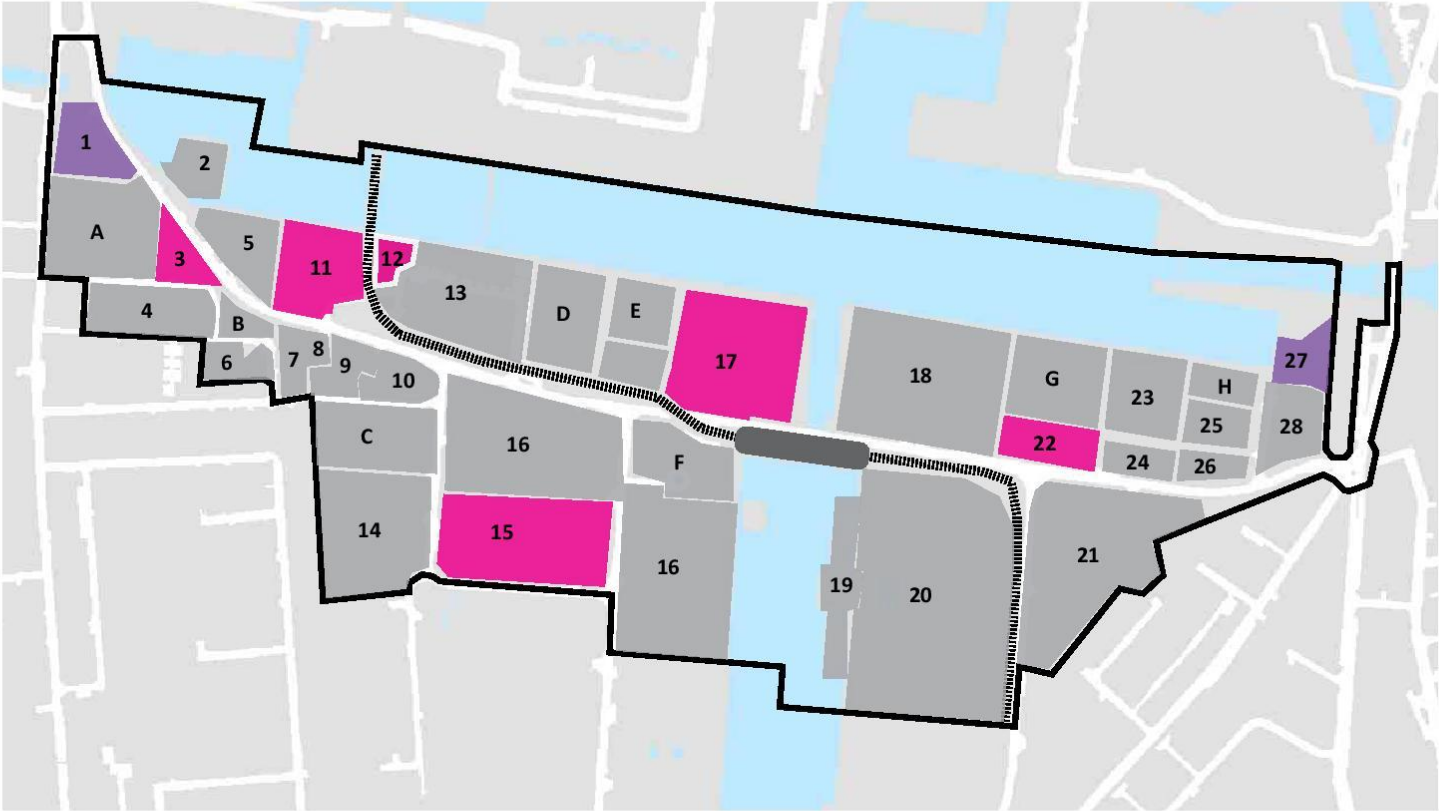
- 1.3 South Quay is located to the south of Canary Wharf on the Isle of Dogs.
- 1.4 Since 2010, interest from the development industry and land owners has resulted in a high number of development proposals which seek to maximise densities along Marsh Wall (within the South Quay area), specifically in tall building typologies. If these developments are not appropriately managed, there is a risk that the townscape and wider environment of the South Quay area will suffer and development opportunities across the whole area will not be optimised. This will result in the lost opportunity to deliver a sustainable place and capture benefits for the community.
- 1.5 Currently development in the South Quay area is managed in accordance with policies and site allocations set out in the Local Plan (the adopted Core Strategy and Managing Development Document; key policies are listed in **Chapter 4** of this report) and policies within the London Plan. The western side of South Quay also falls within the boundary covered by the [Millennium Quarter Masterplan](#), which was produced in 2000. The Masterplan is used for the purpose of development management alongside the Local Plan and London Plan to determine planning applications.
- 1.6 Given the scale of development which has been coming forward in this area (and to ensure benefits are maximised, whilst adverse impacts are appropriately managed at a strategic scale), LBTH consider that a bespoke Masterplan is required for the South Quay area to supplement the Local Plan and London Plan.
- 1.7 The proposed Masterplan for South Quay is therefore required to assist with the management of the proposed growth within the area, securing the associated benefits of this growth for the wider community. Specifically, it is needed to ensure that development contributes to an overall high quality and sustainable connected morphology and that social and physical infrastructure requirements are planned for and delivered in line with the proposed levels of growth. It is intended that the Masterplan be adopted as a SPD and it will become a material consideration in future planning decisions.
- 1.8 The Masterplan Area is set out in **Figure 1.1** below. It comprises a series of development sites which are at varying stages in the planning process. All of these sites are brownfield comprising existing residential or commercial buildings and associated public realm. Some of the sites are vacant and the buildings are unoccupied.
- 1.9 As noted from **Figure 1.1** below, the sites are classified as:
 - Planning permission (implemented) (sites in purple).

- Planning application (current) (sites in pink).
 - Potential development site (sites in grey).
- 1.10 The proposed applications seek to redevelop the sites for large-scale residential and/ or mixed use developments.
- 1.11 The Masterplan will apply to those sites classed as 'potential development' sites, where 'pre-application' discussions are currently underway or where current planning applications are in place (i.e. the SEA would not assess the effects of those sites where a planning permission has been implemented or consent has been obtained (but is currently unimplemented)).
- 1.12 **Figure 1.2**, which follows Figure 1.1, shows the Masterplan Area and its location within the wider borough.

Figure 1.1– Status of development sites in the South Quay Masterplan Area

SOUTH QUAY MASTERPLAN SITES

1	City Pride
2	Island Quay
3	30 Marsh Wall
4	Cuba Street
5	Britannia Quay
6	68 to 74 Manila Street
7	63 to 69 Manila Street
8	50 Marsh Wall
9	54 Marsh Wall
10	56 to 58 Marsh Wall
11	Arrowhead Quay
12	Quay House
13	Admiral Estate
14	Mastmaker Court
15	Millharbour Village (Fidelity)
16	Millharbour Village (Galliard)
17	South Quay Plaza
18	Thames Quay
19	Harbour Island
20	Harbour Exchange Square
21	Skylines
22	Meridian Gate (south)
23	Meridian Gate (north)
24	Angel House
25	Lawn House Close Car Park
26	Sovereign House
27	Dollar Bay
28	Jack Dash House
A	Landmark Square
B	40 Marsh Wall
C	Pheonix Heights
D	Discovery Dock West
E	Discovery Dock East
F	Pan Peninsula
G	Meridian Place
H	Antilles Bay



Planning permission
 Current application

Figure 1.2– Masterplan SPD boundary and location within wider borough



Content and Purpose of the SPD

- 1.13 The Masterplan provides concise and effective guidance to inform the determination of planning applications. It should be considered a manual for the development management process that aims to deliver the vision and principles set out for the area.
- 1.14 Following the close of the formal consultation period, the emerging Masterplan will be a material consideration in planning decisions, providing further detail to the Local Plan and London Plan.
- 1.15 The Masterplan will sit within a hierarchy of planning policy documents that provide guidance at sequential spatial scales:
- National Planning Policy Framework (2012) and Planning Practice Guidance.
 - Local Plan (2011).
 - Local Plan (2010 & 2013) and
 - Millennium Quarter Masterplan SPD (2000)

National Planning Policy Framework (2012) and Planning Practice Guidance

- 1.16 The NPPF provides guidance for when and why SPDs should be developed. The Masterplan will fulfil these requirements by seeking to help facilitate successful applications and deliver the required infrastructure to support housing growth in the Isle of Dogs.

Local Plan (2011)

- 1.17 South Quay is located within the 'Opportunity Area' for the Isle of Dogs. The 'Opportunity Area' initiative seeks to deliver new homes by converting surplus business capacity south of Canary Wharf to housing and to support a wider mix of services.
- 1.18 Tower Hamlets Council and the Mayor of London will be working in partnership to develop an Opportunity Area Planning Framework (OAPF) for the wider area.

Local Plan (2010 & 2013)

- 1.19 The existing Local Plan provides borough-wide, place and specific guidance for the South Quay area. Key designations include:
- Places of Millwall & Cubitt Town.
 - Canary Wharf Activity Area.
 - Millennium Quarter Site Allocation.
 - Marsh Wall East Site Allocation.
 - Flood Zone 3a.
 - The Docks Site of Importance for Nature Conservation (SINC) and
 - Heritage designations including statutorily and locally Listed Buildings and/ or structures and Coldharbour Conservation Area.

Millennium Quarter Masterplan Supplementary Planning Guidance

- 1.20 Upon adoption of the South Quay Masterplan, it is envisaged that the Millennium Quarter Masterplan Supplementary Planning Guidance (SPG) will be deleted.
- 1.21 The Millennium Quarter Public Realm Guidance Manual (2008) will continue to be used to inform development across the whole of the South Quay area.

Why is the Council Producing a Masterplan

- 1.22 A masterplan is needed for South Quay to help the Council to manage the high levels of housing growth proposed by housing developers to secure the maximum benefits for the wider community.
- 1.23 The Greater London Authority's London Plan is currently being updated to reflect the need to deliver more housing across the capital. The London Plan sets the Council's housing target and is looking to raise the target from 2,885 to 3,930 homes a year for the next ten years. This requires the Council to deliver a minimum of 39,300 new market and affordable homes across the borough by 2025.
- 1.24 The need to deliver more housing is resulting in higher densities being proposed by housing developers in greater numbers across the borough. This is requiring the Council to update its population and infrastructure modelling to ensure existing and future residents and businesses are supported by services and a high quality built environment.
- 1.25 In light of the need for new affordable and market housing within the Borough, the Council considers the potential to optimise the delivery of housing to be a unique opportunity to secure housing for those in need and to help to ensure existing and future residents and businesses are supported by services and a high quality coherent but varied built environment.
- 1.26 Within the South Quay area, the amount, scale and densities of residential development being proposed by developers is greater than envisaged in the Council's Local Plan and Millennium Quarter Masterplan. There are twenty-eight potential development sites within the South Quay area, each in different ownership which presents challenges and opportunities for coordinating development and managing their impacts.
- 1.27 As such, further planning guidance is required to manage this growth to ensure affordable housing and infrastructure is planned for and delivered to support existing and future residents while creating a liveable and vibrant place. The Masterplan seeks to adopt a proactive approach by acknowledging the existing policy position of density set out in the London Plan and recognising that sites may come forward above the London Plan densities. It seeks to address the demands such a place would need to provide for in terms of social and physical infrastructure in addition to the requirements set out in the Greater London Authority's Housing SPG.
- 1.28 The Masterplan is being developed ahead of the Isle of Dogs Opportunity Area Planning Framework in partnership with the Greater London Authority.

South Quay Masterplan SPD

- 1.29 The SPD contains a vision, supporting principles, detailed guidance under a range of themes and sets out the mechanism for delivery of the SPD requirements.

Vision

- 1.30 The vision for the Masterplan is as follows:

A thriving dockside urban neighbourhood of varied densities integrated with the wider area and home to a diverse community.

By 2030, South Quay will have been shaped to be a lively, sustainable neighbourhood sitting among the places of Canary Wharf, Millwall and Cubitt Town. Home to a substantial residential and working population that is integrated with the surrounding areas, the area will be designed to an exceptional standard. The benefits generated by the new development will be available to people from across the Isle of Dogs and beyond.

Principles

- 1.31 There are eight Principles which provide an overarching framework to structure the Masterplan's guidance and its implementation. These are set out below:
- 1 Housing Design:** Development should deliver exemplary housing design to meet the needs of residents, Registered Providers of affordable housing and service providers.
 - 2 Connections & Public Realm:** Development should frame and deliver high quality, legible and inviting movement routes, connections and public realm.

- 3 Public Open Spaces:** Development should contribute to the delivery of usable high quality public green open spaces in coordination with neighbouring sites.
- 4 Urban Structure & Frontages:** Development should deliver a well-defined urban block pattern fronting active frontages throughout, with a focus on non-residential uses facing onto Marsh Wall, open spaces and docksides with clear distinctions between public, communal and private spaces.
- 5 Massing:** Development should deliver massing in a varied but coherent urban environment that delivers defined and engaging streets and spaces while maximising levels of natural light and providing a transition in scale from surrounding areas.
- 6 Skyline:** Development should contribute to a visually engaging and balanced skyline while acknowledging the Maritime Greenwich World Heritage Site.
- 7 Infrastructure:** Development should contribute to the delivery of infrastructure.
- 8 Delivery and Management:** Development should accord with the guidance set out in the Masterplan and support its delivery in coordination with management mechanisms.

Guidance

SQ1 Housing Density

- 1.32 This section provides guidance for new development that seeks to exceed London Plan housing densities. It will have to demonstrate how it will mitigate impacts and deliver the visions, principles and guidance of the Masterplan. It must also deliver exemplary design for both housing and non-residential uses whilst providing the required infrastructure.

SQ2 Connections and Public Spaces

- 1.33 This guidance explains how development will be required to provide well-defined networks of routes and spaces in terms of connections for walking, cycling (and the division of primary, secondary and tertiary streets).
- 1.34 New public realm open space will be required to deliver and manage high quality open space and contribute to Principal and DLR public open spaces.
- 1.35 Development adjacent to the Principal and DLR public open spaces will need to provide areas of public open space only whilst creating visually engaging and active spaces.

SQ3 Massing and Urban Blocks

- 1.36 The guidance in this section requires new development to define and enclose the network of connections and space. It must also reflect the massing, hybrid urban blocks (including podiums, plinths, and taller elements) and housing typologies set out in the Masterplan. As well as providing social infrastructure and primary schools, communal amenity spaces, child play space and private amenity space.

SQ4 The Skyline

- 1.37 This guidance draws upon the Maritime Grand Axis and how all new development will be required to define the Grand Axis, deliver coherent materiality and design distinct from the rest of South Quay and provide publicly accessible viewing locations. Layering and clustering must be demonstrated and fit within the current skyline and expected views of the proposal must be provided.

SQ5 Infrastructure

- 1.38 This section provides guidance to use the most up to date infrastructure planning requirements identified for new development in South Quay. Primary schools must be delivered on site if demonstrated to be deliverable and innovative and appropriate waste and recycling, storage and collections systems should be explored.

Delivery

- 1.39 This section to the SPD sets out how development and social and physical infrastructure will be delivered. Specifically it defines the approach to coordinated development, the delivery organisations and key stakeholders, the key delivery tools and approach to phasing.

Approach to coordinated development

- 1.40 The Council will work with landowners, developers and the community through the development management process to secure a joined-up approach to delivery of development and supporting infrastructure.

Delivery Organisations and Key Stakeholders

- 1.41 The delivery organisations consist of:

- Landowners.
- London Borough of Tower Hamlets.
- Greater London Authority.
- Transport for London.
- Canals & Rivers Trust.
- Affordable Housing Providers.
- Utilities Providers.

- 1.42 Other key stakeholders include:

- Local Community Groups & Tenants and Resident Associations.
- Maritime Greenwich World Heritage Site.
- English Heritage.
- Environment Agency.
- Natural England and

Delivery Tools

- 1.43 The use of additional studies and development briefs will be explored in coordination with landowners and stakeholders to secure the delivery of infrastructure and other key projects. This includes, for example, a Feasibility & Design Study for Sustainable Vacuum Waste Collection System as well as a Design Brief for new public open spaces.

Summary of South Quay Masterplan SPD

- 1.44 In summary, this guidance seeks to shape South Quay to:

- Complement and provide a transition from the Canary Wharf Major Centre to the adjacent residential areas.
- Contribute to the delivery of high-density mixed use areas with significant levels of housing.
- Deliver new physical and social infrastructure.
- Improve connections to the wider area.
- Ensure buildings step down from the north to the south and step back from the docksides.
- Deliver a legible, permeable and well-defined movement network.
- Activate frontages along streets and docks and
- Protect and sustain heritage assets.

Structure of SEA Report

- 1.45 This chapter (**Chapter 1**) has described the background to the production of the Masterplan SPD and the key components of the SPD. The remainder of this report is structured into the following sections:

- **Chapter 2** sets out the requirement to undertake SEA.

- **Chapter 3** describes the approach that is being taken to the SEA of the Masterplan SPD and outlines the tasks involved.
- **Chapter 4** presents a summary of the review of plans, policies and programmes.
- **Chapter 5** presents the baseline information and key sustainability issues for South Quay, including the likely evolution of the baseline without the Masterplan SPD.
- **Chapter 6** summarises the findings of the SEA of the Draft Masterplan SPD.
- **Chapter 7** details the approach that will be taken to monitoring the effects of the Masterplan SPD after it has been adopted.
- **Chapter 8** summarises the conclusions of the SEA and describes the next steps to be undertaken.

1.46 In addition to the above, the SEA Report is accompanied by a **Technical Appendix** document comprising:

- **Appendix 1:** SEA Screening Flowchart
- **Appendix 2:** Scoping Consultation Comments and the Response to these
- **Appendix 3:** Review of Plans, Policies and Programmes
- **Appendix 4:** Detailed SEA Matrices
- **Appendix 5:** SEA Assumptions

2 Strategic Environmental Assessment

- 2.1 SEA is a statutory assessment process required under the Environmental Assessment of Plans and Programmes (England) Regulations 2004 (the SEA Regulations, Statutory Instrument 2004, No 1633) which provide the legislative mechanism for transposing European Directive 2001/ 42/ EC 'on the assessment of the effects of certain plans and programmes on the environment' the (SEA Directive). The SEA Directive and Regulations require the formal assessment of plans and programmes which are likely to have significant effects on the environment. Annex II (2) of the SEA Directive sets out the criteria for determining what constitutes a significant effect.
- 2.2 The South Quay Masterplan SPD is considered to require SEA. A flow-chart setting out the reasons for undertaking SEA is provided in **Appendix 1** in the accompanying **Technical Appendix** document.
- 2.3 LBTH informed the statutory consultees of their decision to undertake SEA of the Masterplan in a Screening Letter published on 10th September 2014
<http://www.towerhamlets.gov.uk/pdf/SEA%20Screening%20Letter.pdf>.
- 2.4 No responses were received in response to the SEA Screening Determination letter.

Compliance with the SEA Regulations

- 2.5 This report has been prepared in accordance with the SEA Regulations. The reporting requirements in Annex 1 of the SEA Directive (and Schedule 2 of the SEA Regulations) are set out in Error! Reference source not found. below, which also indicates where in this SEA Report the relevant requirement has been met.

Table 2.1– Requirements of the SEA Directive and where these have been addressed in this Environmental Report

SEA Directive Requirements	Covered in this Environmental Report?
Preparation of an environmental report in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the Objectives and geographical scope of the plan or programme, are identified, described and evaluated. The information to be given is (Art. 5 and Annex I):	Covered by this Draft Environmental Report .
a) An outline of the contents, main Objectives of the plan or programme, and relationship with other relevant plans and programmes;	Refer to Chapter 1, Chapter 4 and Appendix 3 .
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	Refer to Chapter 5 .
c) The environmental characteristics of areas likely to be significantly affected;	Refer to Chapter 5 .
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas	Refer to Chapter 5 .

SEA Directive Requirements	Covered in this Environmental Report?
designated pursuant to Directives 79/ 409/ EEC and 92/ 43/ EEC;	
e) The environmental protection, Objectives, established at international, community or national level, which are relevant to the plan or programme and the way those Objectives and any environmental, considerations have been taken into account during its preparation;	Refer to Chapter 1, Chapter 4 and Appendix 3.
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors ¹ ;	Refer to Chapter 6 and Appendix 4.
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Refer to Chapter 6 and Appendix 4.
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Refer to Chapter 3.
i) A description of measures envisaged concerning monitoring in accordance with Art. 10;	Refer to Chapter 7.
j) A non-technical summary of the information provided under the above headings	Provided separately.
The Report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Art. 5.2)	Included within this Draft Environmental Report as necessary.
<p>Consultation:</p> <ul style="list-style-type: none"> • authorities with environmental responsibility, when deciding on the scope and level of detail of the information which must be included in the Environmental Report (Art. 5.4) • authorities with environmental responsibility and the public, shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying Environmental Report before the adoption of the plan or programme (Art. 6.1, 6.2) • other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country (Art. 7). 	<p>Consultation with the relevant statutory environmental bodies on the Scoping Report was undertaken during September and October 2014.</p> <p>Public consultation on the Draft Masterplan SPD and this Draft SEA Report is being undertaken from January to February 2015.</p> <p>Unlikely to be relevant to the Masterplan SPD.</p>

¹ These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and adverse effects

SEA Directive Requirements	Covered in this Environmental Report?
Taking the Environmental Report and the results of the consultations into account in decision making (Art. 8)	
<p>Provision of information on the decision:</p> <p>When the plan or programme is adopted, the public and any countries consulted under Art.7 must be informed and the following made available to those so informed:</p> <ul style="list-style-type: none"> • the plan or programme as adopted • a statement summarising how environmental considerations have been integrated into the plan or programme and how the Environmental Report of Article 5, the opinions expressed pursuant to Article 6 and the results of consultations entered into pursuant to Art. 7 have been taken into account in accordance with Art. 8, and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and • the measures decided concerning monitoring (Art. 9) 	<p>Requirement will be met at a later stage in the SEA process.</p>
<p>Monitoring of the significant environmental effects of the plan's or programme's implementation (Art. 10)</p>	<p>Requirement will be met at a later stage in the SEA process.</p>

3 Methodology

- 3.1 The approach used to carry out the SEA of the South Quay Masterplan SPD has been based on current best practice and the following guidance:
- A Practical Guide to the SEA Directive, (September 2005) Office of the Deputy Prime Minister, Scottish Executive, Welsh Assembly Government, Department of the Environment for Northern Ireland.
 - SEA guidance within National Planning Practice Guidance (<http://planningguidance.planningportal.gov.uk/>).
- 3.2 The SEA has been undertaken in close collaboration with the LBTH officers responsible for drafting the Masterplan SPD in order to fully integrate the SEA process with the production of the Masterplan. Support has also been provided from Cascade Consulting (providing technical advice on water resources), from technical specialists within the LBTH who provided input to the baseline environment section and undertook a review of appraisal outputs.

SEA Stages and Work Undertaken

- 3.3 **Table 3.1** below sets out the main stages of SEA. Each stage is then discussed in more detail in the subsequent sections.

Table 3.1– Stages in the SEA Process

SEA Stages
SEA Stage A: setting the context and Objectives, establishing the baseline and deciding on the Scope
A1: Identifying other relevant plans, programmes and sustainability Objectives
A2: Collecting baseline information
A3: Identifying sustainability issues and problems
A4: Developing the SEA Framework
A5: Consulting on the Scope of the SEA
SEA Stage B: Develop Options, taking account of assessed effects
B1: Testing the project Objectives against the SEA Framework
B2: Developing the Options
B3: Predicting the effects of the Masterplan
B4: Evaluating the effects of the Masterplan
B5: Considering ways of mitigating adverse effects and maximising positive effects
B6: Proposing measures to monitor the significant effects of implementing the Masterplan
SEA Stage C: Preparing the SEA Report
C1: Preparing the SEA Report
SEA Stage D: Consulting on the Project and the SEA Report
D1: Public participation on the draft project and SEA report
D2: Assessing significant changes
SEA Stage E: Monitoring the significant effects of implementing the Masterplan
E1: Finalising aims and methods for monitoring
E2: Responding to adverse effects

Stage A: Setting the context and Objectives, establishing the baseline and deciding on the scope

- 3.4 The SEA Regulations set out consultation requirements at the SEA Scoping Stage. These are reproduced below.

Part 3 of the SEA Regulations 12(5) states that:

"when deciding on the scope and level of detail of the information that must be included in the report, the responsible authority shall consult the consultation bodies".

- 3.5 The 'scope' included the range of SEA Objectives used to assess the effects of the Masterplan SPD and the approach taken to appraise the 'reasonable alternatives'. The 'detail' as referenced includes the plans and policies and the environmental baseline of most relevance to this Masterplan SPD.
- 3.6 The SEA Scoping exercise involved the following main tasks:
- Identification and review of other relevant policies, plans and programmes (PPP), strategies and initiatives which may influence the Masterplan SPD, enabling potential synergies to be exploited and any inconsistencies and potential conflicts to be identified and addressed (see **Chapter 4** and **Appendix 3**).
 - Characterisation of the plan area (i.e. describing the baseline environmental characteristics of the area, including its economic, social and environmental characteristics) in order to identify their current state and trends (see **Chapter 5**).
- 3.7 Drawing on the PPP review and the baseline characterisation, the key local environmental and sustainability issues were highlighted and used in the development of the SEA Framework against which the Masterplan SPD and reasonable alternatives have been appraised. The SEA framework is set out at the end of this sub-section.
- 3.8 An SEA Scoping Report containing the information referred to above was published for consultation between September 15th and October 20th 2014.
- 3.9 A range of comments were received and have been responded to as necessary within this Draft SEA Report.
- 3.10 A full list of all the comments received from the consultees, along with a description of how each one has been addressed, is provided in **Appendix 2**. Each of the comments received was reviewed and certain elements of the Scoping work have been updated as necessary and included in this SEA Report. The revised and updated baseline information and review of plans, policies and programmes are presented in **Chapters 4** and **5** and **Appendix 3**, with the updated key environmental and sustainability issues also being set out at the end of **Chapter 5**.
- 3.11 As mentioned earlier, one of the key outputs of the SEA Scoping Report is development of a framework of Objectives. The framework consists of 18 Objectives and supporting sub-criteria which encompass all of the SEA topics and seek to cover all the sustainability issues identified during preparation of the Scoping Report and highlighted by the consultees during the consultation into the Scoping Report. The SEA framework was developed taking account of the objectives already established in the SA/SEA of the Local Plan (Core Strategy and Managing Development Document) as well as the London Plan. The full SEA framework is provided overleaf.

Table 3.2 – SEA Framework

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
Need for coherent design principles	1. To create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place	<p>Will it promote a high quality public realm?</p> <p>Will it contribute to a high quality, well designed living environment?</p> <p>Will it encourage healthier lifestyles?</p> <p>Will it increase access to high quality recreation facilities and open and green space, including recreational use of the water space and paths along the water front?</p> <p>Will it encourage community cohesion and a sense of shared ownership?</p> <p>Will it contribute towards the achievement of a genuinely 'liveable' place?</p> <p>Will it create spaces that encourage social interaction and deliver a high quality of living?</p> <p>Will it create spaces that maximise natural light and ventilation whilst providing natural shade and cooling during periods of excessive summer heat?</p> <p>Will it contribute towards the achievement of managing the impact of local wind patterns to deliver usable public open spaces?</p>	Material assets; Human Health	<p>Total distance of cycle and pedestrian networks provided</p> <p>Level of satisfaction with the built environment</p> <p>Number of domestic burglaries per 1,000 households</p> <p>Area of land designated as open space</p> <p>Number of eligible open spaces managed to Green Flag standard</p> <p>Area of land designated as Green Chain</p>
Ecological mitigation/ enhancement is required to be incorporated into the design of new developments, as	2. To protect, conserve and enhance the biodiversity within the Masterplan Area	Will it conserve or enhance the Milwall and West India Dock SINC?	Biodiversity, fauna, flora and material	Biological river quality

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
<p>set out in LBTH's Local Plan</p> <p>Currently mitigation measures are implemented on an <i>ad hoc</i> basis which leads to segmented and isolated areas of biodiversity</p> <p>The shadows cast by existing tall buildings could have contributed to the degradation of the aquatic ecology within the dock (designated a SINC). New development could exacerbate this issue</p> <p>Existing developments and new developments may reclaim land from the dock to facilitate development, reducing the size and integrity of the Millwall and West India Dock SINC</p> <p>An increase in the number of developments which use the SINC for cooling purposes may lead to an increase in water temperature which could damage its aquatic ecology</p> <p>Protected species and species on the LBTH and London BAP list are present in West India Dock</p> <p>There are TPOs at the far south-western end of the Masterplan Area which could be indirectly affected by development</p> <p>Publicly accessible open spaces make an essential contribution</p>	<p>and wider borough and where appropriate create habitats, green and open spaces and watercourses</p>	<p>Will it conserve or enhance habitat suitable for European and UK Protected Species?</p> <p>Will it maintain or enhance Priority Habitats and/ or Species?</p> <p>Will it lead to the creation of new areas of habitat and/ or contribute to improved habitat connectivity?</p> <p>Will it conserve TPO designated trees and/ or enhance tree cover?</p>	<p>assets</p>	<p>Changes in areas of biodiversity importance</p> <p>Area of land designated as open space</p> <p>Area of land designated as Green Chain</p> <p>Number of eligible open spaces managed to Green Flag standard</p> <p>Area of land designated as Local Nature Reserves/ SINC</p>

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
<p>towards the environmental sustainability of the borough</p> <p>The borough currently has an undersupply of open space and there is limited space within the existing Masterplan Area to accommodate new spaces</p>				
<p>Entire Masterplan Area is within Flood Zone 3</p> <p>All flood risk vulnerable uses are considered acceptable in within the Masterplan Area as the site is afforded protection by existing River Thames flood defences (these are likely to be maintained by the EA)</p> <p>The amount of development (and consequently the population) in the Masterplan Area is likely to substantially increase, leading to more people and property being at risk of flooding</p> <p>However, additional flood management measures may need to be implemented over and above general maintenance to ensure adequate protection from sea level rises (as a result of climate change)</p>	<p>3. To minimise flood risk to people and property within the Masterplan Area, the wider borough and elsewhere, and promote the use of sustainable urban drainage systems</p>	<p>Will it take account of and mitigate against the potential impacts of flooding, and more frequent storms?</p> <p>Will it reduce the risk of damage to property and health from flooding and storm events?</p> <p>Will it enhance the flood defences of the area?</p> <p>Will it protect vulnerable uses from flooding?</p> <p>Will it provide spaces for flood water to dissipate during extreme rainfall events?</p>	<p>Water; Population; Material Assets</p>	<p>Number of planning permissions granted contrary to Environment Agency advice on flooding</p> <p>Percentage of approved planning applications that do not meet the sequential test for managing flood risk</p>

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
<p>Coldharbour Conservation Area is partially within the Masterplan Area</p> <p>The Maritime Greenwich World Heritage Site (WHS) is 1.7km to the south. Further tall development on the Isle of Dogs could adversely affect its setting</p> <p>The Masterplan is within close proximity of Grade I and Grade II Listed Buildings and/or structures, as well as locally Listed Buildings and/or structures</p> <p>Continued introduction of modern development has the potential to adversely affect the setting of surrounding heritage assets</p> <p>The Masterplan is within an area of archaeological potential.</p>	<p>4. To enhance and protect the significance of heritage assets and archaeological heritage</p>	<p>Will it protect and/ or enhance the setting of the WHS in line with the WHS Management Plan?</p> <p>Will it protect and/ or enhance the settings of surrounding heritage assets?</p> <p>Will it conserve and/ or enhance areas or buildings of historical importance?</p> <p>Will it protect known and unknown features of archaeological importance?</p>	<p>Cultural heritage, including architectural and archaeological heritage</p>	<p>Number of planning permissions granted contrary to English Heritage advice on designated heritage assets and undesignated assets including archaeology</p> <p>Number of planning permissions granted contrary to the principles set out in the WHS Management Plan</p> <p>Number of major development projects that enhance the significance of heritage assets or townscape character</p>
<p>Continued lack of cohesion in character across the area and poor integration with surrounding residential areas. Sudden contrasts in scale and form within the area from immediate areas.</p> <p>Mixed quality of public spaces with continued predominance of hard landscapes, with very limited</p>	<p>5. To enhance local townscape/ landscape character and improve the quality of the built environment and public open spaces</p>	<p>Will it contribute towards the achievement of a high-quality townscape/ landscape that responds to the local context and enhances local distinctiveness and quality of place?</p>	<p>Landscape (townscape)</p>	<p>Area of land designated as open space</p> <p>Area of land designated as Green Chain</p> <p>Number of eligible open spaces managed to Green</p>

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
vegetation and soft landscapes				<p>Flag standard</p> <p>Housing Quality – building for life assessment.</p> <p>Design Quality - Shaping Neighbourhoods: Character and Context SPG.</p>
The cluster of buildings which form the existing skyline of the Isle of Dogs will no longer taper down from One Canada Square with the implementation of consented schemes	6. To achieve a planned and aesthetically balanced skyline, as seen in protected views	<p>Will it impact positively on the skyline as seen in protected views and in a wider London context?</p> <p>Is it in line with management guidance for the LVMF for relevant protected views?</p>	Landscape (townscape and views)	<p>Number of planning permissions granted that do not accord with parameter guidance.</p> <p>Number of planning permissions granted that do not accord with the LVMF or the principles of 'Seeing the History in the View'.</p> <p>Seeing History in the View: Guidance on the setting of heritage assets</p>
Further tall buildings could adversely affect the visual amenity of surrounding communities by appearing visually dominant and out of scale with smaller scale elements and buildings	7. To protect views and the visual amenity of people living and working in and visiting the area and surroundings	<p>Will it enhance the visual amenity of local communities and of people working and visiting the area?</p> <p>Is the building imposing? Will people walking on the streets be able to see the sky?</p>	Population (visual amenity)	<p>Level of satisfaction with the built environment.</p> <p>Housing Quality – building for life</p>

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
				assessment. Adherence to English Heritage and CABE joint Guidance on Tall Buildings (currently being revised)
<p>PTAL levels vary between 2, 3, 4 and 5 across the Masterplan Area</p> <p>Westbound Central Line trains, eastbound Jubilee Line trains and the DLR west are very congested in the AM peak three hours. C2C services from Barking to Limehouse are also very crowded</p> <p>The A11, A12 and A13 trunk roads are heavily used and congestion and traffic delays are worst at the three river crossings – Tower Bridge, Rotherhithe and Blackwall tunnels due to high demand to cross the river</p> <p>Transport for London (TfL) is providing modelling information in relation to the pedestrian network and public transport capacity. Transport assessments undertaken for site specific proposals are indicating that by 2021 the existing footbridge will be congested only enabling restricted movement.</p>	8. To increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by car)	<p>Will it contribute towards the reduction of traffic volumes?</p> <p>Will it contribute towards the reduction of traffic congestion?</p> <p>Will it encourage more journeys to be made by walking and cycling?</p> <p>Will it increase the proportion of journeys made using alternative transport modes to private vehicle?</p> <p>Will it encourage travelling by bus or train?</p> <p>Will it encourage sustainable freight movement?</p>	Material Assets; Population; Human Health	<p>Number of Car-free Agreements signed</p> <p>Level of satisfaction with public transport</p> <p>Number of travels plans submitted</p> <p>Total number of car parking spaces provided relative to baseline</p> <p>Total distance of cycle and pedestrian networks provided</p> <p>Number of new/enhanced walking/cycling connections to existing networks outside of the Masterplan Area.</p> <p>Number of Delivery and Servicing Plans adopted.</p>

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
				Construction Logistics Plans and the use of the Docks for freight movement.
<p>Anecdotal evidence suggests that the Marsh Wall area is currently not well catered for with respect to retail provision</p> <p>Developments that have recently been approved exceed the London Plan's maximum housing density level. This in turn leads to relatively small sites generating large numbers of residents, which require greater than usual amounts of services/ facilities (e.g. shops, schools)</p>	9. To maximise the accessibility to key services and amenities	<p>Will it improve the accessibility for all to key local services (including leisure and sports facilities etc.)? (Education and health facilities are considered under separate Objectives).</p> <p>Will it improve accessibility for all to shopping facilities?</p> <p>Will it reduce the need to travel?</p>	Population & Human Health	<p>Total distance of cycle and pedestrian networks provided</p> <p>Percentage of major applications with comments from the Council's Access Officer</p> <p>Number of visits to leisure centres</p> <p>Number of physical visits to public library premises per annum</p> <p>Total number of car parking spaces provided relative to baseline</p> <p>Number of new/ enhanced local services (school places, GPs etc) provided within (i) the Masterplan Area (ii) within 400m and (iii) within</p>

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
				800m.
<p>Water quality of the Thames Tideway is highly variable as a result of its tidal influence, and as a result of occasional combined sewer overflow events</p> <p>Foul water is an issue. At present, manholes at the east end of Marsh Wall are blocked which could result in sewers back-surfing onto the public highway. Subsequently, major back-surfing could also be experienced where the major trunk sewer from the Isle of Dogs meets the sewer running to Beckton, at Abbots Road</p> <p>Water supply could be restricted in periods of heavy usage as the population in the Masterplan Area increases</p>	10. To improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources	<p>Will it improve the quality of water within the Thames Tideway and surrounding Docks?</p> <p>Will it contribute towards the reduction of water consumption?</p> <p>Will it encourage water efficiency, including recycling and re-use?</p>	Water	<p>Number of planning permissions granted contrary to Environment Agency advice on water quality grounds</p> <p>Number of planning permissions granted contrary to Thames Water advice on the capacity of the water supply and wastewater treatment network to accommodate development</p> <p>Implementation of water efficient initiatives</p>
High density development results in high volumes of waste (both construction and household and municipal waste). Without strategic planning, it is likely that the Borough will not have capacity to manage this waste sustainably	11. To minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates	<p>Will it contribute towards the reduction in the consumption of materials and resources?</p> <p>Will it contribute towards the reduction of household and commercial waste sent to waste facilities?</p> <p>Will it contribute towards the reduction of demolition and construction waste sent to waste facilities?</p> <p>Will it encourage the re-use or recycling of</p>	Material assets.	<p>Provision of new waste management and/ or waste recycling facilities within the Borough</p> <p>Capacity of new waste management facilities by waste planning authority</p> <p>Percentage of</p>

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
		<p>products and packaging?</p> <p>Will it make use of recycled materials?</p>		<p>household waste expected to be sent by the authority for recycling, reuse and/ or composting</p> <p>Amount of municipal waste arising and managed by waste management authority: by management type</p> <p>Percentage of household waste expected to be sent by the authority for disposal</p>
<p>There is currently some school capacity on the Isle of Dogs, however this is likely to be exceeded in the next five years</p> <p>The Isle of Dogs has the highest levels of projected housing and therefore population growth requiring additional schools. However, it also has the fewest Options for school expansion and potential new schools</p> <p>Identifying new locations to provide additional capacity is difficult on the Isle of Dogs</p>	<p>12. To protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population</p>	<p>Will it result in capacity issues in local primary and/ or secondary schools?</p> <p>Will it provide onsite primary and/ or secondary schools which are accessible to new and existing residents?</p> <p>Will it provide offsite primary and/ or secondary schools which are accessible to new and existing residents?</p> <p>Will it enable families to send all their children to the same schools?</p> <p>Will it improve the quality and diversity of learning and training opportunities?</p>	<p>Population & Human Health</p>	<p>Provision of new primary, secondary and/ or adult education facilities which are within relevant catchment areas for South Quay residents</p> <p>Enrolments of adult education courses per 1,000 population</p> <p>Percentage of population aged 16-74 with no formal</p>

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
				<p>qualifications</p> <p>Percentage of young people aged 16-18 not in education, employment or training</p> <p>Financial contribution for education per residential unit</p>
<p>Existing GPs within the area can accommodate a maximum of 24,687 new patients. However, the number of patients moving to the area is increasing year on year and this capacity will soon diminish</p> <p>Additionally, 65% of the capacity is located at Limehouse, Chrisp Street and Aberfeldy practices, none of which are easily accessible to residents on the Isle of Dogs</p>	13. To maximise the health and well-being of the population and reduce inequalities in health	<p>Will it reduce health inequalities?</p> <p>Will it improve access to high quality health facilities?</p>	Population & Human health	<p>Number of GPs per 1,000 people</p> <p>Number of new primary care facilities which are accessible to South Quay residents</p> <p>Percentage of population reporting good health, aged under 75</p> <p>Life expectancy at birth</p> <p>Financial contribution for health per residential unit</p> <p>Area of land designated as open space</p>

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
				<p>Number of eligible open spaces managed to Green Flag standard</p> <p>Number of planning permissions granted contrary to Environment Agency advice on water quality/ flood risk grounds</p> <p>Total distance of cycle and pedestrian networks provided</p>
<p>Whilst the increase in housing provision (particularly affordable), through redevelopment of the Masterplan Area, is considered positive, the developments that have recently been approved exceed the London Plan's maximum density level. This leads to relatively small sites generating large numbers of residents, which require greater than usual amounts of services (e.g. shops) or facilities (e.g. schools)</p>	<p>14. To ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability</p>	<p>Will it increase the provision of affordable housing for all social groups within the Masterplan Area or wider borough?</p> <p>Will it increase the net availability of new homes in the Borough?</p> <p>Will it provide a mix of unit sizes and types to meet need e.g. for single persons, co-habiting couples and families?</p> <p>Will it provide affordable housing in appropriate locations and typologies?</p> <p>Will it deliver affordable housing that is sustainable from a management perspective, affordable from a resident perspective and inclusive from a social perspective.</p> <p>Will it provide a mix of uses (e.g. employment, retail, open space etc) enabling</p>	<p>Population</p>	<p>Net additional (onsite/ offsite) dwellings in previous years</p> <p>Net additional dwellings for the reporting year</p> <p>Net additional dwellings in future years</p> <p>Gross affordable housing completions</p> <p>Percentage of total housing completions that are affordable</p>

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
		new and existing residents to live and work locally?		(calculated by affordable rooms) Number of affordable housing units secured through planning obligations Percentage of intermediate and market housing completions for family housing Percentage of social rented housing completions for family housing Wheelchair accessible affordable homes completed Number of residential dwellings lost Housing quality – Building for Life Assessment
Recent developments within the area have been residential led, reducing the amount of employment floorspace provided Furthermore, they have also been	15. To provide all residents with the opportunity of employment, particularly in deprived areas	Will it generate new jobs within the Masterplan Area? Will it create or contribute to the creation of low and high skilled jobs? Will it improve the resilience of the borough's	Population & Human Health	Number of new jobs created Working age people on out of work benefits

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
<p>replacing existing employment uses. Extremely high losses of employment floorspace from the area will have a significant adverse impact on employment within the Masterplan Area</p> <p>There is a dominance of employment within professional occupations, notably within the financial services sector</p>		<p>business and the wider economy?</p> <p>Will it reduce unemployment?</p> <p>Will it encourage inward investment?</p> <p>Will it improve economic performance in both advantaged and disadvantaged areas?</p>		<p>Percentage of residents working outside the borough</p> <p>Total amount of additional employment floorspace by type</p> <p>New business registration rate per 10,000 adults</p> <p>Percentage of children living in households with relative low income</p> <p>Town Centre Vacancy Rate</p> <p>Percentage of A1, A3 and A5 uses in District Centres</p> <p>Completed floorspace for 'town centre uses' (A1, A2, B1a and D2)</p>
<p>The Masterplan Area is a former dock, and therefore it is likely that the land is contaminated</p> <p>Development has resulted in some remediation of land to a certain depth</p>	16. To reduce pollution to land through direct action or mitigation; to seek to improve the quality of land as far as possible	<p>Will it maintain and/ or enhance land quality?</p> <p>Will it remediate contaminated land?</p>	Soil; population; human health	Amount of contaminated land remediated
LBTH is designated as an AQMA and	17. To reduce pollution to the	Will it reduce the emission of greenhouse	Air;	Total distance of

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
<p>therefore even small increases in emissions can lead to significant adverse effects.</p> <p>Key sources of air pollution are vehicles, central heating systems and construction activities</p> <p>The Masterplan Area contains sensitive commercial and residential noise receptors</p> <p>Existing dominant sources of noise pollution are considered to be road traffic, DLR, aircraft (to and from London City Airport) and building services from commercial buildings</p> <p>Limited vibration is also emitted from the DLR and Jubilee underground line</p>	<p>air and reduce disruption from noise and vibration through direct action or mitigation measures; To seek to improve the quality of the air as far as possible</p>	<p>gases and other air-borne pollutants?</p> <p>Will it improve air quality?</p> <p>Will it reduce noise and vibration levels, including those from roads, public transport, aviation and construction activities?</p>	<p>population; human health.</p>	<p>cycle and pedestrian networks</p> <p>Number of Car-free Agreements signed</p> <p>Number of travel plans submitted</p> <p>Number of noise related complaints to Environmental Health</p> <p>Number of car parking spaces approved compared to baseline</p>
<p>New development will need to be designed to adapt to climate change, including flood resilience measures and make provision for natural cooling, ventilation and shade, taking account of the potential for warmer summers</p> <p>Existing buildings which are not redeveloped will need to be retrofitted</p> <p>Of the 33 Local Authorities in Greater London, LBTH produces the third highest level of total carbon emissions</p>	<p>18. To ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels</p>	<p>Will it ensure that buildings are able to cope with the effects of climate change (e.g. warmer summers and wetter winters)?</p> <p>Will it create spaces that maximise natural light and ventilation whilst providing natural shade and cooling during periods of excessive summer heat?</p> <p>Will it increase access to high quality green and open spaces which could also provide a cooling and flood mitigation function?</p> <p>Will it reduce the risk of damage to property from flooding?</p> <p>Will it encourage the use of Sustainable</p>	<p>Climatic factors; Population & Human Health; Material Assets.</p>	<p>Number of planning permissions granted contrary to Environment Agency advice on flooding</p> <p>Percentage of approved planning applications that do not meet the sequential test for managing flood risk</p> <p>Area of land designated as open</p>

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
<p>Developments are currently required to demonstrate a 50% reduction in carbon dioxide</p> <p>The Barkantine District Heating Centre network has capacity for expansion and has points of connection in the network to achieve this</p>		<p>Drainage Systems?</p> <p>Will it reduce traffic volumes?</p> <p>Will it increase the proportion of journeys using alternative transport modes to private vehicles?</p> <p>Will it lead to an increased proportion of energy needs being met from renewable sources?</p> <p>Will it reduce the use of natural resources during its construction and operation?</p> <p>Will it ensure buildings are designed so they use and waste less energy?</p> <p>Will it result in the reduction of use of fossil fuels?</p> <p>Will it reduce CO₂ emissions onsite from the developments?</p> <p>Will it minimise fuel costs and service charges for future residents?</p> <p>Will it improve fuel security for future occupants?</p>		<p>space</p> <p>Area of land designated as Green Chain</p> <p>Number of eligible open spaces managed to Green Flag standard</p> <p>Implementation of water efficient initiatives</p> <p>Total distance of cycle and pedestrian networks provided</p> <p>Number of Car-free Agreements signed</p> <p>Level of satisfaction with public transport</p> <p>Number of travels plans submitted</p> <p>Total number of car parking spaces provided relative to baseline</p> <p>Number of new developments which connect to the borough-wide district heating</p>

Relevant Sustainability Issues	SEA Objective	Detailed Sub-Criteria	Relevant SEA Topic	Key Indicators
				<p>network</p> <p>Number of developments incorporating renewable energy developments</p> <p>Anticipated carbon reduction percentage levels from developments connecting to district systems?</p> <p>Anticipated rises in fuel costs and household bills?</p>

Stage B: Developing and refining alternatives and assessing effects

- 3.12 Developing Options for a plan is an iterative process usually involving a number of consultations with the public and stakeholders. Consultation responses and the SEA can help to identify where there may be other 'reasonable alternatives' to the Options being considered for a plan.

Part 3 of the SEA Regulations 12(2) requires that:

"The Report shall identify, describe and evaluate the likely significant effects on the environment of:

(a) implementing the plan or programme; and

(b) reasonable alternatives taking into account the Objectives and the geographical scope of the plan or programme."

Schedule 2(8) of the SEA Regulations requires that the Environmental Report includes a description of:

"An outline of the reasons for selecting the alternatives dealt with..."

- 3.13 In order to meet the requirements of the SEA Regulations, all of the reasonable alternatives identified by LBTH were subject to SEA by LUC and the findings have been presented in this draft SEA report which is being published for consultation alongside the Draft Masterplan SPD.
- 3.14 There is no requirement in the SEA Regulations for all possible reasonable alternatives to be subject to appraisal. Part (b) of Regulation 12(2) above notes that reasonable alternatives will take into account the Objectives of the plan, as well as its geographical scope. Therefore, alternatives that do not meet the Objectives of the South Quay Masterplan SPD, LBTH's Core Strategy or Managing Development Document or National or London policy, or are outside the Masterplan Area were not considered to be reasonable and were therefore not appraised.
- 3.15 It also needs to be recognised that the SEA findings are not the only factors taken into account when determining what preferred Options will be taken forward in a plan. There will often be positive and adverse effects identified for Options, such that it is not possible to 'rank' them based on sustainability performance in order to select a preferred Option(s). Factors such as public opinion, deliverability and conformity with the adopted development plan and National Policy will also be taken into account by plan-makers.
- 3.16 The SEA considered the likely effects of two sorts of reasonable alternatives: **different amounts of development** within the Masterplan Area and **different ways to deliver development** based on development clusters (referred to as Stage 1 and Stage 2 below). The Draft Masterplan SPD developed in parallel with the earlier SEA work was also subject to appraisal. For the latter appraisal, it was recognised that there was a limited number of genuine alternative choices e.g. to supporting principles and the guidance provided which could be subject to appraisal.

Stage 1: Alternative Growth Scenarios

- 3.17 A number of alternative scenarios, which were considered reasonable, were assessed in the SEA. The Options considered different amounts of development based on habitable rooms per ha (hr/ha) varying from 1,100 hr/ha (the policy compliant option) to 7,000 hr/ha. The proposed growth scenarios drew on real schemes which have either been consented or are under construction in the South Quay area (for example, the City Pride, Wood Wharf and Pan Peninsula schemes)².
- 3.18 The scenarios were chosen to be tested through the SEA appraisal process as they **provide a reasonable representation of the different levels of viable development which could come forward within the Masterplan Area**. This includes an option based on the maximum densities put forward in the London Plan as well as a number of options that exceed this level. The purpose of undertaking SEA of these Options was to understand the potential impact that

² Although Option 4 (4,500 hr/ha) was not based on a real scheme, it was considered an appropriate option in relation to the other density scenarios.

different development densities could have on environmental and socio-economic factors – for example, is there a threshold, above which more significant adverse effects are anticipated?

- 3.19 An internal workshop held with LBTH specialists on the 13th May 2014 identified the potential for an additional option providing housing numbers below the policy compliant scenario. However, the scenario was subsequently discounted as recently permitted densities in South Quay and the Isle of Dogs commonly exceed the highest value of the London Plan density matrix and as such was not considered to be a reasonable alternative.
- 3.20 An outline of the proposed growth scenarios is provided in **Table 3.3** below (i.e. the proposed habitable rooms/ ha and the estimated population, which could reside within the Masterplan Area).

Table 3.3 – Alternative Growth Scenarios

Scenario	Habitable Rooms/ ha	Estimated Population
Option 1	1,100	8,420
Option 2	2,000	15,309
Option 3	3,000	22,964
Option 4	4,500	34,445
Option 5	7,000	64,048

- 3.21 Social infrastructure requirements were also calculated for each scenario. These include:
- Education yields.
 - Public open space.
 - Healthcare (number of whole time equivalent GPs and floorspace area of GP surgeries).
 - Idea Stores (libraries) and
 - Leisure Centres.
- 3.22 A set of ‘massing’ visualisations was used to assist with the appraisal work (particularly in consideration of townscape and visual impacts).
- 3.23 The SEA appraised each of these scenarios seeking to identify the preferred growth scenario for the Masterplan. The SEA then tested how the growth could be delivered.
- 3.24 The results of the appraisal of different development amounts is summarised in **Chapter 6** and the detailed appraisal matrices are provided in **Appendix 4** of the separate Technical Appendices document.
- 3.25 Following the outcomes of the SEA of the alternative growth scenarios LBTH decided not to set an overall development density for developers to work towards. The SEA work was considered to be a critical tool in understanding how the potential density of housing growth across South Quay will impact on the local natural and socio-economic environment. LBTH decided that the subsequent Masterplan would seek to optimise housing growth while maximising the capture of benefits for the wider community; as such the subsequent guidance does not seek to specify a prescriptive limit to development but provides a framework to guide growth within the development management process, informed by the earlier assessment work undertaken as part of the SEA.
- Stage 2: Development Delivery Options*
- 3.26 As already explained, the first stage of the SEA tested a range of possible development densities which could be applied across the Masterplan Area. Recognising that each of the possible development density scenarios would represent a substantial increase in the amount of development as well as a change to the type of development within the Masterplan Area, the means by which development is delivered (particularly in terms of the design and layout) will be

critical to managing impacts and ensuring benefits are secured. As such, it was agreed that the next stage of the SEA would test different ways to deliver the development coming forward. The final output from the SEA was subsequently used to inform the selection of a preferred development delivery option, and prescriptive guidance was prepared to underpin this Option in the SPD.

3.27 Six possible Options were considered:

- Option 1: 3,000 hr/ ha Towers in Space.
- Option 2: 1,100 hr/ ha Towers in Space.
- Option 3: 3,000 hr/ ha Podium/ Plinth/ Towers
- Option 4: 1,100 hr/ ha Podium/ Plinth/ Towers
- Option 5: Principal Open Spaces & some onsite Open Space Delivery
- Option 6: Only onsite Open Space Delivery

3.28 Whilst LBTH took the decision not to work to a preferred average development density across the Masterplan Area, it was recognised that masterplan wide development densities above 3,000 hr/ ha could potentially lead to a greater number of significant adverse effects and consequently it was considered that assessing Stage 1 Options 1 (1,100hr/ha) and Option 3 (3,000hr/ha) provided the most relevant scenarios to inform the Masterplan and ultimately the development management process (whilst the threshold for the greatest number of significant adverse effects was 3,000hr/ha, it was recognised that all options could result in adverse effects and all options would represent a significant change to the baseline).

3.29 As such, the SEA has tested the potential for development to come forward (as an average across the Masterplan Area) to either 1,100 hr/ ha or 3,000 hr/ha as 'Towers in Space' or as 'Podium/ Plinths/ Towers' (the two recognised most common ways to deliver high density development). 'Towers in Space' and 'Podiums/ Plinths/ Towers' are considered to be the two main Options for delivering tall, high density development. As such, no other reasonable alternatives have been identified.

3.30 The Towers in Space Option represents a development form which has been coming forward within the Masterplan Area and elsewhere in the Borough and London – essentially this sort of development tends to deliver tall towers, perhaps with open/ private amenity space alongside the development. Residential and non-residential uses would typically be delivered within the main tower block.

3.31 The Podium/ Plinth/ Towers Option is an architectural form which enables higher density residential development to be delivered in tall towers, alongside podiums (1-2 storeys) and plinths (3-10 storeys) enabling non-residential uses with active frontages to be provided at lower levels within the podium and plinth elements helping to deliver a defined urban structure. This Option provides an opportunity for private and public space to be separated and provides scope for separate accesses to different uses. This option also enables densities to be delivered that may not necessarily require taller elements.

3.32 Options 5 & 6 sought to assess the difference between proactively planning for new principal public open spaces to serve the new and existing residents in the Masterplan Area (alongside provision of communal and private amenity space within each development plot) versus only relying on delivery of open/ private space as part of each development plot. Option 5 would also require an element of cooperation between developers in order to develop larger principal open spaces. Six new principal public open spaces were proposed. The locations for the new principal open spaces are based on deliverability (i.e. the potential to coordinate onsite public open space provision to deliver larger public open spaces) as well as the desire to activate Marsh Wall and DLR spaces. Northerly locations for new principal public open spaces were discounted (i.e. Dockside public open spaces) due to the more exposed nature of these locations meaning they would be less suitable for public amenity. There are not considered to be any other realistic locations for public open space which could require testing through the SEA.

3.33 The results of the assessment of each alternative have been used to inform the draft Masterplan SPD which is currently being consulted upon. A summary of this appraisal of delivery Options is

provided in **Chapter 6** with the detailed appraisal matrices provided in **Appendix 4** of the **Technical Appendix** document.

Draft Masterplan SPD

- 3.34 The final stage in the appraisal process was to appraise the Draft Masterplan SPD. An initial draft was prepared at the end of September 2014 which was subject to a high level review by LUC, LBTH technical specialists and the GLA.
- 3.35 Following this earlier review the document was restructured and revised. This removed duplicate information currently contained in National policy and the existing Local Plan and London Plan, and took on board the high level comments.
- 3.36 The SEA then tested the different component parts of the SPD, for example, the vision, principles and guidance. The scope for genuine reasonable alternatives to the principles, guidance etc was limited (for example, many of the decisions have already been set out in higher tier policy e.g. within the NPPF and the Local Plan).
- 3.37 The appraisal of the Draft SPD is summarised in **Chapter 6** and **Appendix 4**.

Stage C: Preparing the SEA Report

- 3.38 This SEA report describes the process undertaken to date in carrying out the SEA of the South Quay Masterplan SPD. It sets out the findings of the appraisal, highlighting any likely significant effects (both positive and adverse and taking into account likely secondary, cumulative, synergistic, short, medium and long-term and permanent and temporary effects), making recommendations for improvements and clarifications that may help to mitigate adverse effects and maximise the benefits of the plan, and outlining proposed monitoring measures.
- 3.39 Each of the Options with potential to influence the SPD and the principles within the Draft SPD itself was assessed against each SEA Objective, and judgement was made with regards to the likely effect that the Option would have on that Objective. These judgements were recorded as a colour coded symbol, as shown below in **Table 3.4**. The sustainability effects are presented in a matrix for each Option as set out in **Appendix 4** of the **Technical Appendix document**, along with a brief justification of the judgement made. A summary of the significant effects of implementing the Plan are provided in **Chapter 6**.
- 3.40 Assumptions were set out to assist with the appraisal and to ensure consistency in outputs. These were developed during the appraisal of different amounts of development and have been used throughout the appraisal process as a guide. The assumptions are presented in **Appendix 5** of the separate **Technical Appendix** document.

Table 3.4– Key to SEA scores

Symbol	Effect
++	Significant positive effect
+	Minor positive effect
0	Negligible effect
-	Minor adverse effect
--	Significant adverse effect
+/-	Mixed effect likely
?	Likely effect uncertain
N/A	Policy is not relevant to SEA Objective

Stage D: Consulting on the Masterplan and the SEA Report

- 3.41 Consultation on the Draft Masterplan SPD and this accompanying SEA Report is taking place between January and February 2015, with both documents being made available to the statutory environmental bodies as well as a range of other consultees and the general public.
- 3.42 Consultation comments received will be taken into account with amendments made to the SPD as necessary. Any comments raised specifically on the SEA Report will also be taken into account and addressed in an updated Environmental Report (which will also reflect updates to the SPD).

Stage E: Monitoring the significant effects of implementing the Masterplan SPD

- 3.43 This SEA Report sets out initial recommendations for monitoring the potential significant environmental effects of the Masterplan SPD. The monitoring proposals have been considered within the context of the broader monitoring framework for the LBTH Local Plan and the data collection for the Council's Annual Monitoring Report. The team responsible for monitoring will likely be the officer team tasked with delivering the South Quay Masterplan.

Next Steps

- 3.44 Following the six week formal consultation, responses will be assessed and the Masterplan amended where appropriate. Depending on the significance of these amendments, the SEA Report may also be updated.

Difficulties encountered and data limitations

- 3.45 The SEA has been undertaken at a strategic level which is appropriate for an assessment of this nature.
- 3.46 Assumptions were drafted early on in the process to assist with the identification of significant effects. It should however be noted that the assessment has been based primarily on the professional judgement of LUC staff underpinned by local knowledge provided by LBTH planning and technical officers.
- 3.47 A question mark (?) has been used to underpin judgements recognising the inherent uncertainty in the process. Justification has been provided to accompany all judgements on effects, supplemented through reference to baseline information as necessary.
- 3.48 The SEA Scoping phase provided an opportunity for a wide range of statutory consultees and interested stakeholders to comment on the baseline data which would be used to inform the assessment, the proposed method of assessment and the Options which were being appraised. This provided an opportunity to ensure the SEA process was fit for purpose.

4 Review of Plans, Policies and Programmes

The SEA Regulations, Schedule 2: requires consideration of:

5. The environmental protection Objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those Objectives and any environmental considerations have been taken into account during its preparation.

- 4.1 A review of relevant International, National plans, policies and programmes has been undertaken and is set out in **Appendix 3**. Although not a requirement of the SEA Directive/ Regulations, the review also covers sub-national and local plans. Through this process it has been possible to establish:
- Social, economic and environmental Objectives that should be reflected in the framework of SEA Objectives against which the Masterplan will be appraised.
 - Sustainability issues that should be addressed by the Masterplan.
 - Whether policies in other plans and programmes could lead to cumulative effects in combination with the Masterplan Options.
- 4.2 In carrying out this policy review we have had regard to the following:
- The review is not exhaustive. It seeks to identify the main policies, plans and programmes of relevance to the SEA and the Masterplan.
 - The policy review is dynamic. New or revised relevant policies, plans or programmes emerge on a regular basis, for example the replacing of the Planning Policy Statements (PPSs) with the NPPF. The review considers the policies, plans and programmes extant at the time of writing.
 - Policies, plans and programmes generally exist within a hierarchy descending from an International/ European to a local level, with the implications for the SEA becoming more specific to the Masterplan at lower levels in the hierarchy.
 - The enforceability of policies, plans and programmes also differs at each level of the hierarchy. International Agreements, European Conventions/ Directives represent legislation to support the achievement of certain policies, plans or programmes. The UK Government has, by signing them or enacting them, agreed to continually deliver their Objectives or achieve their targets by a specific time. They are, or will eventually be, accompanied by complementary UK legislation which the Government, its authorities/ agencies, private companies or individuals must adhere to. National legislation, policies and strategies are enforceable by the Government, and influence policy approaches at lower levels. At lower levels in the hierarchy the policies, plans, and programmes are more likely to take the form of guidance which will have less legal enforcement but may be related to the achievement of specific targets/ aspirations set out at higher tiers.
 - It is seldom possible to achieve absolute consistency with the Objectives of other plans. This review seeks to clearly identify compatibility and inconsistency and how they will be addressed in the Environmental Report.
- 4.3 Relevant Objectives identified by the review of national and regional plans and policy documents (including the NPPF and the London Plan) are set out in **Appendix 3** and have been used to inform the proposed SEA Objectives set out in the SEA Framework in **Chapter 3**.
- 4.4 Key planning policy documents considered in the review included the following:

National Planning Policy Framework (2012) and Planning Practice Guidance

- 4.5 The NPPF provides guidance for when and why SPDs should be developed. The Masterplan will fulfil these requirements by seeking to help facilitate successful applications and deliver the required infrastructure to support housing growth in the Isle of Dogs.

Local Plan (2011)

- 4.6 South Quay is located within the 'Opportunity Area' for the Isle of Dogs. The 'Opportunity Area' initiative seeks to deliver new homes by converting surplus business capacity south of Canary Wharf to housing and to support a wider mix of services.
- 4.7 Tower Hamlets Council and the Mayor of London will be working in partnership to develop an Opportunity Area Planning Framework (OAPF) for the wider area.

Local Plan (2010 & 2013)

- 4.8 The existing Local Plan provides borough-wide, place and specific guidance for the South Quay area. Key designations include:
- Places of Millwall & Cubitt Town.
 - Canary Wharf Activity Area.
 - Millennium Quarter Site Allocation.
 - Marsh Wall East Site Allocation.
 - Flood Zone 3a.
 - The Docks Site of Importance for Nature Conservation (SINC) and
 - Heritage designations including statutorily and locally Listed Buildings and/ or structures and Coldharbour Conservation Area.
- 4.9 In addition, there are a number of existing development management policies in the London Plan and Local Plan which would be used alongside the Masterplan SPD to manage the impact of development.

Millennium Quarter Masterplan Supplementary Planning Guidance

- 4.10 Upon adoption of the South Quay Masterplan, it is envisaged that the Millennium Quarter Masterplan Supplementary Planning Guidance (SPG) will be deleted.
- 4.11 The Millennium Quarter Public Realm Guidance Manual (2008) will continue to be used to inform development across the whole of the South Quay area.

5 Baseline Information and Issues

- 5.1 The collection of information on the current state of the environment is a key component of the SEA process and a requirement of the SEA Directive. It provides a baseline from which to predict and subsequently monitor the environmental effects of the Masterplan.

The SEA Regulations, Schedule 2 requires consideration of:

"2. The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.

3. The environmental characteristics of areas likely to be significantly affected.

4. Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Council Directive 79/409/EEC on the conservation of wild birds and the Habitats Directive."

- 5.2 Sufficient baseline information to meet these requirements has been collected and is organised below by SEA theme.
- 5.3 It should not be assumed that all baseline data are currently available, or, that it will be possible to collect missing data in the future. SEA Guidance recognises that data gaps will exist, but suggests that where baseline information is unavailable or unsatisfactory, authorities should consider how it will affect their assessments and determine how to improve it for use in the assessment of future plans. Where there are data gaps in the baseline and forthcoming reports, these are highlighted in the text. The collection and analysis of baseline data is regarded as a continual and evolving process, given that information can change or be updated on a regular basis.
- 5.4 Relevant baseline information will be updated during the SEA process as and when new data is published. For example, following the completion of emerging technical reports on specific thematic areas such as urban design and viability.

Baseline information, Sustainability Issues and their likely evolution without the Masterplan

- 5.5 The baseline information included within this Scoping Report provides a snapshot of the current social, economic and environmental situation in the Masterplan Area (and wider borough as relevant) including the key sustainability issues of relevance to each SEA theme, and their likely future evolution in the absence of the Masterplan (this takes account of the extant policies in the adopted Local Plan and London Plan and recognises that the London Plan Further Alterations is seeking to raise the target for housing in Tower Hamlets and London as a whole).

Climatic Factors

- 5.6 There is widespread scientific consensus that the Earth's climate is changing and that human activity could be the principal cause. Scientific forecasts suggest that the UK's climate will continue to get warmer and that heavy rainfall will be more frequent. Weather extremes, such as heat waves would become more common and others such as snowfall would become less common. Heavy rainfall will become more frequent, increasing the risk of flooding in built-up areas. Flood risk in the South Quay area is discussed in more detail later on in this Chapter.
- 5.7 A significant contributor to climate change is the concentration of carbon dioxide in the atmosphere. These levels are rapidly increasing and, if left unchecked, will continue to contribute to climate change.

Carbon Emissions

- 5.8 The Climate Change Act 2008 introduced a statutory target of reducing carbon emissions by 80% below 1990 levels by 2050, with an interim target of 34% by 2020. EU Directive 2009/28/EC also commits the UK to sourcing 15% of its energy from renewable sources by 2020.
- 5.9 The carbon dioxide emission reductions outlined in Policy DM29 of the Managing Development DPD provide a responsive framework to take forward the LBTH Community Plan and Core Strategy target to reduce carbon emissions by 60% by 2025 against a 1990 baseline (Core Strategy Policy SO24/ SP11) and reduce greenhouse gas emissions in accordance with the aims of the Climate Change Act 2008.
- 5.10 Part two of the policy identifies that '*development will be required to connect to or demonstrate a potential connection to a decentralised energy system.*' It is considered that linking a development to a heating system is the most resource efficient option.

Climate change mitigation

- 5.11 Of the 33 Local Authorities in Greater London, Tower Hamlets produces the third highest level of total carbon emissions. Department of Energy and Climate Change Figures show that whilst 30 of the 33 London Boroughs have continually reduced their CO₂ levels (on average 11% reduction per Borough on 2005 levels) the LBTH total emissions have risen by 12%.
- 5.12 Tower Hamlets must plan for a low carbon future and ensure that carbon emissions across the borough are kept as low as possible. Whilst reduction in emission levels from existing buildings and operations will yield the greatest carbon savings, it is also essential to minimise emission levels from new development.

Sustainability issues and relevance to the Masterplan

- 5.13 Developments in LBTH are currently required to demonstrate a 50% reduction in carbon dioxide emissions. If this cannot be achieved, in lieu financial contributions are required.
- 5.14 The Barkantine District Heating Centre renewable energy infrastructure lies to the south of the Masterplan Area which consists of a 1.3 MWe/ 1.6 MWth CHP gas engine, four 1.4 MW gas boilers act as back-up and standby and two 105 m³ thermal stores.
- 5.15 The district heating scheme provides affordable heat and hot water to a deprived area, reducing fuel bills for connected residents. It is estimated that around 80% of those living on the Barkantine estate receive state benefits.
- 5.16 The thermal stores can hold 4.5 MWh of heat which is sufficient to cover up to 8 hours of heat demand across the DH Network. The DH network connected to the energy centre consists of 4 km of pre-insulated pipes and operates at approximately 90/ 70°C flow and return temperatures. The heat network appears to have capacity for expansion and has points of connection in the network to achieve this.
- 5.17 Tower Hamlets are committed to supporting the development and expansion of decentralised energy in order to develop a more sustainable, secure, cost-effective and low to zero carbon energy supply in the Borough.
- 5.18 New development will need to be designed to adapt to climate change, including flood resilience measures and make provision for natural cooling, ventilation and shade, taking account of the potential for warmer summers.
- 5.19 There will be a need to retrofit existing buildings to respond to the impacts of climate change.

Likely Evolution of the Issues without the Masterplan

- 5.20 Without the Masterplan, developers will continue to be required to reduce their carbon emissions, or pay financial contributions. The investment of these financial contributions may not be appropriately allocated (i.e. they may be delivered offsite), as how and when the Masterplan Area will be developed is unknown.
- 5.21 Developments will connect to the district heating scheme as necessary, but this may not be possible for development sites in the north-east corner of the Masterplan Area due to difficulties with crossing the docks.

Climate Change Adaptation

- 5.22 Consideration must be given to the potential for climate change to lead to an increase in sea levels, and therefore increased flood risk. Climate change is also likely to lead to wetter winters and warmer summers.

Likely Evolution of the Issues without the Masterplan

- 5.23 Without the Masterplan, new development will continue to be designed to adapt to climate change on a site by site basis, normally meeting the Environment Agency's minimum requirements. It is unlikely that any site wide mitigation would be implemented.

Flood Risk

- 5.24 The entire Masterplan Area lies within Flood Zone 3. This Zone is classed as high risk and comprises land assessed as having a greater than a 0.5% annual exceedance probability of flooding in any year. If vulnerable land uses are proposed in land classified as Flood Zone 3 it must be subject to the Sequential and Exception Tests.
- 5.25 The western edge of the South Quay Masterplan Area, along and around Cuba Street and Manilla Street, is considered to be at risk from extreme tidal surge events involving a breach of the Thames Tidal Flood Defences. The area is considered to be at low risk of actual tidal flooding.
- 5.26 In addition, surface water is predicted to accumulate on site in localised low-lying areas during a 1% annual exceedance probability rainfall event, particularly to the west of Mastmaker Road where surface waters could rise to a depth of 1.2m and to the north west of Admirals Way where waters could rise to 3m deep. In these areas of high risk, flood resilience resistance measures, raised floor levels and safe access/ egress and refuge facilities are recommended³.
- 5.27 The site is not in a Critical Drainage Zone (surface water).

Sustainability issues and relevance to the Masterplan

- 5.28 The siting of all flood risk vulnerability classification (as defined in the NPPF) is considered acceptable in the Masterplan location (including 'essential infrastructure') as the site is afforded protection by the presence of raised flood defences along the River Thames.

Likely evolution of the issues without the Masterplan

- 5.29 Without the Masterplan, existing and new development will continue to be located in this area, although the amount of development (and consequently the population) is likely to substantially increase, leading to more people and property being at risk of flooding.
- 5.30 It is anticipated that the EA would continue to maintain the existing flood defences.
- 5.31 However, additional measures may need to be implemented over and above general maintenance to ensure adequate protection from sea level rises (as a result of climate change).

Population and Human Health

Demographics (Census 2011)

- 5.32 South Quay has a very young population (average age 29.5) even compared to the whole of Tower Hamlets (30.9) which itself has a young population when compared with the rest of London (35.6). Just 1.9% of South Quay residents are aged over 60, compared with 10.3% across the whole borough and 15.3% across London. The profile of ages in South Quay is concentrated within the ranges encompassing those most associated with young professionals - 20-24, 25-29 and 30-44.
- 5.33 Just as there are fewer older people in South Quay, there are also a lower proportion of children when compared with other areas.

Ethnicity (Census 2011)

- 5.34 The ethnic profile of South Quay does not reflect the borough as a whole. One of the largest ethnic groups in South Quay is 'Other White' (22%), potentially reflecting employment

³ London Borough Tower Hamlets, Level 2 Strategic Flood Risk Assessment, Capita Symonds, January 2012.

predominantly in financial services at Canary Wharf of nationals of countries such as the USA and those within Western Europe.

- 5.35 In contrast, the largest ethnic group in Tower Hamlets Borough is 'Bangladeshi' at 32%; in South Quay the proportion is much lower at less than half that proportion.
- 5.36 There are significantly more residents of Chinese origin in South Quay, as a proportion of the population, than across the rest of Tower Hamlets and indeed London; 11.7% compared to 3.2% and 1.5% respectively.
- 5.37 The proportion of Arab residents is double that of London.
- 5.38 The proportion identifying as 'Indian' is in line with London but significantly higher than the rest of the borough.

Crime

- 5.39 According to London Metropolitan Police, LBTH experiences an 'average' (April 2014) level of crime.

Deprivation

- 5.40 The Government's Index of Multiple Deprivation (2010) measures deprivation by combining a number of indicators which include a range of social, economic and housing issues to give a single deprivation score for each small area across England.
- 5.41 LBTH as a whole has substantial areas which are within the 10% and 20% most deprived in England, particularly the areas directly north of the Isle of Dogs. The Masterplan Area includes areas of high levels of deprivation – amongst the top 20% in the country.
- 5.42 Life expectancy at birth in LBTH for the period 2010-2012 for men for was 77.1 and for Women 82.0, which is lowest life expectancy for both men and women in London.

Households (Census 2011)

- 5.43 Just short of half of households in South Quay comprise one person. Families with married or co-habiting couples make up one third of households. Other household types (for example, single occupancy) make up just 12.6% of units, which contrasts with 33.5% across Tower Hamlets and 31.7% across London. The proportion of lone parent households is roughly half that of Tower Hamlets and a third of London's figure.
- 5.44 South Quay is dominated by the private rented sector. Just 18.1% of properties are owned either outright or with a mortgage by their inhabitants compared with 24.2% across the borough and 48.2% across London. The social rented sector is also much lower in South Quay than across those two areas.

Retail Uses

- 5.45 Whilst no formal studies have been undertaken by LBTH, it is understood that the South Quay area is currently not well catered for with respect to retail provision.
- 5.46 Local high streets and facilities outside of Canary Wharf can be perceived as uncoordinated.

Education

- 5.47 The Council has a statutory duty to provide sufficient school places and has to provide sufficient infrastructure, including schools, to ensure sustainable local communities. There need for primary school places is rising in the borough with the highest projected levels in the areas of the highest rates of new residential development. The local authority operates admissions to primary school using catchment areas. Priority for primary school places is generally based on proximity to the school.
- 5.48 There is also a significant increase in demand for secondary school places. The local authority has increased secondary school capacity and more has been planned with the allocation of sites for new secondary schools, there is likely to be requirement for further secondary schools over the next 15 years.

Health

- 5.49 The maximum number of patients per GP is 1,800 according to the Healthy Urban Development Unit (HUDU). The Masterplan Area lies within the LBTH South East locality – the GP whole time equivalent is shown in **Table 5.1** below.

Table 5.1 – GP Whole Time Equivalents (wte)

South East Locality Practices	List Size 1 January 2014 (raw) - source SBS	Requirement (based on maximum requirements of 1,800 patients per GP)	Total GP WTE Source PCIS (downloaded 19/03/14)*	Current Provision/ Deficit
Newby Place Health Wellbeing Centre	4,163	2.31	1.96	- 0.35
The Limehouse Practice	10,401	5.78	7.90	+2.12
The Chrisp Street Health Centre	12,867	7.15	12.92	+5.77
Roserton Street Surgery [Island Mc]	4,234	2.35	3.45	+1.1
Docklands Medical Centre	7,268	4.04	3.22	-0.82
Aberfeldy Practice	6,107	3.39	4.67	+1.28
All Saints Practice	6,036	3.35	4.00	+0.65
Island Health	11,332	6.30	8.46	+2.16
The Barkantine Practice	18,367	10.20	12.00	+1.8
Total	80,775	44.88	58.58	13.71

* Figures provided by NHS England April 2014

- 5.50 South Quay has a higher proportion of residents describing themselves as in 'very good health'. The proportion describing themselves as in 'fair health', 'bad health' and 'very bad health' is less half that of Tower Hamlets and London.

Sustainability issues and relevance to the Masterplan

- 5.51 The population of South Quay is predominantly made up of young people and is less ethnically diverse than the remainder of the borough.
- 5.52 Household size tends to be small and most dwellings are privately rented.
- 5.53 Based on (emerging) LBTH data, whilst there is currently some school capacity on the Isle of Dogs, this is likely to be exceeded in the next 5 years. The Isle of Dogs area has the highest level of projected housing and therefore population growth requiring additional school places, but also has the fewest options for school expansion and potential new schools.

- 5.54 When residential schemes are permitted, a s106 financial contribution is agreed to mitigate the impact on school places, but this does not help where there are no identified locations for providing the capacity. On the Isle of Dogs, identifying appropriate locations is the primary difficulty.
- 5.55 **Table 5.1** shows that there is currently excess capacity of GPs – approximately 13.71 WTE. The whole South East locality could therefore accommodate a maximum of 24,678 new patients.
- 5.56 The current total patient numbers as at the end of March 2014 is 81,324 compared to 78,043 in March 2013 which is an increase of about 4% in a year. This demonstrates that patient numbers are already rising, and therefore that the current excess capacity will not last very long.
- 5.57 Additionally over 65% of this potential capacity is located at Limehouse, Crisp Street and Aberfeldy practices - none of which is particularly accessible to residents on the Isle of Dogs.

Likely evolution of the issues without the Masterplan

- 5.58 Without the Masterplan, the trend for smaller households, dominated by the private sector is likely to continue. The dominance of younger people employed in businesses at Canary Wharf is also expected to continue.
- 5.59 Without the Masterplan, the proposed developments will lead to extremely high population growth, which will require high numbers of additional school places. It is anticipated that the current capacity will be exceeded imminently, which will be exacerbated by the introduction of hyper-dense developments. This may lead to children having to travel further to schools, greater difficulty in ensuring siblings can attend the same school and larger class sizes.
- 5.60 If a site does include a school, it is possible that this will be used by the developer to offset other planning requirements, leading to secondary adverse effects e.g. lower affordable housing provision.
- 5.61 Currently when a development is granted planning permission, s106 payments are made with respect to school places. However, there are no identified locations for providing new school capacity in the Masterplan Area and therefore funds are unable to be allocated.
- 5.62 Without the Masterplan, the proposed developments will lead to extremely high population growth, which will require additional GPs. Whilst it is acknowledged that there is currently capacity in the South East locality, this would not be sufficient to accommodate a large number of hyper-dense density developments as this would put pressure on the existing facilities leading to increased waiting times. Furthermore, not all of the existing practices which currently have capacity are accessible to residents in the Isle of Dogs.
- 5.63 Whilst the Masterplan cannot control the overall amount of development within the Masterplan Area, it can provide guidance on development form and delivery, seeking to maximise opportunities for delivery of required infrastructure (including primary schools and healthcare facilities) to enable need to be met onsite or in accessible locations. It also enables infrastructure requirements to be looked at holistically on a Masterplan-wide basis.

Housing

- 5.64 The localised housing target (market and affordable) based on the Further Alterations to the London Plan for the Masterplan Area is 7,532⁴ new net additional units (NB this does not account for net residential developable area).
- 5.65 LBTH's target for onsite affordable housing is between 35% and 50%. Based on LBTHs minimum requirement for 35% affordable housing, this would lead to the provision of approximately 4,896 market rent units, and 2,636 affordable units. Please note that this has been calculated based on number of units, rather than habitable rooms (as required by the Local Plan) to provide a high level estimate for the SEA.

Sustainability issues and relevance to the Masterplan

- 5.66 Whilst the increase in housing provision (particularly affordable), through redevelopment of the Masterplan Area, is considered positive (and reflects the need to deliver more housing as set

⁴ This is taken from local calculations using the Strategic Housing Land Availability Assessment for the Borough.

down in the London Plan), the developments that have recently been approved exceed the London Plan's maximum density level. This leads to relatively small sites generating large numbers of residents, which require greater than usual amounts of services (e.g. shops) or facilities (e.g. schools).

- 5.67 Affordable housing can be provided onsite, offsite or sometimes by way of a financial contribution if proposals meet criteria set out in the Local Plan. This is based on each site's viability.

Likely evolution of the issues without the Masterplan

- 5.68 Based on the developments that have recently been approved, the number of residential units generated in the area will significantly exceed the current housing target. With no overarching approach to the provision of services and/ or facilities there may not be sufficient capacity to accommodate the new residents (see above/ below with respect to schools, open space, health care etc.). This will lead to residents having to use services or facilities in the wider area, leading to increased pressure on these existing resources.
- 5.69 Where services and/ or facilities are provided onsite, these tend to be located based on the current need of the existing development, rather than the wider future needs of the area. This may lead to services and/ or facilities being located in less convenient locations, or clusters of all the same uses in certain locations and none in others.
- 5.70 Without a Masterplan, the affordable housing provision may not be appropriately located (on/ offsite), and therefore the full benefits of the Masterplan are not realised for LBTH residents.
- 5.71 Without the Masterplan there is potential for affordable housing to be delivered outside the Masterplan Area, within lower value areas in the Borough. This could lead to unbalanced communities.
- 5.72 Whilst the Masterplan cannot control the overall amount of development within the Masterplan Area, it can provide guidance on development form and delivery, seeking to maximise opportunities for a range of housing typologies and tenures to be delivered helping to create a more liveable environment for existing and future environments.

Economy and labour market

- 5.73 There is a dominance of professional occupations amongst South Quay residents. The proportion of residents employed in 'higher' occupations is over double that of the rest of Tower Hamlets and London.
- 5.74 There is a dominance of employment within financial services for residents of South Quay, along with other professional activities. Employment within other sectors, both as a proportion and in absolute numbers, is very low.
- 5.75 As may be expected with the high number of professionals and levels of employment within financial services South Quay has a high proportion of residents educated to Level 4 or above which is equivalent to a diploma and a very low proportion with no qualifications at all.
- 5.76 Full time employment is more prevalent at South Quay than across the rest of the borough and London. Furthermore, the proportion working more than 49 hours per week is over double that of the rest of the borough and London.
- 5.77 A higher percentage of South Quay residents are in employment than the Tower Hamlets and London average.

Sustainability issues and relevance to the Masterplan

- 5.78 Recently approved planning applications have been mixed use, but residential led. This has meant that the amount of office/ retail/ community floorspace available in the Masterplan Area has been reduced. Whilst this is supported by LBTH's Local Plan, extremely high losses of office/ retail/ community floorspace could lead to significant adverse effects in providing employment for local people.

Likely evolution of the issues without the Masterplan

- 5.79 Without the Masterplan, development in the area is likely to continue to be focused on residential properties. This will reduce the amount of office/ retail/ community floorspace that is brought forward in the area, reducing the number of jobs available to local residents.
- 5.80 The Masterplan can provide guidance on development form and delivery, seeking to maximise opportunities for delivery of a range of non-residential uses, including employment uses.

Historic environment

- 5.81 The Tower of London World Heritage site (WHS) lies within the jurisdiction of LBTH (this WHS lies to the north-west of the Masterplan Area). The Maritime Greenwich WHS lies approximately 1.7 km to the south of the Masterplan Area, the buffer zone for which extends into LBTH.
- 5.82 The Greenwich WHS Management Plan (Third Review 2013) identifies important strategic views along Wren's Grand Axis and from the Wolfe statue.
- 5.83 The Management Plan notes that *"the panorama from the Wolfe statue contains a number of views to individual landmarks including:*
- St Paul's Cathedral
 - Millennium Dome (O2)
 - Meridian line (zero degrees longitude extending from the Royal Observatory) (this is not strictly a landmark but a design parameter)
 - Vanbrugh Castle on Maze Hill to the east (at present this view is free from modern development)
 - All Saint's Church on Blackheath along Blackheath Avenue to the south (part of the Grand Axis)" (para. 5.6.5.4).
- 5.84 It also notes that *"Standing in Grand Square at the centre of the Old Royal Naval College offers one of the finest views of the Property, up and down the Grand Axis. To the north the Canary Wharf complex is distant enough not to be imposing when seen from ground level. It is also (at present) mainly off-axis and this helps to make it less dominant in visual terms. However any development in the foreground of Canary Wharf – that is, on the southern part of the Isle of Dogs – would have serious implications for the setting of the World Heritage Property buildings"* (para. 5.6.5.6).
- 5.85 Para 5.6.6.2 goes on to introduce the 'inverted-cone principle': *" The principle of an inverted cone is a helpful concept for establishing in general terms maximum building heights around the Property that would not significantly damage its setting. This concept applies the simple principle that impact decreases with distance. The cone is centred in Grand Square on the Grand Axis and extends out in contours representing building heights. It is assumed that it would be preferable from the WH Property perspective if new development did not exceed these height contours, defined by storey heights which are assumed to be of three metres"*. The proposed contours can be seen in the plan below:

- Grand Axis
- Listed buildings in Greenwich WHS
- ▨ Protected vista from point 5A.2 to St. Paul's
- Panorama from point 5A.2
- Greenwich WHS suggested building heights



- 5.86 The Management Plan stresses that this concept offers general guidance and is not intended to be absolutely definitive.
- 5.87 The Mayor's London's WHS: Guidance on Settings SPG (2012) states that "*The towers of Canary Wharf have a profound impact on the setting of the Maritime Greenwich World Heritage Site but they are at sufficient distance to allow the significance of the axial view from the Royal Observatory to the appreciated*" (stet) (section 7.7).
- 5.88 There are no statutory Listed Buildings and/ or structures within the Masterplan Area. There are however, a number within 500m of the site (see and below), including:
- West India Docks – Grade II listed;
 - Import Dock & Export Dock – Grade I listed;
 - Blackwall Basin – Grade I listed;
 - Poplar Dock, Original Eastern Part – Grade II listed;
 - Isle House, Grade II listed;
 - Blackwall River Police Station – Grade II listed;
 - The Gun Pub – Grade II listed; and
 - The Carnegie Library – Grade II listed.
- 5.89 All Listed Buildings and/ or structures within 500m of the site boundary will be considered.
- 5.90 English Heritage has previously advised that there should also be no distinction drawn between Grade I and II* Listed Buildings and/ or structures and Grade II Listed Buildings and /or structures. The degree of protection afforded to Listed Buildings and/ or structures by the legislation does not distinguish between grades and as a national designation all grades should be regarded as 'high' importance.
- 5.91 There are no locally Listed Buildings and/ or structures within the Masterplan Area, and only one on the Isle of Dogs: the Coldharbour (LST 177) locally listed building lies to the north-east of the site (see below). All locally Listed Buildings and/ or structures within 500m of the site boundary will be considered.
- 5.92 Coldharbour Conservation Area lies to the east, partially within the Masterplan Area. This is an area of particular special architectural and historic interest, illustrated by its rich history and significant architecture, dating from the 18th century. There are a few gap sites and some minor

inappropriate buildings in the Conservation Area, but overall these have little impact on the qualities that led to its designation. All Conservation Areas within 500m of the site will be included in the assessment.

- 5.93 All trees in Conservation Areas are protected.
- 5.94 The Masterplan Area is located within an archaeology priority area and hence there is potential for buried archaeological remains to be uncovered during the construction of future development.

Sustainability issues and relevance to the Masterplan

- 5.95 No direct effects on either statutory or locally Listed Buildings and/ or structures are anticipated from development within the Masterplan Area and no development is proposed within the Conservation Area aside from potential public realm improvements. There is however potential for indirect effects on the setting of Listed Buildings and/ or structures as a result of the newer developments. The impact of existing developments within the Masterplan Area on the setting of Listed Buildings and structures is variable.

Likely evolution of the issues without the Masterplan

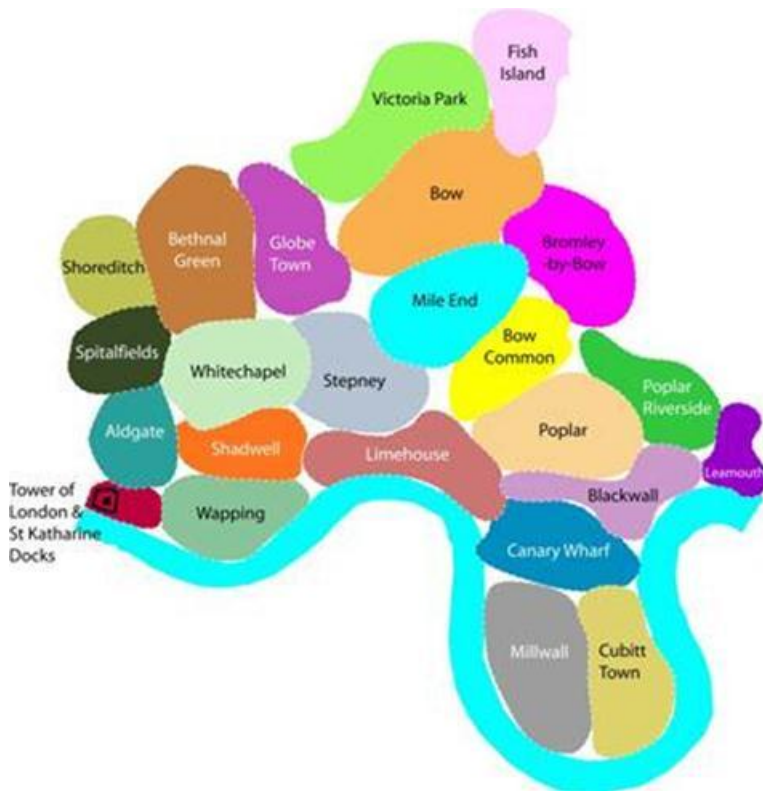
- 5.96 The introduction of further modern developments has the potential to adversely affect the surrounding heritage assets, although it is recognised this would be managed in part through existing policies in the Local Plan and London Plan.
- 5.97 New tall buildings have the potential to affect the setting of the Greenwich WHS, if not carefully designed with respect to height, design and location. Concerns have previously been raised with the height of the buildings and their relationship with One Canada Square.
- 5.98 There is less opportunity to coordinate and manage the design of developments (and hence minimise effects) without the Masterplan.

Views and Townscape

- 5.99 Located within the Isle of Dogs, the South Quay area is historically linked to the Docklands and historically was largely characterised by the shipbuilding industry, which declined rapidly in the second half of the 20th century. The character of the area has changed substantially over the past thirty years and since 1997 the area has become an important business district in London. It is now heavily influenced by the high density and large office blocks of Canary Wharf in the north of the island, which forms the main area of activity within the Isle of Dogs. Residential areas, of mixed typologies and scales, predominate within the south of the island.
- 5.100 The area contains substantial areas of open water including South Dock and Millwall Inner Dock. The historical character of the docklands is still present in pockets throughout the island, particularly around the dock basins. Greenspace and public open space is very limited, there are few street trees and a predominance of hard rather than soft landscaping. The character of the area is diverse in terms of urban grain and pattern, built forms and styles. It remains subject to rapid change, with a number of consented or proposed large, high-density developments likely to be developed in the near future.

Townscape Character

- 5.101 The Masterplan Area comprises the southern part of Canary Wharf, the north part of the Millennium Quarter and the northern part of Manchester Road North character areas (as set out in the Local Development Framework SUBMISSION DOCUMENT CORE EVIDENCE BASE: Character Area Assessments, November 2006), which corresponds to the southern part of the Canary Wharf, north-east part of Millwall and north-west part of Cubitt Town character areas as set out in the LBTH's Urban Structure and Characterisation Study (2009). This is indicated below.



Protected/ Important Views

- 5.102 Although the Masterplan Area does not lie within any 'Protected Vistas' from any of the designated views within the London View Management Framework View⁵ (LVMF), it does form part of the background of the 'London Panorama' from The General Wolfe Statue and the backdrop to the 'River Prospect' from London Bridge.
- 5.103 The 'Visual Management Guidance' for view 5 from The General Wolfe Statue states "*any consolidation of clustering of taller buildings on the Isle of Dogs needs to consider how the significance of the axis view from the Royal Observatory towards Queen Mary's House could be appreciated*".
- 5.104 There may also be locally important views within Tower Hamlets and surrounding London boroughs which could be affected. It is important that views to and from these locations allow for the buildings constituting the emerging cluster to be seen against the sky and allows for views of sky, rather than a cluster of buildings with no back drop to appreciate them.

Visual Amenity

- 5.105 In addition to protected/ important views noted above, the Masterplan Area is seen by a number of people including:
- Users of the Thames Path (including down to City Hall where the skyline is seen through Tower Bridge).
 - Users of the Docklands Light Railway.
 - Residents within residential areas immediately to the southeast at Manchester Road North and to the southwest within Westferry.
 - Workers at Canary Wharf, to the north of South Dock.
 - Visitors to South Dock including Wood Wharf.

⁵ Mayor of London (2012) London View Management Framework supplementary planning guidance: London Plan 2011 Implementation Framework

- Visitors to Millwall Inner Dock and Millwall Dock South (and residents around the dock).
- Visitors to Millwall Park.
- Visitors to Stave Hill Ecological Park.
- Visitors to Mudchute Park.
- Visitors to Greenwich (including the World Heritage site) and Greenwich Park.
- Visitors to Greenwich Peninsula (Millennium Dome).
- Visitors to Poplar Recreational Ground.
- Visitors to Sir John McDougall Gardens and
- Visitors to Trinity Buoy Wharf.

Sustainability issues and relevance to the Masterplan

- 5.106 Under LBTH's Local Plan, some provision of open space and public enhancements are required to be incorporated into the design of new developments. With no overarching strategy with respect to how individual developments relate to other developments (in terms of their location, density, massing, and consideration of how their open spaces link into those in surrounding areas) a mixed and inconsistent quality of urban character has resulted, with a lack of public realm and a lack of open public spaces and green spaces.
- 5.107 Current issues, some of which are identified in the published character assessments, include:
- The poor integration of new and proposed high density and high-rise development with existing residential areas, such as disparities in scale, material, functioning linkages (including visual links) between areas.
 - Limited provision of high quality publicly accessible green and open spaces which can serve a range of uses.
 - Limited permeability and provision of attractive and green non-motorised links across the areas.
 - Loss of historic dimensions of the area which relates to the Docklands and the shipbuilding industry where these give localised areas a sense of place.
 - Changes to urban form and qualities of the area that result in a lack of cohesion of character, for example an imbalance in scale and massing or public realm.
 - Change to the character of the area as experienced from other areas – i.e. change to the profile of the skyline and
 - Change to the character of adjacent areas, i.e. density of high-rise development which may alter the character of adjacent areas (both within the Isle of Dogs and surrounding areas)
- 5.108 In addition, recently implemented and consented developments, have created an unplanned skyline in protected views, such as from the Grand Axis from the Grand Square at the centre of the Old Royal Naval College. There are a number of views which are sensitive to changes within the Masterplan Area, in particular:
- Panorama from The General Wolfe Statue.
 - River prospect from London Bridge looking downstream and
 - View up and down the Grand Axis from the Grand Square at the centre of the Old Royal Naval College.

Likely evolution of the issues without the Masterplan

- 5.109 Without a Masterplan, the developments are likely to be progressed in an unstructured manner leading to an unplanned skyline and resulting in uncertain effects on townscape character, the wider skyline of London, on protected or important views and on the visual amenity of people in and around the area.
- 5.110 Piecemeal developments may not deliver the creation of a coherent district, with a distinct sense of place, quality of design of open and green spaces. There is a risk that inappropriate building

locations and typologies (grain/ density) could result in a “wall” of development that is poorly integrated with surrounding areas and with poor quality of public space, and this will compromise the ability to achieve the aspirations of the Local Plan.

- 5.111 Whilst it recognised, that the requirements of development EIA and the need to respond to Local Plan and London Plan policies makes provision for consideration of cumulative effects (including cumulative effects on views) as well as delivery of open space, the Masterplan can also provide guidance which could facilitate development of larger public open spaces coordinated across development plots and promote development forms which include more human-scale elements and result in a more coherent use of each development plot.

Biodiversity

- 5.112 There are no Natura 2000 Sites (Special Areas of Conservation (SACs) or Special Protection Area (SPAs)) Ramsar Sites or Sites of Special Scientific Interest (SSSIs) within 2 km of the Masterplan Area. Natural England was informally consulted to seek an opinion on whether Habitats Regulations Assessment (HRA) was required for the South Quay Masterplan SPD. Natural England concluded that they did not consider HRA to be necessary in this instance⁶.
- 5.113 Mudchute Park Farm, a Local Nature Reserve, lies 500 m to the south of the Masterplan Area.
- 5.114 Millwall and West India Dock is a 34.41ha Site of Borough Grade II Importance for Nature Conservation (SINC) which lies within the Masterplan Area (see). These large areas of open water are surrounded by dense high-rise development. The vertical concrete walls of the docks support a sparse flora where the old brick and stonework is still extant. Millwall Outer Dock supports the greatest number of colonising plant species on its sides, some associated with wetland habitats, others with terrestrial habitats. These include skullcap (*Scutellaria galericulata*), Jersey cudweed (*Gnaphalium luteoalbum*), hemlock water-dropwort (*Oenanthe crocata*), alder (*Alnus glutinosa*), pellitory-of-the-wall (*Parietaria judaica*) and rat's-tail and squirrel-tail fescues (*Vulpia myuros* and *V. bromoides*). Tern rafts are present in the docks, and are occasionally used by common terns. The docks provide an important area for gulls and other aquatic birds, such as great crested grebe, coots, cormorants and mallards. Waterfowl numbers are higher in hard weather, when several hundred diving ducks, mostly tufted duck, can be present. A single grey seal has been more or less resident in the docks for several years.
- 5.115 The land immediately surrounding the dock is hard-landscaped with some planted trees, the greater number around Millwall Outer Dock, which comprise horse chestnut (*Aesculus hippocastanum*) and London plane (*Platanus x hispanica*). A small semicircle of grass at the eastern end of Millwall Outer Dock is surprisingly rich chalk grassland, with plants including restharrow and field madder.
- 5.116 Access to the docks is open, apart from parts of West India Dock, where development is underway. The area is known to contain European protected species, as well as species on the LBTH and London BAP priority species lists. There are no Section 41 habitats in the Masterplan Area.
- 5.117 There are four (01 to 04 TPO number) TPOs located adjacent to the Masterplan Area. These are located in the south-west corner along Alpha Grove (see).

Sustainability issues and relevance to the Masterplan

- 5.118 Under LBTH's Local Plan, ecological mitigation/ enhancement is required to be incorporated into the design of new developments, and therefore appropriate measures (e.g. green roofs, bat/ bird boxes etc.) tend to be provided. These measures are however, implemented on an *ad hoc* basis, with no overarching strategy with respect to how it relates to other developments. This leads to segmented and isolated areas of ecological enhancement.
- 5.119 The ecological enhancement measures incorporated into developments generally meet the minimum standards, due to financial constraints and a lack of understanding of LBTH's requirements. This has meant that the ecological benefits are not maximised to their full potential.

⁶ Telephone conversation with Natural England Officer responsible for London Region, 10th September 2014.

- 5.120 The introduction of tall buildings over the last twenty years has led to substantial overshadowing of the dock, which could have contributed to the degradation of the aquatic ecology. Further work is needed to support this assertion.
- 5.121 New developments surrounding the Masterplan Area have reclaimed land from the docks to facilitate their development e.g. Wood Wharf. Whilst this has yet to occur within the Masterplan Area, there is the potential for this to be implemented. Whilst this may be considered acceptable on a case by case basis, the potential cumulative effect of the loss of the SINC needs to be considered.

Likely evolution of the issues without the Masterplan

- 5.122 Without the Masterplan, development will still progress and provide ecological mitigation/enhancement on an *ad hoc* basis, which is poorly integrated with existing and proposed developments. This may lead to detrimental effects on protected species.
- 5.123 The introduction of a large number of extremely tall buildings will increase the overshadowing of the dock which could cumulatively impact on the aquatic ecology of the SINC (as mentioned above, further evidence is needed to support this assertion). There is also the potential to introduce floating vessels in the docks, which may also lead to adverse overshadowing effects.
- 5.124 Whilst it may be considered acceptable for individual developments to use the SINC for cooling purposes, multiple developments could lead to a cumulative increase in the water temperature leading to a potentially significant adverse effect on the aquatic ecology.
- 5.125 Whilst the Masterplan cannot control the overall amount of development, it can provide guidance on development form, encouraging developers to include taller and lower rise elements helping to minimise the effects of tall buildings.

Air Pollution

- 5.126 In December 2000, the whole of the LBTH was designated as an Air Quality Management Area (AQMA) for exceedences in both PM₁₀ and NO₂, therefore even small increases in emissions can lead to significant effects. An Air Quality Action Plan was produced in 2003 to examine the various methods of improving air quality in the borough.
- 5.127 Monitoring is no longer undertaken by LBTH and consequently there is no data available post 2011. Tower Hamlets operate three monitoring stations in the borough. These are located at Bethnal Green, Mile End and Poplar. They measure pollutants in real time which means that the pollution levels are constantly being measured and the results recorded.
- 5.128 Air quality monitoring in the borough has shown that a large amount of the pollution in LBTH comes from vehicle emissions. Other key sources of air pollution are from central heating systems and construction sites.

Sustainability issues and relevance to the Masterplan

- 5.129 As an AQMA, even small increases in emissions can lead to significant effects.
- 5.130 Development construction and vehicular emissions are key contributors to pollution in LBTH.

Likely evolution of the issues without the Masterplan

- 5.131 Development will continue to be permitted in the absence of the Masterplan. Additional development is likely to result in increased car based emissions and increased pollution during the construction phase of development.
- 5.132 It will be difficult to coordinate developments in the absence of a Masterplan - for example, seeking to stagger development construction programmes to minimise cumulative impacts and seeking to maximise investment in public transport.
- 5.133 The Masterplan approach enables the impacts of different development densities to be considered strategically, providing scope for a more planned approach to infrastructure delivery (including delivery of public transport).

Noise Pollution

- 5.134 Policy DM25 of the LBTH Managing Development DPD relates to amenity including noise and vibration stating:
- 5.135 *"Development will be required to protect, and where possible improve, the amenity of surrounding existing and future residents and building occupants, as well as the amenity of the surrounding public realm by:...not creating unacceptable levels of noise, vibration..."*
- 5.136 Sections 5 and 6 of the LBTH Code of Construction Practice (CoCP) set out requirements for noise and vibration and operating hours for construction works within the LBTH.
- 5.137 Hours of working will be established by LBTH on a site-by-site basis, but in general the hours of working will be limited to Monday to Friday 08:00 to 18:00, and Saturdays 08:00 to 13:00, with no works which are audible at the site boundary outside of these hours (including Sundays and Bank Holidays).

Sustainability issues and relevance to the Masterplan

- 5.138 Sensitive receptors in the Masterplan are considered to be both residential and commercial. The existing dominant source of noise pollution is from road traffic, the Docklands Light Railway (DLR), aircraft (travelling to and from City Airport) and building services (from commercial buildings).
- 5.139 Limited vibration is also emitted from the DLR and Jubilee underground line.

Likely evolution of the issues without the Masterplan

- 5.140 Without the Masterplan, the proposed developments will lead to extremely high population growth, which will generate high numbers of additional transport movements. Increased traffic movements will lead to increased noise levels. This would be controlled in part through existing policies in the Local Plan and London Plan.
- 5.141 Without specific guidance on the local land uses and building design a higher proportion of residential properties may experience adverse impacts generated by DLR noise.
- 5.142 High population growth is likely to require additional DLR services, which would lead to increased noise levels (it is recognised that the Masterplan cannot control the amount of development coming forward).
- 5.143 It will be difficult to coordinate developments in the absence of a Masterplan - for example, staggering development construction programmes to minimise cumulative noise and vibration impacts and maximising investment in public transport.
- 5.144 Without an understanding of the amount of construction work coming forward, this may lead to incorrect thresholds being applied to sites.

Contaminated land (soils)

- 5.145 The site is a former dock, and therefore it is likely that the land is contaminated. It is noted, that many of the sites have been developed and therefore contamination will have been previously remediated to a certain depth.

Sustainability issues and relevance to the Masterplan

- 5.146 Remedial work is required as necessary for planning permission under a standard LBTH planning condition.

Likely evolution of the issues without the Masterplan

- 5.147 Without the Masterplan, contamination will continue to be dealt with on a case by case basis.

Water Quality

- 5.148 The Canal and River Trust is responsible for water quality within the docks. The docks are primarily used for residential and business moorings, maintenance vessels, pleasure crafts, and occasional water sports.

- 5.149 The Environment Agency does not undertake any monitoring of the dock water quality, although routine sampling data may be available from the Canal and River Trust. The docks themselves are too small to be considered as waterbody units within the Water Framework Directive (WFD) and therefore do not have specific WFD water quality standards. Any water quality data available for the docks will be requested from the Canal and River Trust and reviewed as part of the SEA.
- 5.150 The water quality in the docks relates to two main influences: the quality of the water pumped in from the Thames Tideway, and the quality of the discharges into the docks. The docks surrounding the Masterplan Area are connected hydraulically to the Thames Tideway.
- 5.151 The reach of the Thames Tideway connected to the docks falls within the Thames Middle transitional waterbody (waterbody ID GB530603911402). According to the latest reports produced by the Environment Agency for the WFD (in 2009, with an interim update published in 2012), the Thames Middle waterbody currently has moderate ecological potential, associated with moderate status for invertebrates. In terms of supporting water quality elements, the Thames Middle waterbody currently has moderate status for dissolved inorganic nitrogen and dissolved oxygen. Routine water quality and biology monitoring data for the Thames Middle waterbody will be requested from the Environment Agency and reviewed as necessary as part of the SEA.
- 5.152 Details (location, volume and quality) of the consented discharges, such as combined sewer overflows, which may affect water quality in the docks will be requested as necessary from the EA.

Sustainability issues and relevance to the Masterplan

- 5.153 Water quality in the Thames Tideway is highly variable as a result of its tidal influence, and as a result of occasional combined sewer overflow events.
- 5.154 The outfalls into the docks are from surrounding highways and development sites, including roofs or footpaths. Water quality is considered to generally of a good quality, because discharge is typically from storm water via trapped gullies. There is potential for these flows to be contaminated as a result of pollution events e.g. significant highway spillages, but these are considered unlikely and infrequent in nature.

Likely evolution of the issues without the Masterplan

- 5.155 Without the Masterplan, the water quality of the docks will continue to be affected by the Thames Tideway and discharges from surrounding roads/ buildings. The increase in vehicles using the road will lead to increased pollutants on the roads and therefore into the docks. An increase in construction works may increase the likelihood of pollution events.
- 5.156 Water quality impacts would continue to be managed in part through existing policies in the Local Plan.

Wastewater Treatment and Water Supply

- 5.157 Thames Water is responsible for the provision of clean water and waste water capacity in the Masterplan Area.

Sustainability issues and relevance to the Masterplan

- 5.158 Foul water is an issue on the Isle of Dogs. At present the manholes at the east end of Marsh Wall are already blocked and therefore sewer back-surfing onto the public highway could be a major issue. As a consequence of this, major back-surfing could also be experienced where the trunk sewer from the Isle of Dogs meets the sewer running to Beckton, at Abbotts Road.

Likely evolution of the issues without the Masterplan

- 5.159 With respect to clean and foul water, the increase in units will lead to an increase in demand and capacity (respectively). For foul water, without any strategic intervention this could lead to additional pressure on the sewerage system, leading to more frequent and severe back surging. For clean water, without any wider upgrade residents may experience low water pressure, and potentially lose their water supply in periods of high demand e.g. summer periods.
- 5.160 Whilst individual developments may undertake, or provide financial contributions to, localised upgrading, it is unlikely that this will be sufficient for the amount of development that is anticipated in the Masterplan Area.

- 5.161 The Sustainable Urban Drainage Systems (SuDS) Approval Body (SAB) should be in place in soon, and therefore any major development must include SuDS. As the sites are all owned by separate landowners, it is likely that SuDS will be implemented on an *ad hoc* manner, rather than as an integrated approach.
- 5.162 Whilst the Masterplan cannot control the overall amount of development, a Masterplan-approach can be used to test different densities of development in order to better inform infrastructure requirements (including water supply and wastewater treatment). The Masterplan can also include guidance to maximise opportunities for delivery of SUDs e.g. through provision of larger open spaces across development plots.

Material assets⁷

Open Space

- 5.163 The National Playing Field Association requirement is 2.4 ha per 1,000 residents. This standard has long been used as the national benchmark for open space provision. LBTH has determined that the average provision of open space across the Borough is 1.2 hectares per 1,000 population i.e. there is a borough-wide undersupply of open space.
- 5.164 According to the LBTH Open Space Strategy, Local Area Partnership (LAP) 8, in which the Masterplan Area is located, it *"has good access to waterside spaces but access to green space is poor in several areas."* A Major Park needs to be developed at Millwall Park and Mudchute Park and is a key priority for the LAP. Opportunities exist to enhance the blue-green space linkages and develop routes between riverside to park, park to docks and dock to riverside. The Thames Path provides a key route through the LAP area.

Sustainability issues and relevance to the Masterplan

- 5.165 Publicly accessible open spaces make a significant contribution towards the environmental sustainability of the borough. They provide access to nature that is essential to resident health and wellbeing. Diverse habitats are desirable for many reasons, but they need to be carefully designed and managed if their values are to be recognised by people.

Likely evolution of the issues without the Masterplan

- 5.166 The provision of open space is limited on the smaller development plots. Without coordination between these smaller plots, it will be difficult to generate a usable quantum of open space.
- 5.167 The larger developments have more potential for open space provision, but on very high density schemes there will still not be enough space on the site on its own to achieve the minimum requirements.

Transport

- 5.168 LBTH will see the most significant increase in population and jobs over the next two decades of all the 33 London boroughs. Over the next 20 years, the numbers of residents and jobs in the borough is anticipated to increase by around 50%.
- 5.169 The borough is in a strategic position, sitting on the City fringe, accommodating Canary Wharf, and on the edge of the Olympic Park. This strategic location means that transport improvements are essential to ensure the continuing growth of this area and the whole of east London.
- 5.170 Public transport trips account for 37% of total trips in LBTH, with 21% of all trips by car, 15% by bus, 40% walking and 2% cycling.
- 5.171 TfL's forecasts (LBTH Transport Planning Strategy, 2011) suggest that delays and congestion on the highway network will increase significantly as a result of a 37% increase in vehicle trips to, from and within the borough combined with a 50% increase in through trips. If this materialises, this would lead to the peak travel period spreading with delays and congestion through much of the working day, which will also affect bus operations, walking and cycling. With these delays, some car users may choose to switch to public transport which would increase the forecasts used in this Report.

⁷ The term 'material assets' in the SEA directive is not defined and has been interpreted in a variety of ways; in this Scoping Report it is taken to mean 'infrastructure' in the Directive including 'green' infrastructure such as open space.

- 5.172 As no significant increase in highway capacity is planned, it is unlikely that the forecast increases in traffic can be accommodated without compromising the operation of the highway network.
- 5.173 Future demand for movement in and out of the borough will be significantly affected by the amount of in/ out commuting. Currently, the proportion of those who work and also live in the borough is only 15%, which means that there are a high proportion of journeys from people commuting in, and from borough residents commuting to outside the borough. The modelling undertaken for this study assumes this current pattern remains more or less the same in the future. However, if the proportion of people living and working in the borough could be increased, it would make a significant difference to the number of trips across the borough boundary, particularly those by Crossrail, Underground, DLR and National Rail.
- 5.174 Within the Masterplan Area, the critical points in terms of highway congestion are the two road accesses to the Masterplan Area from the rest of the borough – Preston’s Road roundabout and Westferry Circus. Marsh Wall is also vulnerable to increased traffic congestion.

Sustainability issues and relevance to the Masterplan

- 5.175 Public Transport Accessibility varies between PTAL levels 2, 3, 4 and 5 (PTAL levels vary between 1 and 6, where ‘1’ indicates very poor access to the location by public transport and ‘6’ indicates excellent access by public transport) across the Masterplan Area (refer to **Figure 5.3** below). The PTAL dictates the maximum level of parking considered for individual applications, as set out in **Table 5.2** below.

Table 5.2 – Residential Parking Standards

Location	Less than three bed unit	Three bed plus unit
PTAL 1-2	0.5	1
PTAL 3-4	0.3	0.4
PTAL 5-6	0.1	0.2

- 5.176 It should be noted that PTALs only reflect accessibility in terms of the reliability and frequency of services within the catchment, including the walking time to public transport stops/ stations, as well as average waiting time for a service. They do not measure the speed of routes, utility of the services to the passenger, crowding, spare capacity, ease of interchange, information provision, or cost.
- 5.177 LBTH’s Transport Strategy identifies a long term priority for more public transport from south and east to Isle of Dogs. Modelling (underpinning the LBTH Transport Planning Strategy 2011⁸) results show demand will be close to capacity from south of the borough to the Isle of Dogs. Some capacity enhancement may be necessary to facilitate Isle of Dogs employees coming in from the south. As a long term priority, this will not be implemented in the next 15+ years.
- 5.178 Some parts of the rail network are very congested in the peak period. In the AM peak 3 hours, the Central Line westbound from Mile End, the Jubilee Line eastbound to Canary Wharf and the DLR west to Shadwell are among the worst. On National Rail, congestion is not as bad. However, the C2C services from Barking to Limehouse are very crowded.
- 5.179 On the road network, the A12, A13 and A11 are the most heavily used, with over 3,400 passenger car units (pcus) per hour on the northbound A12 through the Blackwall tunnel in the AM peak hour and over 5,000 pcus per hour westbound on the A13. Congestion and traffic delay are worst at the three river crossings – Tower Bridge, Rotherhithe and Blackwall Tunnels due to high demand for crossing the river.
- 5.180 Transport for London (TfL) is providing modelling information in relation to the pedestrian network and public transport capacity. Transport assessments undertaken for site specific proposals are

⁸The forecasts in the Transport Planning Strategy were based on growth assumptions that fed into the LBTH Core Strategy which are less than the levels of growth now anticipated in the Masterplan Area.

indicating that by 2021 the existing footbridge will be congested only enabling restricted movement.

Likely evolution of the issues without the Masterplan

- 5.181 Without the Masterplan, the proposed developments will lead to higher levels of uncoordinated population growth, which will generate high numbers of additional transport movements – by car and sustainable transport modes.
- 5.182 Increased car movements, on an already congested network, could lead to significant transport effects resulting in gridlock on both the local network, and the wider area.
- 5.183 The DLR and London Underground are close to capacity, and therefore a substantial increase in users could lead to dangerous levels of use e.g. in exceedance of the crush capacity.
- 5.184 Whilst some financial contribution will be obtained from s106 agreements and future CIL payments, this is unlikely to provide sufficient funding for the scale of improvements required.
- 5.185 Increased pedestrian movement will continue to restrict access across the existing footbridge.
- 5.186 Whilst it is recognised that the Masterplan cannot control the amount of development coming forward within the Masterplan Area it provides an approach to enable different development densities to be tested to better inform infrastructure planning (including public transport). It can also provide guidance on the preferred development form (potentially including a mix of taller buildings and lower elements) helping to better manage access to different uses and reduce internal congestion.

Waste

- 5.187 Tower Hamlets is a Unitary Waste Planning Authority.
- 5.188 Policy DM14 within LBTHs' Managing Development DPD provides guidance to manage the waste apportionment by safeguarding the capacity of existing waste sites, identified on the proposals map, unless it can be demonstrated this capacity can be more efficiently re-provided elsewhere in the borough by supporting development which seeks to maximise their operational efficiency.
- 5.189 The Council does not have its own treatment and disposal facility within the borough and so is reliant on the availability of spare capacity at other waste facilities for the actual management of its Municipal Waste.

Sustainability issues and relevance to the Masterplan

- 5.190 The LBTH Waste Evidence Base Report (2009) identified six licensed waste management facilities within the borough which are required to be safeguarded in accordance with the London Plan and the Borough Core Strategy.
- 5.191 This includes the Northumberland Wharf site which lies immediately to the east of the Masterplan Area. Northumberland Wharf is safeguarded as a waste management facility as it is currently a licensed waste facility.
- 5.192 Whilst LBTH has sufficient safeguarded land to meet the borough's waste apportionment target, the Council does not consider that all of the existing sites provide the best long term solution for the sustainable management of waste in terms of sufficient recycling, composting or treatment capacity given their size, location and accessibility. The capacity at Northumberland Wharf has therefore been increased from 0.62 ha to 0.85 ha, and additional sites in the borough have also been considered.
- 5.193 There are currently issues with waste storage and collection in respect of new and refurbished developments.

Likely evolution of the issues without the Masterplan

- 5.194 High amounts of construction over an extended period of time will lead to high volumes of construction waste/ excavated material that will need to be appropriately disposed of (it is recognised that the Masterplan cannot control the overall amount of development).
- 5.195 Without the Masterplan, there is potential for waste management services to have an adverse effect on the public realm and local road networks (as there would be less opportunity to

coordinate collections and to manage waste generation arising from development). This could be exacerbated without the Masterplan as it will be difficult to accurately plan for the waste needs of future residents. High density developments will lead to high volumes of waste which without suitable planning, the borough will not have capacity for. If LBTH cannot accommodate the waste, it will need to pay to send the waste elsewhere, which is an unnecessary financial burden on the Council.

- 5.196 Waste storage is already an issue for new and refurbished developments and is likely to be exacerbated without a planned approach to ensure sufficient space is designed into new developments.
- 5.197 Furthermore, an opportunity will be lost for utilising waste for local energy generation to assist in addressing fuel poverty and reducing carbon emissions (this could be promoted through the Masterplan).

Figure 5.1 – Environmental Constraints in the immediate vicinity of the South Quay Masterplan Area

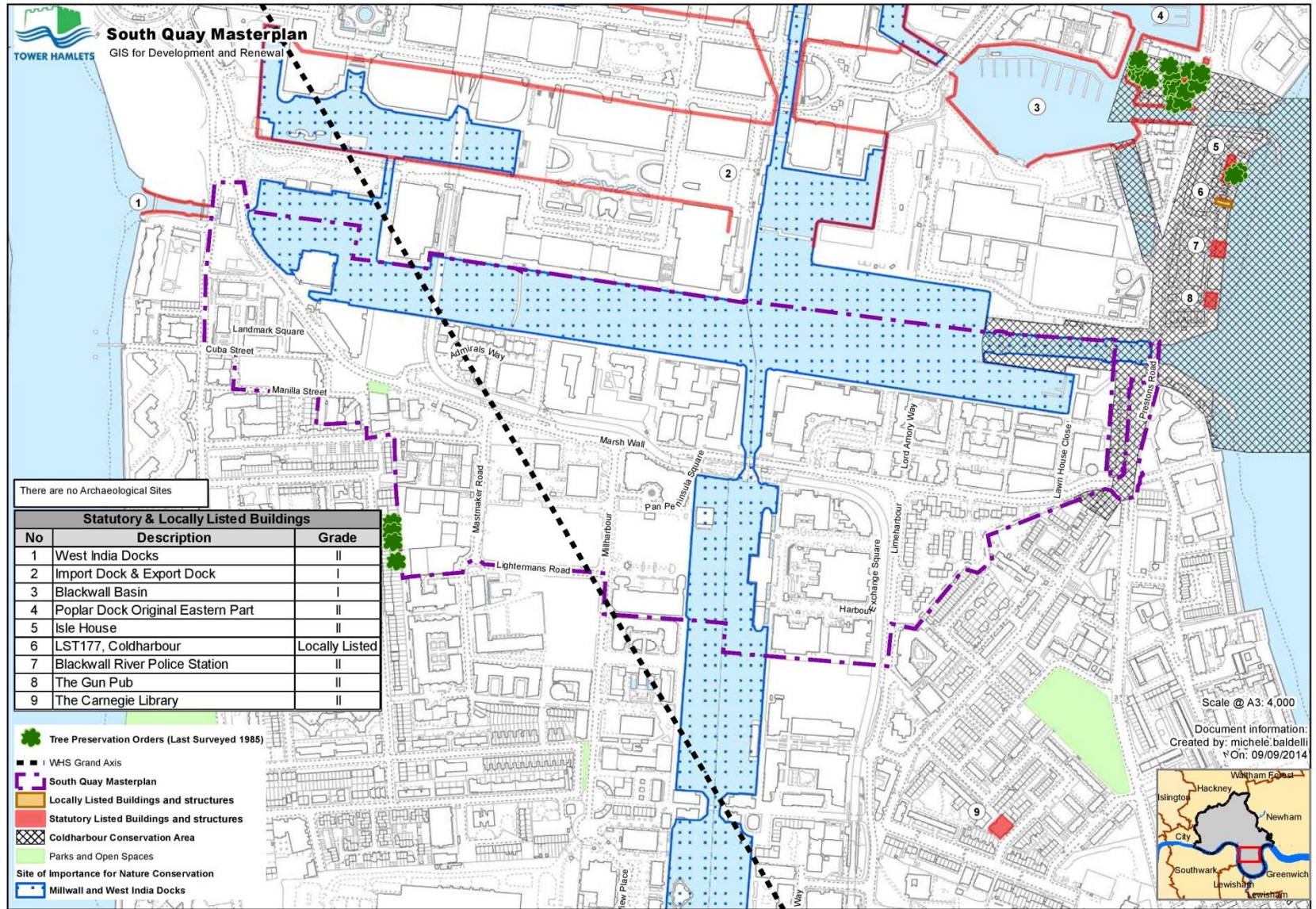


Figure 5.2 – Environmental Constraints within 500m of the South Quay Masterplan Area

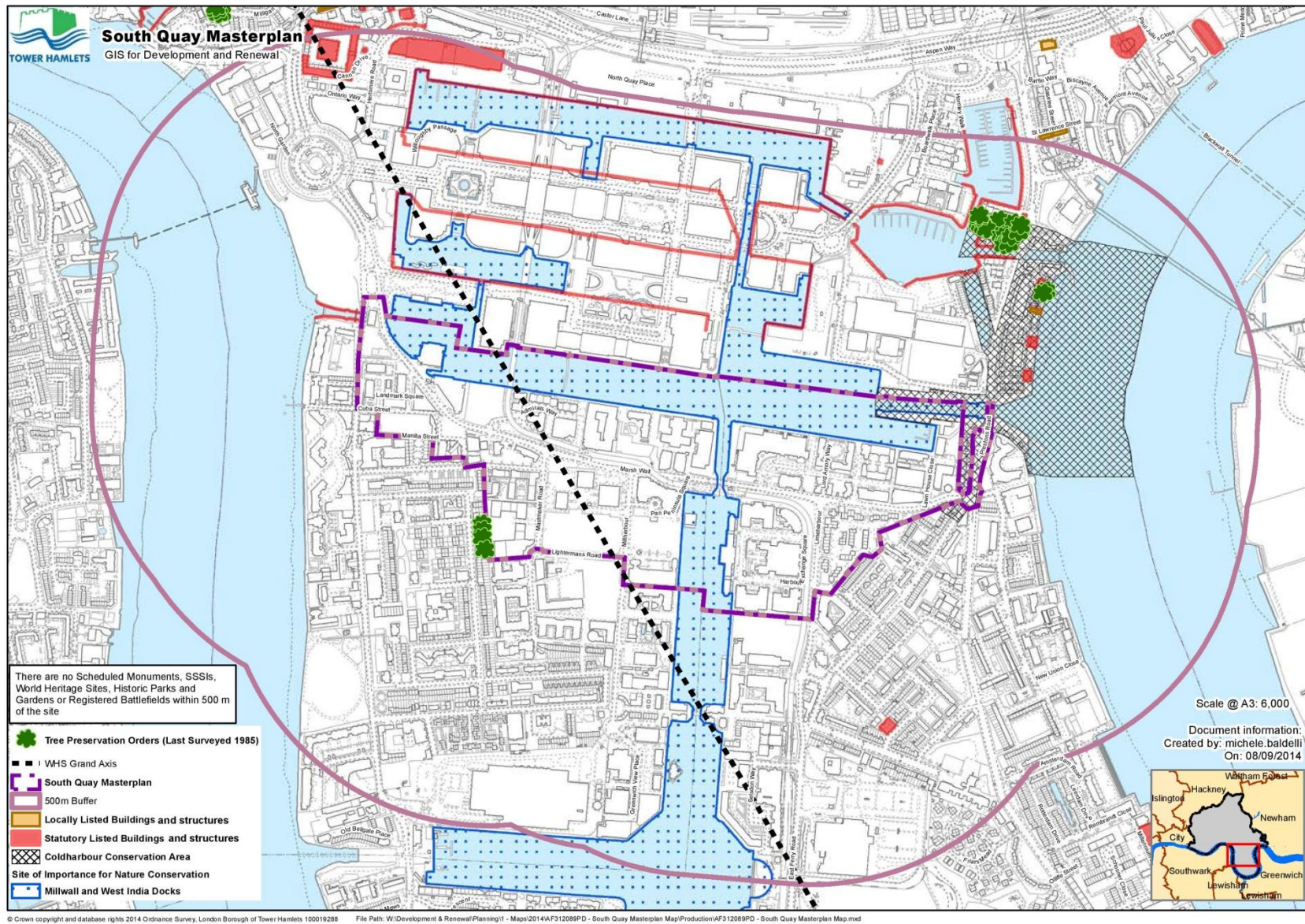
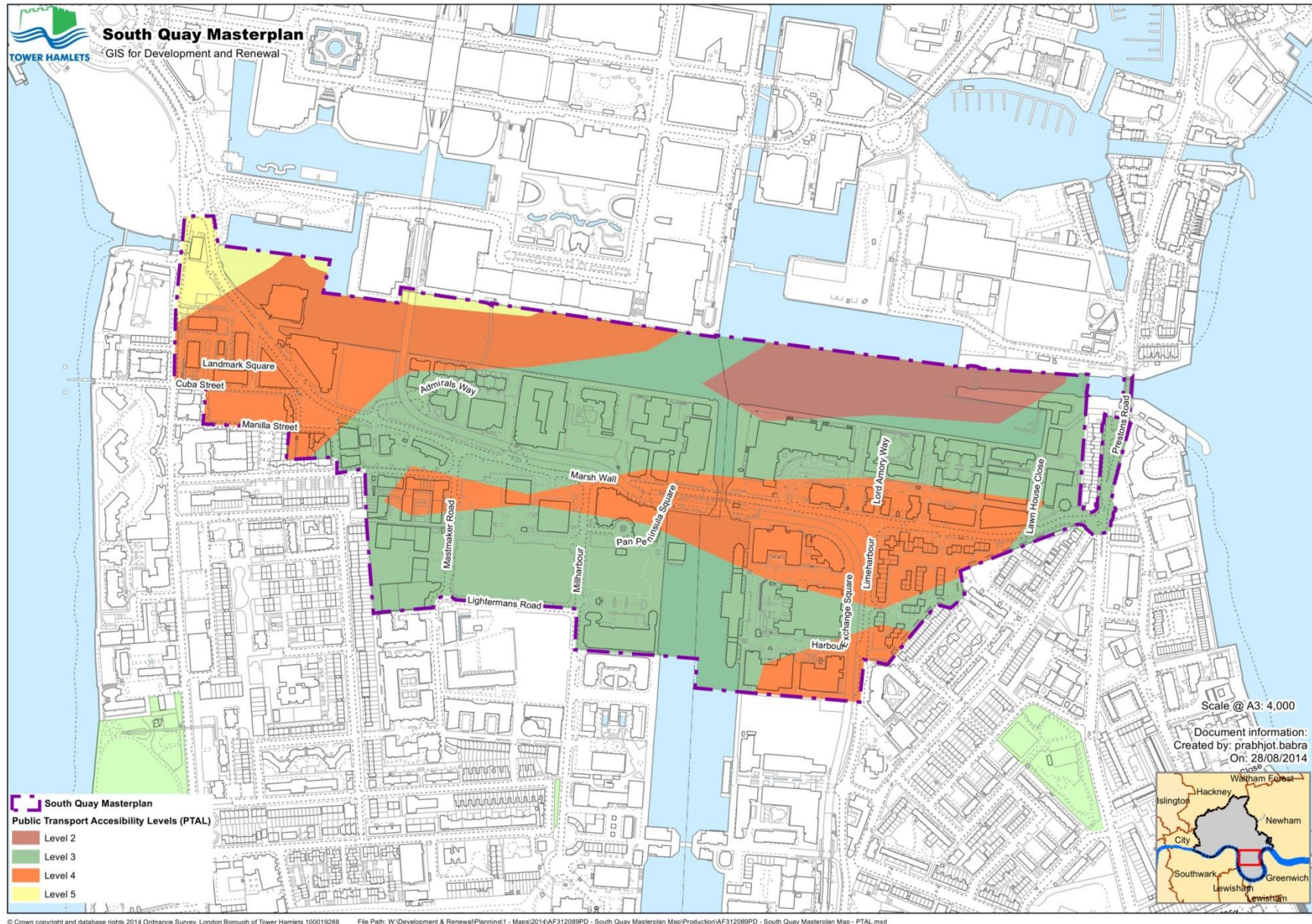


Figure 5.3 – Public Transport Accessibility Levels in the South Quay Masterplan Area



NB: Please note that the depiction of PTAL ranges across the water spaces is not intended to suggest that development of Docks resulting in loss of Dock space will be supported.

6 Strategic Environmental Assessment Findings

Part 3: Environmental Reports and Consultation Procedures of the SEA Regulations 12(2) require that:

"The Report shall identify, describe and evaluate the likely significant effects on the environment of:

- (a) implementing the plan or programme; and
- (b) reasonable alternatives taking into account the Objectives and the geographical scope of the plan or programme."

Schedule 2(8) of the SEA Regulations requires that the Environmental Report includes a description of:

"An outline of the reasons for selecting the alternatives dealt with..".

Furthermore, The SEA Regulations, Schedule 2(6) require the Environmental Report to consider:

"The likely significant effects on the environment, including short, medium and long term effects, permanent and temporary effects, positive and adverse effects and secondary, cumulative and synergistic effects, on issues such as (a) biodiversity, (b) population, (c) human health, (d) fauna, (e) flora, (f) soil, (g) water, (h) air, (i) climatic factors, (j) material assets, (k) cultural heritage including architectural and archaeological heritage, (l) landscape and (m) the inter-relationship between the issues referred to in sub-paragraphs (a)–(l)."

- 6.1 This Chapter describes the findings of the SEA of the South Quay Masterplan SPD, with a focus on the **likely significant effects** arising (either significant positive or significant adverse) and the effects which are uncertain at this stage. Where any mitigation or recommendations have been made, these are summarised at the end of the Chapter. As such, the effects discussed in paragraphs 6.3 to 6.195 are pre-mitigation. **Table 6.4** and **Table 6.5** set out the likely residual effects once mitigation and recommendations have been taken into account. A detailed assessment of the **different amounts of development Options (Stage 1)**, the **delivery of development Options (Stage 2)** and the **draft Masterplan SPD** has been undertaken, considering their likely effects against each of the SEA Objectives. Detailed appraisal matrices for these can be found in **Appendix 4** of the **Technical Appendix** document.
- 6.2 A summary and discussion of all assessment scores is provided at the end of each sub-section.

Different Amounts of Development Options

Introduction

- 6.3 This section sets out the pre-mitigation findings of the SEA of the different amounts of development Options. The section focuses on the likely significant and uncertain effects of each option. All of the effects can be found in the detailed appraisal matrices in **Appendix 4**.
- 6.4 There are five Options in total:
 - Option 1: 1,100 hr/ ha
 - Option 2: 2,000 hr/ ha
 - Option 3: 3,000 hr/ ha
 - Option 4: 4,500 hr/ ha
 - Option 5: 7,000 hr/ ha

- 6.5 The purpose of assessing these Options is to demonstrate the sustainability advantages and disadvantages of delivering the quoted amounts of development within the Masterplan Area.

Option 1: 1,100 Habitable Rooms/ Ha

- 6.6 This Option assessed the likely effects of the development of 1,100 habitable rooms per hectare within the Masterplan Area. This is equivalent to the maximum density in the London Plan Density Matrix. The estimated population of this Option is 8,420.

Significant Positive Effects

- 6.7 This Option is likely to result in an uncertain significant positive effect (++/?) on Objective 14 (*to ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability*) as it will deliver 1,100 habitable rooms per hectare in line with the London Plan's maximum density and will contribute to the LBTH and GLA's housing targets. The Option will have a significant positive effect on the delivery of affordable housing as it is assumed that all affordable housing can be delivered within the Masterplan Area in accordance with LBTH's Local Plan.

Significant Adverse Effects

- 6.8 No significant Adverse effects are predicted for this Option.

Significant Mixed Effects

- 6.9 This Option is likely to result in significant mixed effects on Objectives 12 (++/--/?) and 13 (++/-/?). Effects on Objective 12 (*to protect existing, make provision for new and maximise accessibility to education facilities to meet the needs of all sectors of the population*) are likely to be significant mixed (++/--/?) as the Isle of Dogs school capacity is likely to be exceeded in the next five years. The Option would need to provide 0.7 primary and 0.2 secondary schools to meet additional provision requirements. Without this provision effects are likely to be significant adverse. However, depending on the developments progressed there is the possibility that new development could incorporate onsite educational facilities which could serve new residents and the wider community (this is only likely to be possible in respect of primary schools). This could result in a significant positive effect depending on the number of schools and their capacity and location.

- 6.10 With regard to the effects on Objective 13 (*to maximise the health and well-being of the population and reduce inequalities in health*) (++/-/?), this Option will generate the demand for a minimum of 4.7 GPs based on a maximum of 1,800 residents per GP. Whilst there is a small amount of GP capacity available in LBTH currently, the increase in population will put pressure on existing facilities and may restrict the ability of existing and new residents to access health facilities. This Option would also need additional health floorspace to meet additional requirements for health services. These effects are considered to be minor adverse. However, depending on the developments progressed there is the possibility that new developments could incorporate onsite health facilities which could serve new residents and the wider community. This could result in a significant positive effect depending on the number of facilities and their capacity and location.

Uncertain Effects

- 6.11 This Option is likely to result in uncertain effects (?) on Objective 7 (*to protect views and the visual amenity of people living and working in and visiting the area and surroundings*). At this development scale, buildings are unlikely to be imposing but whether effects on visual amenity will be positive or adverse will depend on the detailed development design which comes forward.

Option 2: 2,000 Habitable Rooms/ Ha

- 6.12 This Option assessed the likely effects of the development of 2,000 habitable rooms per hectare within the Masterplan Area. The estimated population of this Option is 15,309.

Significant Positive Effects

- 6.13 No significant positive (++) effects are predicted for this Option.

Significant Adverse Effects

- 6.14 This Option is likely to result in significant adverse effects on Objectives 1 and 8 (both with uncertainty (--/?)). With regard to Objective 1 (*to create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place*), based on the Option's population estimate, the Option will not meet the National Playing Fields Association standards for open space (2.4ha of open space per 1,000 residents) within the Masterplan Area. The Option could meet LBTH's current average provision for open space (1.2ha of open space per 1,000 residents); however it is highly unlikely that dedicating 71% of the Masterplan Area to open space will be viable. Development of the Option could therefore lead to increased pressure/ overcrowding on existing and proposed recreational facilities and open spaces.
- 6.15 Significant adverse effects are likely on Objective 8 (*to increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)*) as the Masterplan Area is in close proximity to the Central and Jubilee lines and the DLR which are very congested on westbound and eastbound services during the AM peak three hours. C2C (Country to Country) services from Barking to Limehouse are also heavily congested. Although Crossrail will be on-stream from December 2018 and is predicted to offset capacity on the wider public transport network until 2031, it is uncertain whether it will accommodate the predicted population growth expected as a result of this Option.

Significant Mixed Effects

- 6.16 This Option is likely to result in significant mixed effects on Objectives 12 (++/--/?), 13 (++/--/?), 14 (++/--/?), and 18 (--/+/?). Effects on Objective 12 (*to protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population*) (++/--/?) are likely to be significant mixed (++/--/?) as the Isle of Dogs school capacity is likely to be exceeded in the next five years. The Option would need to provide 1.3 primary and 0.3 secondary schools to meet additional provision requirements. Without this provision effects are likely to be significant adverse. However, depending on the developments progressed there is the possibility that new development could incorporate onsite educational facilities which could serve new residents and the wider community (this is only likely to be possible in respect of primary schools). This could result in significant positive effects depending on the number of schools and their capacity and location.
- 6.17 With regard to the effects on Objective 13 (*to maximise the health and well-being of the population and reduce inequalities in health*) (++/--/?), this Option will generate the demand for a minimum of 8.5 GPs. Whilst there is a small amount of GP capacity available in LBTH currently, the increase in population will put pressure on existing facilities and may restrict the ability of existing and new residents to access health facilities. This Option would also need 1,275m² of additional health floorspace to meet additional requirements for health services. These effects are considered to be minor adverse. However, depending on the developments progressed there is the possibility that new developments could incorporate onsite health facilities which could serve new residents and the wider community. This could result in a significant positive effect depending on the number of facilities and their capacity and location.
- 6.18 The Option is likely to have significant mixed effects (++/--/?) on Objective 14 (*to ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability*) as it would deliver 2,000 habitable rooms per hectare contributing to the LBTH and GLA's housing targets. It is also assumed that all affordable housing can be delivered onsite in accordance with LBTH's local plan. However, as the Option would deliver housing at a density above the London Plan maximum density it is considered that there will be an uncertain minor adverse effect on liveability (the higher population arising from this Option could affect the quality of life of existing and new residents).
- 6.19 The Option is likely to have significant mixed effects on Objective 18 (*to ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels*) (--/+/?), as scores from Objectives 1, 3, and 8 which include sub-criteria that is relevant to this Objective vary from mixed to significant adverse uncertain. The significant adverse effects arise from the potential for increased traffic arising from this Option and uncertainty as to whether modal shift can be achieved. Development could connect to the Barkantine District Heat Centre

which could minimise fuel costs and service charges for future residents. This is considered to have an uncertain minor positive effect on this Objective.

Uncertain Effects

- 6.20 This Option is likely to result in uncertain effects (?) on Objective 7 (*to protect views and the visual amenity of people living and working in and visiting the area and surroundings*). At this development scale, buildings are unlikely to be imposing but whether effects on visual amenity will be positive or adverse will depend on development design.

Option 3: 3,000 Habitable Rooms/ Ha

- 6.21 This Option assessed the likely effects of the development of 3,000 habitable rooms per hectare within the Masterplan Area. The estimated population of this Option is 22,964.

Significant Positive Effects

- 6.22 No significant positive (++) effects are predicted for this Option.

Significant Adverse Effects

- 6.23 This Option is likely to result in significant adverse effects on Objectives 1, 2, 4, 8, 9, 10, 11 and 17 (all with uncertainty (--/?)). With regard to Objective 1 (*to create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place*), based on the population estimate for the Option, the Option will not meet the National Playing Fields Association standards for open space within the Masterplan Area or achieve LBTH's current average provision for open space. The Option may also lead to increased pressure/overcrowding on existing and proposed facilities. Uncertain significant adverse effects are also anticipated on the health of new and existing residents from the potential increased wind speeds and overshadowing from tall buildings affecting residents' quality of life and ability to use outside spaces.
- 6.24 The effect on Objective 2 (*to protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses*) is likely to be significant adverse as there is the potential for tall buildings to result in indirect impacts on the Millwall and West India Docks SINC including increased discharges affecting water quality and potential for overshadowing which may significantly affect the aquatic ecology it supports. However, this is uncertain.
- 6.25 Significant adverse effects on Objective 4 (*to enhance and protect the significance of heritage assets and archaeological heritage*) are likely as the scale of the buildings proposed for this Option could have a significant effect on the setting of the Greenwich WHS and has the potential to overwhelm and dominate listed buildings due to the requirement for tall buildings.
- 6.26 Significant adverse effects are likely on Objective 8 (*to increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)*) as the Masterplan Area is in close proximity to the Central and Jubilee lines and the DLR which are very congested on westbound and eastbound services during the AM peak three hours. C2C services from Barking to Limehouse are also heavily congested. Although Crossrail will be on-stream from December 2018 and is predicted to offset capacity on the wider public transport network until 2031, it is uncertain whether it will accommodate the predicted population growth expected as a result of this Option.
- 6.27 Significant adverse effects are likely on Objective 9 (*to maximise the accessibility to key services and amenities*) as it is assumed that the Masterplan will put significant pressure on existing local services (Canary Wharf Idea Store and Tiller Leisure Centre). The predicted population arising from this Option will require 689m² of additional library floorspace and eight additional leisure courts (four courts per leisure centre). These are unlikely to be provided onsite and it is uncertain whether space exists elsewhere in the Borough to meet these requirements.
- 6.28 Effects on Objective 10 (*to improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources*) are considered to be significant adverse as development at this density will lead to a substantial increase in demand for potable and foul water capacity and it is uncertain whether capacity exists within the existing network. Effects on Objective 11 are considered to be significant as the Option will provide 3,000 habitable

rooms per hectare which is likely to significantly exacerbate existing municipal waste capacity issues as well as existing operational difficulties related to waste storage and collection due to increased waste production.

- 6.29 Significant adverse effects are likely on Objective 17 (*to reduce pollution to air and reduce disruption from noise and vibration through direct action or mitigation measures; to seek to improve the quality of the air as far as possible*) as the construction period for the Option is expected to be long and therefore the overall noise and air emissions could be high for the duration of construction. The Option could also result in the delivery of approximately 1,400 car parking spaces based on current Local Plan standards. The estimated population of the Option will increase the demand for road vehicles which will in turn increase noise and air emissions during operation. The increased population will also generate a high energy demand, which if not designed appropriately, could increase air emissions further. The Option is also likely to result in tall buildings which could be significantly affected by aircraft noise.

Significant Mixed Effects

- 6.30 This Option is likely to result in significant mixed effects on Objectives 3 (--/+/?), 12 (++)/--/?), 13 (+++/-/?), 14 (+++/-/?) and 18 (--/+/?). Significant mixed effects are expected on Objective 3 (--/+/?) due to the substantial increase in the number of people and properties at risk of flooding. Furthermore, the increase in residents as a result of this Option will put significant pressure on the existing foul water capacity, which already experiences episodes of back surging during flood events. However, there is potential to implement permeable surfaces into the Masterplan Area which could reduce the risk of flooding having a minor positive effect on this Objective.
- 6.31 Effects on Objective 12 (*to protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population*) are likely to be significant mixed (+++/-/?) as the Isle of Dogs school capacity is likely to be exceeded in the next five years. The Option would need to provide 2 primary and 0.5 secondary schools to meet additional provision requirements. Without this provision effects are likely to be significant adverse. However, depending on the developments progressed there is the possibility that new development could incorporate onsite educational facilities which could serve new residents and the wider community (this is only likely to be possible in respect of primary schools). This could result in a significant positive effect depending on the number of schools and their capacity and location. Whilst the Option has been given the same score as Options 1 and 2, it is considered to be more adverse due to the higher population estimate and hence the increased demand for facilities.
- 6.32 With regard to the effects on Objective 13 (*to maximise the health and well-being of the population and reduce inequalities in health*) (+++/-/?), this Option will generate the demand for a minimum of 12.8 GPs. Whilst there is a small amount of GP capacity available in LBTH currently, the increase in population will put pressure on existing facilities and may restrict the ability of existing and new residents to access health facilities. This Option would also need 1,913m² of additional health floorspace to meet additional requirements for health services. These effects are considered to be minor adverse. However, depending on the developments progressed there is the possibility that new developments could incorporate onsite health facilities which could serve new residents and the wider community. This could result in a significant positive effect depending on the number of facilities and their capacity and location.
- 6.33 The Option is likely to have significant mixed effects (+++/-?) on Objective 14 (*to ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability*) as it would deliver 3,000 habitable rooms per hectare contributing to the LBTH and GLA's housing targets. It is also assumed that all affordable housing can be delivered onsite in accordance with LBTH's local plan. However, as the Option would deliver housing at a density above the London Plan maximum density it is considered that there will be an uncertain minor adverse effect on liveability (the higher population arising from this Option could affect the quality of life of existing and new residents).
- 6.34 The Option is likely to have significant mixed effects on Objective 18 (*to ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels*) (--/+/?) as scores from Objectives 1, 3, and 8 which include sub-criteria that are relevant to this Objective vary from significant mixed to significant adverse uncertain. The significant adverse

effects arise from the potential for increased traffic arising from this Option and uncertainty as to whether modal shift can be achieved, concerns around increased flood risk etc. The Option will also have significant adverse effects on this Objective as a result of the use of natural resources during construction and the energy requirements of new residents. However, development could connect to the Barkantine District Heat Centre which could minimise fuel costs and service charges for future residents. This is considered to have an uncertain minor positive effect on this Objective.

Uncertain Effects

- 6.35 No uncertain effects (?) are predicted for this Option.

Option 4: 4,500 Habitable Rooms/ Ha

- 6.36 This Option assessed the likely effects of the development of 4,500 habitable rooms per hectare within the Masterplan Area. The estimated population of this Option is 34,445.

Significant Positive Effects

- 6.37 No significant positive (++) effects are predicted for this Option.

Significant Adverse Effects

- 6.38 This Option is likely to result in significant adverse effects on Objectives 1, 2, 4, 8, 9, 10, 11 and 17 (all with uncertainty (--/?)). With regard to Objective 1 (*to create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place*), based on the population estimate for the Option, the Option will not meet the National Playing Fields Association standards for open space within the Masterplan Area or achieve LBTH's current average provision for open space. The Option may also lead to increased pressure/overcrowding on existing and proposed facilities. Uncertain significant adverse effects are also anticipated on the health of new and existing residents from the potential increased wind speeds and overshadowing from tall buildings. Whilst the Option has been given the same score as Options 2 and 3, it is considered to be more adverse due to the higher population estimate.
- 6.39 The effect on Objective 2 (*to protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses*) is likely to be significant adverse as there is the potential for tall buildings to result in indirect impacts on the Millwall and West India Docks SINC including increased discharges affecting water quality and potential for overshadowing which may significantly affect the aquatic ecology it supports. However, this is uncertain.
- 6.40 Significant adverse effects on Objective 4 (*to enhance and protect the significance of heritage assets and archaeological heritage*) are likely as the scale of the buildings proposed for this Option could have a significant effect on the setting of the Greenwich WHS and has the potential to overwhelm and dominate listed buildings due to the requirement for tall buildings.
- 6.41 Significant adverse effects are likely on Objective 8 (*to increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)*) as the Masterplan Area is in close proximity to the Central and Jubilee lines and the DLR which are very congested on westbound and eastbound services during the AM peak three hours. C2C services from Barking to Limehouse are also heavily congested. Although Crossrail will be on-stream from December 2018 and is predicted to offset capacity on the wider public transport network until 2031, it is uncertain whether it will accommodate the predicted population growth expected as a result of this Option.
- 6.42 Significant adverse effects are likely on Objective 9 (*to maximise the accessibility to key services and amenities*) as it is assumed that the Masterplan will put significant pressure on existing local services (Canary Wharf Idea Store and Tiller Leisure Centre). The predicted population arising from this Option will require 1,033m² of additional library floorspace and 11 additional leisure courts. These are unlikely to be provided onsite and it is uncertain whether space exists elsewhere in the Borough to meet these requirements.
- 6.43 Effects on Objective 10 (*to improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources*) are considered to be significant adverse as development at this density will lead to a substantial increase in demand for potable

and foul water capacity and it is uncertain whether capacity exists within the existing network. Whilst this Option has been given the same score as Option 3, it is considered to be more adverse due to the higher population estimate.

- 6.44 Effects on Objective 11 (*to minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates*) are considered to be significant adverse as the Option will provide 4,500 habitable rooms per hectare which is likely to significantly exacerbate existing municipal waste capacity issues as well as existing operational difficulties related to waste storage and collection due to increased waste production.
- 6.45 Significant adverse effects are likely on Objective 17 (*to reduce pollution to air and reduce disruption from noise and vibration through direct action or mitigation measures; to seek to improve the quality of the air as far as possible*) as the construction period for the Option is expected to be long and therefore the overall noise and air emissions could be high for the duration of construction. The Option could also result in the delivery of approximately 1,940 car parking spaces based on current Local Plan standards. The estimated population of the Option will increase the demand for road vehicles which will in turn increase noise and air emissions during operation. The increased population will also generate a high energy demand, which if not designed appropriately, could increase air emissions further. The Option is also likely to result in tall buildings which could be significantly affected by aircraft noise. Whilst the Option has been given the same score as Option 3, the effects are considered to be more adverse.

Significant Mixed Effects

- 6.46 This Option is likely to have significant mixed effects on Objectives 3 (--/+/?), 6 (--/+/?), 12 (+/-/?), 13 (+/-/?), 14 (+/-/?), and 18 (--/+/?). Significant mixed effects are expected on Objective 3 (*to minimise flood risk to people and property within the Masterplan Area, the wider borough and elsewhere, and promote the use of sustainable urban drainage systems*) (--/+/?) due to the substantial increase in the number of people and properties at risk of flooding. Furthermore, the increase in residents as a result of this Option will put significant pressure on the existing foul water capacity, which already experiences episodes of back surging during flood events. However, there is potential to implement permeable surfaces into the Masterplan Area which could reduce the risk of flooding having a minor positive effect on this Objective. This effect is considered to be greater when compared to Options 1 to 3 due to the greater number of people/ properties at risk of flooding.
- 6.47 Effects on Objective 6 (*to achieve a planned and aesthetically balanced skyline, as seen in protected views*) are considered to be significant mixed (--/+/?) as the scale of the tall buildings, which are taller than those which currently define the skyline at Canary Wharf are likely to appear imposing or dominant in the backdrop of the 'London Panorama' from The General Wolfe Statue and the backdrop to the 'River Prospect' from London Bridge. However, dependant on development design, the Option could provide scope to enhance the existing situation and create a more balanced skyline. This is considered to be minor positive.
- 6.48 Effects on Objective 12 (*to protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population*) are likely to be significant mixed (+/-/?), as the Isle of Dogs school capacity is likely to be exceeded in the next five years. The Option would need to provide 2.9 primary and 0.7 secondary schools to meet additional provision requirements. Without this provision effects are likely to be significant adverse. However, depending on the developments progressed there is the possibility that new development could incorporate onsite educational facilities which could serve new residents and the wider community (this is only likely to be possible in respect of primary schools). This could result in a significant positive effect depending on the number of schools and their capacity and location. Whilst the Option has been given the same score as Options 1, 2 and 3, it is considered to be more adverse due to the higher population estimate and hence the increased demand for facilities.
- 6.49 With regard to the effects on Objective 13 (*to maximise the health and well-being of the population and reduce inequalities in health*) (+/-/?), this Option will generate the demand for a minimum of 19.1 GPs. This will exceed existing capacity in LBTH and therefore it is unlikely that there will be sufficient health facilities to accommodate the increase in population. As such, existing and new residents may need to travel further afield to access health facilities. This Option would also need 2,869m² of additional health floorspace to meet additional requirements

for health services. These effects are considered to be significant adverse (worse than Options 1, 2 and 3). However, depending on the developments progressed there is the possibility that new developments could incorporate onsite health facilities which could serve new residents and the wider community. This could result in a significant positive effect depending on the number of facilities and their capacity and location.

- 6.50 The Option is likely to have significant mixed effects (+ + / - / ?) on Objective 14 (*to ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability*) as it would deliver 4,500 habitable rooms per hectare contributing to the LBTH and GLA's housing targets. It is also assumed that all affordable housing can be delivered onsite in accordance with LBTH's local plan. However, as the Option would deliver housing at a density above the London Plan maximum density it is considered that there will be an uncertain minor adverse effect on liveability (the higher population arising from this Option could affect the quality of life of existing and new residents).
- 6.51 The Option is likely to have significant mixed effects on Objective 18 (*to ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels*) (- - / + / ?) as scores from Objectives 1, 3, and 8 which include sub-criteria that are relevant to this Objective vary from significant mixed to significant adverse uncertain. The significant adverse effects arise from the potential for increased traffic arising from this Option and uncertainty as to whether modal shift can be achieved, concerns around increased flood risk etc. The Option will also have significant adverse effects on this Objective as a result of the use of natural resources during construction and the energy requirements of new residents (worse than Option 3). However, development could connect to the Barkantine District Heat Centre which could minimise fuel costs and service charges for future residents. This is considered to have an uncertain minor positive effect on this Objective.

Uncertain Effects

- 6.52 No uncertain effects are predicted for this Option.

Option 5: 7,000 Habitable Rooms/ Ha

- 6.53 This Option assessed the likely effects of the development of 7,000 habitable rooms per hectare within the Masterplan Area. The estimated population of this Option is 64,048.

Significant Positive Effects

- 6.54 No significant positive (+ +) effects are predicted for this Option.

Significant Adverse Effects

- 6.55 This Option is likely to result in significant adverse effects on Objectives 1, 2, 4, 5, 6, 7, 8, 9, 10, 11 and 17 (all with uncertainty (- - / ?) with the exception of Objective 5 (- -)). With regard to Objective 1 (*to create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place*), based on the population estimate for the Option, the Option will not meet the National Playing Fields Association standards for open space within the Masterplan Area or achieve LBTH's current average provision for open space. The Option may also lead to increased pressure/ overcrowding on existing and proposed facilities. Uncertain significant adverse effects are also anticipated on the health of new and existing residents from the potential increased wind speeds and overshadowing from tall buildings. Whilst the Option has been given the same score as Options 2, 3 and 4, it is considered to be more adverse due to the higher population estimate and the likely need for very tall buildings across the Masterplan Area.
- 6.56 The effect on Objective 2 (*to protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses*) is likely to be significant adverse as there is the potential for tall buildings to result in indirect impacts on the Millwall and West India Docks SINC including increased discharges affecting water quality and potential for overshadowing which may significantly affect the aquatic ecology it supports. However, this is uncertain.
- 6.57 Significant adverse effects on Objective 4 (*to enhance and protect the significance of heritage assets and archaeological heritage*) are likely as the scale of the buildings proposed for this Option

could have a significant effect on the setting of the Greenwich WHS and has the potential to overwhelm and dominate listed buildings due to the requirement for tall buildings. Whilst this Option has been given the same score as Options 3 and 4 for built heritage, it is considered to be more adverse due to the likely requirement for larger scale, taller development as a result of the higher population estimate.

- 6.58 With regard to Objective 5 (*to enhance local townscape/ landscape character and improve the quality of the built environment and public open spaces*), this Option is likely to have a significant adverse effect as this scale of development will exacerbate existing disparities in scale between different parts of the Isle of Dogs and appear poorly integrated with the surrounding areas to the south, east and west.
- 6.59 The effect on Objective 6 (*to achieve a planned and aesthetically balanced skyline, as seen in protected views*) is likely to be significant adverse as the Option is likely to give rise to a large change to the skyline and could potentially create a 'wall' of development with limited variation in heights and massing. Given the Option's scale, the buildings are likely to appear imposing or dominant in the backdrop to the 'London Panorama' from The General Wolfe Statue and the backdrop to the 'River Prospect' from London Bridge.
- 6.60 The Option is considered to have significant adverse effects on Objective 7 (*to protect views and the visual amenity of people living and working in and visiting the area and surroundings*) as development is likely to be very imposing in views at street level and reduce the ability for people to see open skies. Depending on development design, the Option could also obscure locally important vistas to the docks or views to greenspace.
- 6.61 Significant adverse effects are likely on Objective 8 (*to increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)*) as the Masterplan Area is in close proximity to the Central and Jubilee lines and the DLR which are very congested on westbound and eastbound services during the AM peak three hours. C2C services from Barking to Limehouse are also heavily congested. Although Crossrail will be on-stream from December 2018 and is predicted to offset capacity on the wider public transport network until 2031, it is uncertain whether it will accommodate the predicted population growth expected as a result of this Option.
- 6.62 Significant adverse effects are likely on Objective 9 (*to maximise the accessibility to key services and amenities*) as it is assumed that the Masterplan will put significant pressure on existing local services (Canary Wharf Idea Store and Tiller Leisure Centre). The predicted population arising from this Option will require 1,921m² of additional library floorspace and 21 additional leisure courts. These are unlikely to be provided onsite and it is uncertain whether space exists elsewhere in the Borough to meet these requirements.
- 6.63 Effects on Objective 10 (*to improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources*) are considered to be significant adverse as development at this density will lead to a substantial increase in demand for potable and foul water capacity and it is uncertain whether capacity exists within the existing network. Whilst this Option has been given the same score as Options 3 and 4, it is considered to be more adverse due to the higher population estimate.
- 6.64 Effects on Objective 11 (*to minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates*) are considered to be significant adverse as the Option will provide 7,000 habitable rooms per hectare which is likely to significantly exacerbate existing municipal waste capacity issues as well as existing operational difficulties related to waste storage and collection due to increased waste production.
- 6.65 Significant adverse effects are likely on Objective 17 (*to reduce pollution to air and reduce disruption from noise and vibration through direct action or mitigation measures; to seek to improve the quality of the air as far as possible*) as the construction period for the Option is expected to be long and therefore the overall noise and air emissions could be high for the duration of construction. The Option could also result in the delivery of approximately 3,000 car parking spaces based on current Local Plan standards. The estimated population of the Option will increase the demand for road vehicles which will in turn increase noise and air emissions during operation. The increased population will also generate a high energy demand, which if not designed appropriately, could increase air emissions further. The Option is also likely to result in

tall buildings which could be significantly affected by aircraft noise. Whilst the Option has been given the same score as Options 3 and 4, the effects are considered to be more adverse because of the increase in the number of people/ properties contributing to and at risk of air/ noise pollution.

Significant Mixed Effects

- 6.66 This Option is likely to have significant mixed effects on the Objectives 3 (--/+/?), 12 (++)/--/?), 13 (++)/--/?), 14 (++)/--/? and 18 (--/+/?). Significant mixed effects are expected on Objective 3 (*to minimise flood risk to people and property within the Masterplan Area, the wider borough and elsewhere, and promote the use of sustainable urban drainage systems*) (--/+/?) due to the substantial increase in the number of people and properties at risk of flooding. Furthermore, the increase in residents as a result of this Option will put significant pressure on the existing foul water capacity, which already experiences episodes of back surging during flood events. However, there is potential to implement permeable surfaces into the Masterplan Area which could reduce the risk of flooding having a minor positive effect on this Objective. Whilst the Option has been given the same score as Options 3 and 4, it is considered to be more adverse due to the higher population estimate increasing the number of people and properties at risk of flooding.
- 6.67 Effects on Objective 12 (*to protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population*) are likely to be significant mixed (++)/--/? as the Isle of Dogs school capacity is likely to be exceeded in the next five years. The Option would need to provide 4.5 primary and 1.1 secondary schools to meet additional provision requirements. Without this provision effects are likely to be significant adverse. However, depending on the developments progressed there is the possibility that new development could incorporate onsite educational facilities which could serve new residents and the wider community (this is only likely to be possible in respect of primary schools). This could result in a significant positive effect depending on the number of schools and their capacity and location. Whilst the Option has been given the same score as Options 1, 2, 3 and 4, it is considered to be more adverse due to the higher population estimate and hence the increased demand for facilities.
- 6.68 With regard to the effects on Objective 13 (*to maximise the health and well-being of the population and reduce inequalities in health*) (++)/--/?), this Option will generate the demand for a minimum of 35.6 GPs. This will exceed existing capacity in LBTH and therefore it is unlikely that there will be sufficient health facilities to accommodate the increase in population. As such, existing and new residents may need to travel further afield to access health facilities. This Option would therefore need to provide health floorspace to meet additional requirements for health services and this is considered to be a significant adverse effect (worse than Option 4 due to additional space required and uncertainty as to whether this can be delivered within the Masterplan Area or the wider Borough). However, depending on the developments progressed there is the possibility that new developments could incorporate onsite health facilities which could serve new residents and the wider community. This could result in a significant positive effect depending on the number of facilities and their capacity and location.
- 6.69 The Option is likely to have significant mixed effects (++)/--/? on Objective 14 (*to ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability*) as it would deliver 7,000 habitable rooms per hectare contributing to the LBTH and GLA's housing targets. It is also assumed that all affordable housing can be delivered onsite in accordance with LBTH's local plan. However, as the Option would deliver housing at a density above the London Plan maximum density it is considered that there will be an uncertain minor adverse effect on liveability (the higher population arising from this Option could affect the quality of life of existing and new residents).
- 6.70 The Option is likely to have significant mixed effects on Objective 18 (*to ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels*) (--/+/?) as scores from Objectives 1, 3, and 8 which include sub-criteria that are relevant to this Objective vary from significant mixed to significant adverse uncertain. The significant adverse effects arise from the potential for increased traffic arising from this Option and uncertainty as to whether modal shift can be achieved, concerns around increased flood risk etc. The Option will

also have significant adverse effects on this Objective as a result of the use of natural resources during construction and the energy requirements of new residents (worse than Options 3 and 4). However, development could connect to the Barkantine District Heat Centre which could minimise fuel costs and service charges for future residents. This is considered to have an uncertain minor positive effect on this Objective.

Uncertain Effects

- 6.71 No uncertain effects (?) are predicted for this Option.

Conclusion

- 6.72 **Overall, it is considered that Option 1 (1,100 hr/ ha) performs the best** as it is less likely to put significant pressure on existing facilities, utilities, the transport network, open space and is likely to lead to the least energy demand due to the scale of development and the estimated population for the Option. It is recognised that this option would deliver the least amount of housing.
- 6.73 **Option 5 (7,000 hr/ ha) is the worst performing option** as due to the scale of development and the estimated population which is likely to put a significant strain on the existing facilities within the Isle of Dogs and in many instances exceed existing capacity. It is also considered that it will have the highest energy demand, will result in logistical issues with regard to waste and result in the greatest amount of overall waste production.
- 6.74 As might be expected, the higher the development density the greater the likelihood of significant adverse effects arising (particularly in respect of the environmental SEA Objectives). The SEA assessment of different densities of development found that the threshold for the greatest number of significant adverse effect was 3,000 hr/ ha and above. This is not to say that significant effects would not be experienced at lower densities, however, significant adverse effects are considered to be more likely at these densities.
- 6.75 **Table 6.1** overleaf provides a summary of all the Options' pre-mitigation effects against each objective.

Table 6.1 – Summary of SEA of Different Amounts of Development Options (Pre-mitigation)

SEA Objectives	Likely Effects				
	Option 1 (1,100 hr/ ha)	Option 2 (2,000 hr/ ha)	Option 3 (3,000 hr/ha)	Option 4 (4,500 hr/ ha)	Option 5 (7,000 hr/ ha)
1. To create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place	-/?	--/?	--/?	--/?	--/?
2. To protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses	-/?	-/?	--/?	--/?	--/?
3. To minimise flood risk to people and property within the Masterplan Area, the wider borough and elsewhere, and promote the use of sustainable urban drainage systems	+/-/?	+/-/?	--/+/?	--/+/?	--/+/?
4. To enhance and protect the significance of heritage assets and archaeological heritage	-/?	-/?	--/?	--/?	--/?
5. To enhance local townscape/ landscape character and improve the quality of the built environment and public open spaces	-/?	+/-/?	+/-/?	-/?	--
6. To achieve a planned and aesthetically balanced skyline, as seen in protected views	0	0/-	+/-/?	--/+/?	--/?
7. To protect views and the visual amenity of people living and working in and visiting the area and surroundings	?	?	-/?	-/?	--/?
8. To increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)	+/-/?	--/?	--/?	--/?	--/?
9. To maximise the accessibility to key services and amenities	-/?	-/?	--/?	--/?	--/?
10. To improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources	-/?	-/?	--/?	--/?	--/?
11. To minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates	-/?	-/?	--/?	--/?	--/?
12. To protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population	++/--/?	++/--/?	++/--/?	++/--/?	++/--/?
13. To maximise the health and well-being of the population and reduce inequalities in health	++/--/?	++/--/?	++/--/?	++/--/?	++/--/?
14. To ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability	++/?	++/--/?	++/--/?	++/--/?	++/--/?
15. To provide all residents with the opportunity of employment, particularly in deprived areas	+/-/?	+/-/?	+/-/?	+/-/?	+/-/?
16. To reduce pollution to land through direct action or mitigation; to seek to improve the quality of the land as far as possible	+	+	+	+	+
17. To reduce pollution to air and reduce disruption from noise and vibration through direct action or mitigation measures; to seek to improve the quality of the air as far as possible	-/?	-/?	--/?	--/?	--/?
18. To ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels	-/+/?	--/+/?	--/+/?	--/+/?	--/+/?

Delivery of Development Options

- 6.76 This section sets out the pre-mitigation findings of the SEA of the delivery of development Options. The section focuses on the likely significant and uncertain effects of each Option. All of the effects can be found in the detailed appraisal matrices in **Appendix 4**.
- 6.77 There are six Options in total:

Density & Massing Options

- Option 1: 3,000 hr/ ha Towers in Space.
- Option 2: 1,100 hr/ ha Towers in Space.
- Option 3: 3,000 hr/ ha Podium/ Plinth/ Towers
- Option 4: 1,100 hr/ ha Podium/ Plinth/ Towers

Public Open Space Options

- Option 5: Principal Open Space & some Onsite Public Open Space Delivery
- Option 6: Only Onsite Public Open Space Delivery

- 6.78 The purpose of assessing these Options is to demonstrate the sustainability advantages and disadvantages of delivering development in different ways; the value of a Masterplan-driven approach to guiding certain forms of development and taking a more a proactive approach towards shaping development within the Masterplan Area.

Option 1: 3,000 hr/ ha Towers in Space

- 6.79 This Option assumed delivery of 3,000 hr/ ha delivered as Towers in Space (**Chapter 3** provides a description of the Towers in Space form of delivery).

Significant Positive Effects

- 6.80 No significant positive effects are predicted for this Option.

Significant Adverse Effects

- 6.81 Significant adverse effects (all with uncertainty) (--/?) are predicted for SEA Objectives 1, 2, 3, 4, 5, 7, 8, 10, 17 and 18.
- 6.82 For the most part, these significant adverse effects are linked to the development at this density (i.e. 3,000 hr/ ha) which is substantially greater than the London Plan maximum (1,100 hr/ ha) set out in the density matrix.
- 6.83 In respect of Objective 1 (*to create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place*), the potential for significant adverse effects recognises the delivery of new public open space (even if new principal open spaces are provided) would not meet the need arising from the additional population; the potential for residents to experience feelings of overcrowding within the Masterplan Area at this density; the requirement for tall buildings which could result in adverse microclimate effects (e.g. overshadowing, excessive wind) affecting living conditions and the amenity of public and private open spaces; the likelihood of Towers in Space at this density resulting in a weak, unfocussed urban grain with confusion over access to different uses and difficulty in providing a range of uses due to the smaller footprint. The lack of defined boundaries could also mean the distinction between public and private spaces is less clear.
- 6.84 In respect of Objective 2 (*to protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses*) the potential for significant adverse effects reflects the tall buildings required to accommodate development at this density which could indirectly and directly impact on the biodiversity of the Docks SINC through over-shadowing, change to water quality in the Docks (from discharges into the Docks) and potentially through a loss of the Docks for development purposes.

- 6.85 In respect of Objective 3 (*to minimise flood risk to people and property within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses*), the potential for significant adverse effects recognises that development at this density could significantly increase the number of people and properties at risk of flooding (compared to the existing situation) and that the increase in residents will put pressure on the existing foul water treatment capacity, which already experiences episodes of back surging during flood events.
- 6.86 The significant effects identified for Objective 4 (*to enhance and protect the significance of heritage assets and archaeological heritage*) relate to potential for 'Towers in Space' at this density to create a 'wall of development' which is potentially imposing and dominant in views to/from heritage assets, including the WHS.
- 6.87 For Objective 5 (*to enhance local townscape/ landscape character and improve the quality of the built environment and public open spaces*) the significant adverse, uncertain effect reflects the potential for towers in space to result in adverse effects on the quality of public spaces due to an absence of human scale at street level and likely wind and overshadowing effects impacting on levels of usage.
- 6.88 In respect of Objective 7 (*to protect views and the visual amenity of people living and working in and visiting the area and surroundings*) it is considered that the towers in space at this density could be imposing in views at street level with no lower buildings to create a human scale. The towers are also likely to obscure the sky and create long shadows, resulting in adverse effects on the visual amenity of people on the streets. Furthermore, there is potential to obscure locally important vistas to the Docks.
- 6.89 In respect of Objective 8 (*to increase the proportion of journeys made by walking and cycling followed by bus or train [relative to those taken by the car]*) significant adverse effects reflects the demand for public transport likely to be generated from this density of development (and the uncertainty in delivery of adequate solutions in the long term) as well as the potential for traffic congestion within the Masterplan Area as access to different uses may not be well defined and the likely increase in car based travel (all of which could exacerbate existing congestion issues).
- 6.90 Infrastructure concerns is one of the main reasons underpinning the significant adverse effects identified for Objective 10 (*to improve the quality of water within the Masterplan Area and to achieve the wise and sustainable use of water resources*) i.e. it is not known if the capacity of the water supply and wastewater treatment network could meet the demand arising from this population density.
- 6.91 Option 1 is predicted to have significant adverse effects on Objective 17 (*to reduce pollution to air, reduce disruption from noise and vibration through direct action or mitigation measures; seek to improve the quality of air as far as possible*). This reflects the potential for increased car use within the Masterplan Area (the number of car parking spaces to be provided within the Masterplan Area is uncertain at this stage but could reach approximately 1,400 based on current Local Plan standards) which could adversely affect air pollution and contribute to increased noise. Similarly the construction period for delivery of this density of development (whilst it may not be significant for individual developments) is likely to be significant for all the development proposed potentially running to 10 years and more (medium term impacts) with consequent impacts on local air quality and noise and vibration.
- 6.92 In respect of Objective 18 (*to ensure the Masterplan adapts to the effect of climate change [both now and in the future] and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels*) significant adverse effects are also predicted reflecting a number of the elements already discussed e.g. flood risk; increased vehicular travel (in the short, medium and longer term) resulting in increased greenhouse gas emissions, increased energy and natural resource use etc.

Significant Mixed Effects

- 6.93 Significant mixed effects are predicted for Objectives 11 (+/--/?), 12 (+/--/?), and 14 (+/--/?).
- 6.94 In respect of Objective 11 (*to minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates*) the significant adverse effects recognise that the population predicted from this density of development would significantly increase the

amount of construction and operational waste produced (noting that the former is assumed to be recycled and reused in accordance with best practice). In respect of the latter, whilst it is recognised that recycling would be promoted, a significant residual level of waste is expected to go to landfill.

- 6.95 In respect of Objective 12 (*to protect existing, make provision for new and maximise accessibility to education facilities to meet the needs of all sectors of the population*) recognises that both new primary schools (two 3-form entry schools within 300m or equivalent walking distance of South Quay) and secondary schools (0.5 secondary schools 8-form entry to be delivered outside of South Quay) would be required to deliver development at this density (3,000 hr/ ha). The potential for Towers in Space (and consequent smaller development footprint) to contribute new, useable onsite education facilities (particularly primary schools) is not clear and could result in significant adverse effects (uncertainty is recognised).
- 6.96 In relation to Objective 14 (*to ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability*) Option 1 is anticipated to result in significant mixed effects (++/--/?). The significant positive effects recognise the substantial amount of housing which would be generated in respect of this Option. However, delivery of housing at this density, as Towers in Space, is less likely to meet criteria related to 'sustainability from a management perspective' and 'social inclusivity' – towers provide less scope for delivery of a mix of uses at ground floor level, which could contribute to the overall development sustainability/ vibrancy. Furthermore, Towers in Space may not be suitable for all types of housing (e.g. family housing) and can be less preferred by housing providers due to the higher service charges imposed.

Option 2: 1,100 hr/ ha Towers in Space

- 6.97 This Option assumed delivery of 1,100 hr/ ha delivered as Towers in Space (**Chapter 3** provides a description of the Towers in Space form of delivery).

Significant Positive Effects

- 6.98 No significant positive effects are predicted.

Significant Adverse Effects

- 6.99 A significant adverse, uncertain effect (--/?) is predicted in respect of Objective 5 (*to enhance local townscape/landscape character and improve the quality of the built environment and public open spaces*). This density of development is more likely to result in smaller towers which will create a transition to some of the smaller scale residential streets to the south, east and west. However, smaller towers to the north would create a disparity in scale between development in Canary Wharf and South Quay. Whilst the effects in relation to the quality of public open and private spaces will depend on whether the detailed design of the developments create vibrant greenspaces, respond to and enhance local features and assets and maximise access to these. However, the presence of Towers in Space is likely to result in significant adverse effects on the quality of public spaces due to an absence of human scale at street level and lack of shelter around the towers.

Significant Mixed Effects

- 6.100 Significant mixed effects (++/--/?) are predicted for Objective 14 (*to ensure that all residents have access to good quality, well-located affordable housing that promotes liveability*). As noted, for Option 1, all Options would contribute significantly positively to this Objective due to the amount of housing which could be delivered. However, as mentioned for Option 1, towers in space would be less likely to contribute to factors that promote liveability resulting in the potential for significant adverse effects.

Option 3: 3,000 hr/ ha Podium/ Plinth/ Towers

- 6.101 This Option assumed delivery of 3,000 hr /ha as podium/ plinth/ towers (**Chapter 3** provides a description of this form of development delivery).

Significant Positive Effects

- 6.102 Significant positive effects both with uncertainty (++/?) are predicted for Objective 14.

6.103 The significant positive effects predicted for Objective 14 (*to ensure that all residents have access to good quality, well-located affordable housing that promotes liveability*) recognises the substantial amount of housing which would be delivered, but also recognises that the podium/ plinth/ towers Option is more likely to meet criteria related to 'sustainability from a management perspective' and 'social inclusivity' through provision of social infrastructure and other non-residential uses at lower levels, providing clearly delineated, enclosed private and public open spaces ensuring that ownership is clear. All of these factors are likely to contribute to overall liveability.

Significant Adverse Effects

- 6.104 Significant adverse effects (all with uncertainty) (--/?) are predicted for Objective 2, 3 and 10.
- 6.105 In respect of Objective 2 (*to protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses*) the potential for significant adverse effects reflects the potential for development at this density to indirectly and directly impact on the biodiversity of the Docks SINC through, for example, change to water quality in the Docks (from discharges into the Docks) and potentially through a loss of the Docks for development purposes.
- 6.106 In respect of Objective 3 (*to minimise flood risk to people and property within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses*), the potential for significant adverse effects recognises that development at this density could significantly increase the number of people and properties at risk of flooding (compared to the existing situation) and that the increase in residents will put pressure on the existing foul water treatment capacity, which already experiences episodes of back surging during flood events.
- 6.107 In respect of Objective 10 (*to improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources*), infrastructure concerns are one of the main reasons underpinning the significant adverse effects identified for Objective i.e. it is not known if the capacity of the water supply and wastewater treatment network could meet the demand arising from this population density.

Significant Mixed Effects

- 6.108 Significant mixed effects are predicted for Objectives 1 (+/--/?), 4 (+/--/?), 8 (+/--/?), 11 (+/--/?), 12 (++)/--/?), 15 (++)/--/?), 17 (+/--/?) and 18 (+/--/?).
- 6.109 In respect of Objective 1 (*to create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place*) the significant adverse uncertain effects are for similar reasons to those identified in respect of Option 1 i.e. the delivery of new public open space (even if new principal open spaces are provided) would not meet the need arising from the additional population; the potential for residents to experience feelings of overcrowding within the Masterplan Area at this density; the requirement for tall buildings which could result in adverse microclimate effects (e.g. overshadowing, excessive wind) affecting living conditions and the amenity of public and private open spaces. However, positive effects reflects the potential of the podium/ plinth/ towers approach to deliver development which delineates and demarks private and public spaces, separates out access to different uses and creates a more coherent sense of space and movement.
- 6.110 In respect of Objective 4 (*to enhance and protect the significance of heritage assets and archaeological heritage*) the significant adverse uncertain effects reflect the potential for indirect effects on the setting of assets, recognising that tall buildings would be required to deliver this density. However, delivery of development as podiums/ plinths/ towers could create more variety in massing and scale, creating less of a 'block' effect. Consequently there remains potential for significant adverse, uncertain effects, but with scope for minor positive effects.
- 6.111 In respect of Objective 8 (*to increase the proportion of journeys made by walking and cycling followed by bus or train [relative to this taken by the car]*) significant adverse effects reflect the demand for public transport likely to be generated from this density of development (and the uncertainty in delivery of adequate solutions in the long term) and the potential for increased congestion (reflecting increased car use within the Masterplan Area). However, delivery of development as 'Podiums/ Plinths/ Towers' could alleviate potential internal congestion by clearly

separating out access for different uses and providing a more coherent streetscape and movement network within the Masterplan Area and within each development plot.

- 6.112 The potential for significant adverse effects in respect of Objective 11 (*to minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates*) recognises that the population predicted from this density of development would significantly increase the amount of construction and operational waste produced (noting that the former is assumed to be recycled and reused in accordance with best practice). In respect of the latter, whilst it is recognised that recycling would be promoted, a significant residual level of waste is expected to go to landfill.
- 6.113 In respect of Objective 12 (*to protect existing, make provision for new and maximise accessibility to education facilities to meet the needs of all sectors of the population*) the predicted significant adverse effects recognise that both new primary schools (two 3-form entry schools within 300m or equivalent walking distance of South Quay) and secondary schools (0.5 secondary schools 8-form entry to be delivered outside of South Quay) would be required to deliver development at this density (3,000 hr/ ha) and delivery is uncertain given the space required for such facilities. However, this Option proposes delivery of development in the form of 'Podium/ Plinths/ Towers' providing greater scope for delivery of non-residential uses (including schools) in the lower level podiums. This form of development delivery will also enable delivery of access for different uses to be kept separate, which will be important when schools and residential uses are delivered together. Recognising that delivery of new primary schools is a high priority for LBTH (with locations for new schools in short supply), development delivery Options which maximise opportunities for delivery of new schools onsite are to be supported and will result in positive effects.
- 6.114 In respect of Objective 15 (*to provide all residents with the opportunity of employment, particularly in deprived areas*) significant positive mixed effects (++/-/?) are predicted. The predominantly residential-led redevelopment of the Masterplan Area will likely result in a loss of existing employment (minor adverse) to be replaced with more appropriate employment floorspace (minor positive). Delivery of individual developments as 'Podiums/ Plinths/ Towers' has potential to contribute to the overall mix of uses through delivery of non-residential uses (including employment) at the ground floor level.
- 6.115 Both Objectives 17 (*to reduce pollution to air and reduce disruption from noise and vibration through direct action or mitigation measures; to seek to improve the quality of air as far as possible*) and 18 (*to ensure the Masterplan adapts to the effects of climate change [both now and in the future] and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels*) are predicted to result in significant adverse mixed, uncertain (+/-/?) effects. The predicted significant adverse effects are for the same reasons as set out for these Objectives under Option 1 above. However, the minor positive effect recognises that delivery of development in this form (podium/ plinth/ towers) offers greater potential to deliver development or Masterplan-wide energy solutions (e.g. CHP plants).

Option 4: 1,100 hr/ ha Podium/ Plinth/ Towers

- 6.116 This Option assumed delivery of 1,100 hr/ ha as podium/ plinth/ towers (**Chapter 3** provides a description of this form of development delivery).

Significant Positive Effects

- 6.117 Significant positive effects with uncertainty (++/?) are predicted for Objective 14.
- 6.118 In respect of Objective 14 (*to ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability*), this Option would deliver housing at 1,100 hr/ ha (the London Plan Density Maximum) which would significantly contribute to overall housing provision in the borough. Furthermore, as already stated for Option 3, delivery as 'podium/ plinths/ towers' is more likely to meet criteria related to 'sustainability from a management perspective' and 'social inclusivity'.

Significant Adverse Effects

- 6.119 No significant adverse effects are predicted under this Option.

Significant Mixed Effects

- 6.120 Significant mixed effects are predicted for Objective 12 (++) and Objective 15 (++).
- 6.121 In respect of Objective 12 (*to protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population*) it is recognised that both new primary schools (a 0.7 3-form entry school within 300m or equivalent walking distance of South Quay) and secondary schools (0.2 secondary school 8-form entry to be delivered outside of South Quay) would be required to deliver development at this density (1,100 hr/ ha). This Option proposes delivery of development in the form of 'Podium/ Plinths/ Towers' providing greater scope for delivery of non-residential uses (including schools) in the lower level podiums. This form of development delivery will also enable delivery of access for different uses to be kept separate, which will be important when schools and residential uses are delivered together. Recognising that delivery of new primary schools is a high priority for LBTH (with locations for new schools in short supply), development delivery Options which maximise opportunities for delivery of new schools onsite are to be supported and will result in positive effects.
- 6.122 In respect of Objective 15 (*to provide all residents with the opportunity of employment, particularly in deprived areas*) significant positive, mixed, uncertain (++) effects are predicted. The predominantly residential-led redevelopment of the Masterplan Area will likely result in a loss of existing employment (minor adverse) to be replaced with more appropriate employment floorspace (minor positive). Delivery of individual developments as 'Podiums/ Plinths/ Towers' has potential to contribute to the overall mix of uses through delivery of non-residential uses (including employment) at the ground floor level.

Conclusions Options 1- 4

- 6.123 Options 1 and 2 propose development as Towers in Space, the differing feature being the proposed density – Option 1 proposes development at 3,000 hr/ ha and Option 2 proposes development at 1,100 hr/ ha.
- 6.124 By contrast, Options 3 and 4 propose that development be delivered as 'Podiums/ Plinths/ Towers'. Option 3 would deliver development to a density of 3,000 hr/ ha whereas Option 4 would deliver development to a density of 1,100 hr/ ha.
- 6.125 As would be expected (and already demonstrated through the appraisal of development amounts), the higher density options (Options 1 and 3) have potential to result in more significant adverse effects than the lower density options (Options 2 and 4). Options 1 and 3 would adversely affect a range of sustainability Objectives, recognising that the greater population arising from the 3,000 hr/ ha density would put more pressure on existing infrastructure and resources, the natural environment and could lead to adverse effects on local and wider views (including protected views) as taller buildings would be required to deliver this density.
- 6.126 **Option 1 would perform worst overall**, followed by Option 3.
- 6.127 **Option 4 performs best overall** and better than Option 2 as delivering development as 'Podium/ Plinth/ Towers' results in the prediction of more significant positive effects (for example in respect of Objectives 12, 14 and 15). This form of development provides more scope to provide a greater range and mix of uses (i.e. other than residential), would better define public and private spaces and a movement network (hence creating a sense of ownership and legibility) and would be better suited to delivery of a range of housing types (for example, family housing could be provided within the development podiums).

Option 5: Principal Open Spaces and some Onsite Public Open Space Delivery

- 6.128 This Option proposes six new principal, public open spaces (requiring multiple developer coordination) alongside onsite public open spaces (delivered as part of individual developments), communal open space (only for residents of a site) and private open space (for individual housing units).

Significant Positive Effects

- 6.129 Significant positive effects are predicted for Objective 5 (++) and Objective 7 (++).

6.130 In respect of Objective 5 (*to enhance local townscape/ landscape character and improve the quality of the built environment and public open spaces*) a significant positive effect (++) is predicted as the provision of new, principal public open spaces as well as private open spaces will increase the activity and vitality of the townscape.

6.131 In respect of Objective 7 (*to protect views and the visual amenity of people living and working in and visiting the area and surroundings*) a significant positive effect (++) is also predicted. The provision of principal public open spaces, as well as onsite public open spaces will benefit the visual amenity of local communities and of people working and visiting the area.

Significant Adverse Effects

6.132 No significant adverse effects are predicted.

Significant Mixed Effects

6.133 No significant mixed effects are predicted.

Option 6: Only Onsite Public Open Space Delivery

6.134 This Option would not provide any principal public open spaces and would rely on delivery of public open space through single developments.

Significant Positive Effects

6.135 No significant positive effects are predicted.

Significant Adverse Effects

6.136 A significant adverse effect is predicted in respect of Objective 1 (*to create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place*). This option would not provide a mechanism to bring forward new, larger, principal public open spaces and as such they are unlikely to be delivered across development plots. Provision of less public open space will result in a missed opportunity to create a liveable, well-designed environment that supports healthy lifestyles.

Significant Mixed Effects

6.137 No significant mixed effects are predicted.

Conclusions Options 5 and 6

6.138 Options 5 and 6 propose different ways to deliver open space with Option 5 proposing delivery of new principal, public open spaces as well as private open space onsite as part of individual developments (this would require developer coordination across development plots) resulting in the delivery of larger, more useable open spaces. Conversely, Option 6 would only result in the delivery of onsite public open spaces which are part of individual developments. **Option 5**, which adopts a more proactive, Masterplan-wide approach to delivery new public open spaces **performs better** than Option 6. This would require coordination between developers across development plots to ensure delivery of useable open space.

6.139 Six new principal public open spaces are proposed under Option 5 and this would remain the same regardless of the density of development consented across the Masterplan Area. It is recognised that the amount of open space proposed through Option 5 would not meet standards set by the National Playing Fields Association (for any of the development densities put forward), nor would it meet LBTH average provision, however, the six new open spaces proposed under Option 5 would have greater benefits for lower density development Options (for example, there would be less feelings of overcrowding within the open spaces as the population is smaller). The quality of the open space provided is as important as the quantity. The provision of principal open spaces should be delivered to a high quality.

6.140 **Table 6.2** overleaf provides a summary of all the Options' pre-mitigation effects against each objective.

Table 6.2 – Summary of SEA of Delivery of Development Options (Pre-mitigation)

SEA Objectives	Likely Effects					
	Option 1 (Towers in Space – 3,000 hr/ ha)	Option 2 (Towers in Space – 1,100 hr/ ha)	Option 3 (Podiums/ Plinths/ Towers – 3,000 hr/ ha)	Option 4 (Podiums/ Plinths/ Towers – 1,100 hr/ ha)	Option 5 (Principal Open Spaces)	Option 6 (Onsite Public Open Space Delivery)
1. To create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place	--/?	-/?	+/-/?	+/-/?	+/?	--/?
2. To protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses	--/?	-/?	--/?	-/?	+/?	0/?
3. To minimise flood risk to people and property within the Masterplan Area, the wider borough and elsewhere, and promote the use of sustainable urban drainage systems	--/?	-/?	--/?	-/?	+	0
4. To enhance and protect the significance of heritage assets and archaeological heritage	--/?	-/?	+/-/?	?	0	0
5. To enhance local townscape/ landscape character and improve the quality of the built environment and public open spaces	--/?	--/?	+/-/?	-/?	++	+
6. To achieve a planned and aesthetically balanced skyline, as seen in protected views	-/?	0	+/-/?	0	0	?
7. To protect views and the visual amenity of people living and working in and visiting the area and surroundings	--/?	-/?	?	?	++	+
8. To increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)	--/?	-/?	+/-/?	+/-/?	+	0
9. To maximise the accessibility to key services and amenities	-/?	-/?	+/?	+/?	+	?
10. To improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources	--/?	-/?	--/?	-/?	+	0
11. To minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates	+/-/?	+/-/?	+/-/?	+/-/?	0	0
12. To protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population	+/-/?	+/-/?	++/--?	++/--?	+	0
13. To maximise the health and well-being of the population and reduce inequalities in health	+/-/?	+/-/?	+/?	+/?	0	0
14. To ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability	++/--?	++/--?	++/?	++/?	+	0
15. To provide all residents with the opportunity of employment, particularly in deprived areas	+/-/?	+/-?	++/--?	++/--?	0	0

SEA Objectives	Likely Effects					
	Option 1 (Towers in Space – 3,000 hr/ ha)	Option 2 (Towers in Space – 1,100 hr/ ha)	Option 3 (Podiums/ Plinths/ Towers – 3,000 hr/ ha)	Option 4 (Podiums/ Plinths/ Towers – 1,100 hr/ ha)	Option 5 (Principal Open Spaces)	Option 6 (Onsite Public Open Space Delivery)
16. To reduce pollution to land through direct action or mitigation; to seek to improve the quality of the land as far as possible	+	+	+	+	+	+
17. To reduce pollution to air and reduce disruption from noise and vibration through direct action or mitigation measures; to seek to improve the quality of the air as far as possible	--/?	-/?	+/-/?	+/-/?	+	0
18. To ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels	--/?	-/?	+/-/?	+/-/?	+	0

Draft Masterplan SPD

Introduction

- 6.141 This section sets out the pre-mitigation findings of the SEA of the Draft Masterplan SPD. The section focuses on the likely significant and uncertain effects of the Vision, Placemaking Principles, Density Guidance, Connections and Public Spaces Guidance, Massing and Urban Blocks Guidance, Skyline Guidance, Infrastructure Guidance and Delivery section of the Masterplan. All of the effects can be found in the detailed appraisal matrices in **Appendix 4**.

The Vision

- 6.142 The SPD vision provides the key overarching headlines from which leads the SPD principles and guidance. It is recognised that it would not be appropriate to seek to respond to every sustainability issue (identified through the SEA objectives) within the vision.

Significant Positive Effects

- 6.143 The Vision is likely to have significant positive effects on Objectives 12 and 14 (both with uncertainty (++/?)). Significant positive effects are likely on Objective 12 (*to protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population*) recognising that benefits will be generated from new development (assumed to include primary schools). It is also assumed that sufficient secondary school capacity can be accessed offsite.
- 6.144 With regard to Objective 14 (*to ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability*), the Vision is likely to have a significant positive effect as it recognises that new housing will be delivered within the Masterplan Area.

Significant Adverse Effects

- 6.145 The Vision is likely to have significant adverse effects on Objectives 2, 10, 11, and 17 (all with uncertainty (--/?)). The Vision is likely to have a significant adverse effect on Objective 2 (*to protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses*) as it does not specifically mention biodiversity or habitats and there is potential for impacts arising from the "substantial residential and working population" on the Millwall and West India Docks SINC.
- 6.146 The Vision's effect on Objective 10 (*to improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources*) is likely to be significant adverse as it does not make specific reference to improved water quality or sustainable water resource management. As such, the substantial new population envisaged could result in significant adverse effects on water supply and wastewater treatment capacity.
- 6.147 The Vision is likely to have a significant adverse effect on Objective 11 (*to minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates*) as it does not make specific reference to waste. As such, the substantial amount of development envisaged could result in significant adverse effects through waste produced during construction and operation.
- 6.148 The effect on Objective 17 (*to reduce pollution to air and reduce disruption from noise and vibration through direct action or mitigation measures; to seek to improve the quality of the air as far as possible*) is likely to be significant adverse as the Vision does not specifically reference pollution or improvements to air quality. It is also considered that the substantial population proposed could result in increased energy demand which could lead to a reduction in air quality through an increase in emissions to air.

Significant Mixed Effects

- 6.149 The Vision is likely to have significant mixed effects on Objectives 1 (++/--/?), 3 (+/--/?), 4 (+/--/?), 8 (+/--/?), and 18 (+/--/?). The Vision is likely to have significant mixed effects on Objective 1 (*to create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place*) (++/--/?) as it seeks exceptional

standards of design and states that the benefits generated by new development will be available to people from across the Isle of Dogs and beyond. The Vision also refers to "a *substantial residential and working population*" which could result in a feeling of overcrowding and impact on the liveability of the area if very tall buildings are developed (e.g. through microclimate effects such as overshadowing or wind funnelling). It is therefore considered that the Vision is also likely to have significant adverse effects on this Objective. There is significant uncertainty in this judgement as it is unclear how much development will come forward in the Masterplan Area.

- 6.150 The Vision is likely to have significant mixed effects on Objective 3 (*to minimise flood risk to people and property within the Masterplan Area, the wider borough and elsewhere, and promote the use of sustainable urban drainage systems*) (+/--/?) as it makes reference to exceptional standards of design which is assumed to refer to SuDS. This is considered to have a minor positive effect on the Objective. However, the "*substantial residential and working population*" proposed will increase the number of people and properties vulnerable to future flood risk. This is considered to be a significant adverse uncertain effect on the Objective.
- 6.151 With regard to the effect on Objective 4 (*to enhance and protect the significance of heritage assets and archaeological heritage*) (+/--/?), the Vision does not specifically mention heritage or archaeology although it seeks to deliver an exceptional standard of design. Recognising that there is the potential for a significant amount of development needed to support the "*substantial residential and working population*" significant adverse uncertain effects are predicted. Minor positive effects are also likely if the hybrid urban blocks (podiums, plinths and towers) development typology is implemented as it could deliver better designed developments.
- 6.152 The Vision is likely to have significant mixed effects on Objective 8 (*to increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)*) (+/--?) – the benefits generated by development are assumed to include public transport. However, the "*substantial residential and working population*" envisaged could result in significant adverse uncertain effects as car use is possible.
- 6.153 The effects on Objective 18 (*to ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels*) (+/--/?) are considered to be significant mixed as the Vision makes reference to benefits from development which could positively affect the objective (e.g. provision of new public transport). However, significant adverse uncertain effects are likely as the Vision does not reference SuDS (to respond to flood risk), any commitment to high standards of energy efficiency and sustainability or refer to walking.

Uncertain Effects

- 6.154 No uncertain effects (?) are predicted for the Vision.

Placemaking Principles

Significant Positive Effects

- 6.155 The Placemaking Principles are not expected to result in any significant positive effects.

Significant Adverse Effects

- 6.156 The Placemaking Principles are not expected to result in any significant adverse effects.

Significant Mixed Effects

- 6.157 The Placemaking Principles are not expected to result in any significant mixed effects.

Uncertain Effects

- 6.158 The Placemaking Principles are not expected to result in any uncertain (?) effects.

Guidance: Housing Density

Significant Positive Effects

- 6.159 The Housing Density Guidance is not expected to result in any significant positive (++) effects.

Significant Adverse Effects

- 6.160 The Housing Density Guidance is not expected to result in any significant adverse effects.

Significant Mixed Effects

- 6.161 The Housing Density Guidance is likely to result in significant mixed effects on Objective 1 (++)/(-/?), Objectives 14 (++)/(-/?), 17 (+/-/?/?) and 18 (+/-/?/?). Effects on Objective 1 (*to create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place*) are expected to be **significant positive mixed** (++)/(-/?). Adverse effects reflect the higher density development which could come forward, adversely impacting on health, the significant positive effects reflect the requirement for development exceeding London Plan housing densities to be of an exemplary design (better quality housing would contribute positively to the creation of a liveable, well-designed environment). Effects on Objective 14 (*to ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability*) (++)/(-/?) are likely to be **significant positive mixed** as the Guidance seeks to require new developments (seeking to exceed London Plan densities) to demonstrate how it will mitigate its impacts, deliver the principles of the Masterplan, deliver exemplary design for housing and provide the required infrastructure (all of which should result in significant positive effects). Whilst the Guidance is non-specific it is recommended that this includes the consideration of each development's contribution to affordable housing and the balance and mix of residential development and how this will be met within the existing development plot, the wider Masterplan Area or through delivery offsite.
- 6.162 The effects on Objective 17 (*to reduce pollution to air and reduce disruption from noise and vibration through direct action or mitigation measures; to seek to improve the quality of the air as far as possible*) (+/-/?/?) are considered to be significant mixed as higher density developments has the potential to significantly adversely affect the Objective through increased noise and air pollution during construction and operation. The Guidance seeks to require new developments (seeking to exceed London Plan densities) to demonstrate how it will mitigate its impacts, deliver the principles of the Masterplan, deliver exemplary design and provide the required infrastructure. Whilst the guidance is non-specific it is recommended that this includes the consideration of potential noise and air pollution during both the construction and operational phases on existing/new residents and employees. Developments will also be expected to demonstrate how they contribute to innovative and highly sustainable means to manage operational impacts. Assuming developers are required to respond to this Guidance is also likely to have minor positive effects on this Objective.
- 6.163 With regard to the effects on Objective 18 (*to ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels*) (+/-/?/?), higher density development is likely to have a significantly adverse effect on this Objective (e.g. higher energy demand). However, the Guidance seeks to require new developments (seeking to exceed London Plan densities) to demonstrate how it will mitigate its impacts, deliver the principles of the Masterplan, deliver exemplary design and provide the required infrastructure. Whilst the Guidance is non-specific it is recommended that this includes consideration of how new development achieves exemplary design in respect of sustainability standards and energy efficiency. Assuming developers are required to do this the Guidance is also likely to have minor positive effects on this Objective.

Uncertain Effects

- 6.164 The Housing Density Guidance is not expected to result in any uncertain effects (?).

Guidance: Connections and Public Spaces

Significant Positive Effects

- 6.165 The Connections and Public Spaces Guidance is likely to have an uncertain significant positive effect (++)/? on Objective 8 (*to increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)*) as it sets out the Masterplan's expectations in terms of connections for walking and cycling as well as the requirement for new development to contribute to six new principal public open spaces in addition to meeting public realm/ open space requirements to meet their own development needs. The Masterplan also sets

out proposals to address barriers to existing and future movements including requiring developments to step back from Dock edges and provision of additional footbridges.

Significant Adverse Effects

- 6.166 The Connections and Public Spaces Guidance is not expected to result in any significant adverse (-) effects.

Significant Mixed Effects

- 6.167 The Connections and Public Spaces Guidance is likely to have significant mixed effects on Objective 1 (*to create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place*) (++/-/?) as the proposals within the Guidance could lead to significant positive effects through the delivery of new spaces for physical activity and maximising opportunities for new residents to walk and cycle. However, minor adverse effects are also likely as the amount of open space within the Masterplan Area is unlikely to be sufficient to meet the needs of the future population (when considered in relation to accepted standards such as the National Playing Fields Association standards).

Uncertain Effects

- 6.168 The Connections and Public Spaces Guidance is not expected to result in any uncertain effects (?).

Guidance: Massing & Urban Blocks

Significant Positive Effects

- 6.169 The Massing and Urban Blocks Guidance is likely to have significant positive effects on Objectives 12, 13 and 14 (all with uncertainty (++/?)). The Guidance is considered to have a significant positive effect on Objective 12 (*to protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population*) as it promotes the provision of primary schools within the podium and plinth elements of the hybrid urban blocks, also incorporating play space at ground level for younger children and play decks and MUGAs at ground level and on podiums. It is considered that this should help secure the provision of primary school infrastructure as part of the developments.
- 6.170 The Guidance is considered to have a significant positive effect on Objective 13 (*to maximise the health and well-being of the population and reduce inequalities in health*) as it is assumed healthcare facilities would form part of the social infrastructure to be delivered within the plinth and podium elements of the hybrid urban blocks.
- 6.171 Effects on Objective 14 (*to ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability*) are considered to be significant positive as the Guidance seeks to encourage a range of housing typologies to come forward including wheelchair accessible and family housing. Guidance is also provided to support the delivery of communal and private amenity spaces which will help support the overall liveability of the Masterplan Area.

Significant Adverse Effects

- 6.172 The Massing and Urban Blocks Guidance is not expected to result in any significant adverse (--) effects.

Significant Mixed Effects

- 6.173 The Massing and Urban Blocks Guidance is likely to have significant mixed effects on Objectives 1 (++/-/?) and 8 (+/-/?). The guidance is considered to have significant mixed effects on Objective 1 (*to create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place*) (++/-/?) as it provides guidance on the anticipated massing, provision of hybrid urban blocks, provision of housing typologies, car parking and the integration of social infrastructure and primary schools within the podium and plinth elements of the hybrid urban blocks. It is therefore considered that the Guidance responds significantly positively to a number of the sub-criteria underpinning this Objective. However, due to the significant population growth estimated through the implementation of the Masterplan there remains concerns over the general liveability of the area, including the potential for overcrowding, and ensuring all open/ private spaces are not overshadowed and/ or affected by wind funnelling effects.

6.174 The Guidance is likely to have significant mixed effects on Objective 8 (*to increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)*) (+/--/?) as it states that development will be required to define and enclose the network of connections and spaces set out in SQ2. However, the Guidance also provides guidance on car parking within the Masterplan Area which could result in significant adverse effects depending on how much comes forward across the Masterplan Area.

Uncertain Effects

6.175 The Massing and Urban Blocks Guidance is not expected to result in any uncertain effects (?).

Guidance: The Skyline

Significant Positive Effects

6.176 The Skyline Guidance is not expected to result in any significant positive (++) effects.

Significant Adverse Effects

6.177 The Skyline Guidance is not expected to result in any significant adverse (--) effects.

Significant Mixed Effects

6.178 The Skyline Guidance is not expected to result in any significant mixed effects.

Uncertain Effects

6.179 The Skyline Guidance is not expected to result in any uncertain effects (?).

Guidance: Infrastructure

6.180 This guidance sets out specific expectations in respect of primary school delivery and waste management. More generally, development will be required to identify the most up to date infrastructure requirements to contribute to the delivery of infrastructure. This includes delivery of new and improved footbridges, principal public open spaces, improved public realm, health facility floorspace and leisure centre courts.

Significant Positive Effects

6.181 The Infrastructure Guidance is likely to have significant positive effects on Objectives 8, 12 and 13 (all with uncertainty (++/?)) with the exception of Objective 8 (++)). The Guidance is considered to have a significant positive effect on Objective 8 (*to increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)*) as it includes a commitment to deliver two new pedestrian/ cycle bridges and one replacement/ refurbished footbridge across/ between the docks. The delivery of these footbridges is considered to be a 'high' priority for the Masterplan Area.

6.182 The effect on Objective 12 (*to protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population*) is considered to be significant positive as the Guidance requires development to provide onsite primary schools if they are deemed deliverable. There is uncertainty as developers may demonstrate that delivery of onsite primary schools is not viable. This is considered to be a high priority for the Masterplan Area. The Guidance also states that CIL (Community Infrastructure Levy) contributions will be sought for offsite secondary schools.

6.183 The Guidance is considered to have a significant positive effect on Objective 13 (*to maximise the health and well-being of the population and reduce inequalities in health*) as the table of infrastructure requirements includes scope for additional (702m²) health facility floorspace (to meet 1,100hr/ha density of development). This is considered to be a medium term priority for the Masterplan Area.

Significant Adverse Effects

6.184 The Infrastructure Guidance is likely to have an uncertain significant adverse effect (--/?)) on Objective 10 (*to improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources*) as taking into account the estimated population growth of the Masterplan Area, it makes no reference to the capacity of water supply or wastewater treatment infrastructure.

Significant Mixed Effects

- 6.185 The Infrastructure Guidance is likely to have significant mixed effects on Objective 11 (*to minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates*) (+/--/?) as it states development should explore the provision of innovative and appropriate waste recycling, storage and collection systems and connect to or demonstrate a potential connection to a Masterplan wide waste storage and collection system. Delivery of a pneumatic waste collection system is identified as a high priority for the Masterplan Area and, as such, the Guidance is considered to have a minor positive effect on this Objective. However, whilst this commitment to a coordinated waste collection/ storage system has been made, this would not reduce or respond positively to the amount of additional waste which will be produced. It is therefore considered that the Guidance will also have a significant adverse effect on the Objective.

Uncertain Effects

- 6.186 The Infrastructure Guidance is not expected to have any uncertain effects (?).

Delivery

- 6.187 The Delivery section of the SPD supports the delivery of the whole of the Masterplan. It sets out how development and social and physical infrastructure will be delivered. Specifically it defines: the approach to coordinated development, delivery organisations and key stakeholders, delivery tools and phasing. This will also include reference to the Local Plan and London Plan Guidance.

Significant Positive Effects

- 6.188 The Delivery section of the Masterplan is likely to have a significant positive effect on Objective 8 (*to increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)*) as it sets out how development and social and physical infrastructure will be delivered. This includes the delivery of a Feasibility, Design and Delivery Study for the new and improved footbridges which will be developed in the short term (2014-2018) and is a high priority for the Masterplan Area.

Significant Adverse Effects

- 6.189 The Delivery section of the Masterplan is likely to have an uncertain significant adverse effect on Objective 10 (*to improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources*) as taking into account the estimated population growth of the Masterplan Area, it makes no reference to the capacity of water supply or wastewater treatment infrastructure.

Significant Mixed Effects

- 6.190 The Delivery section of the Masterplan is likely to have significant mixed effects on Objective 11 (*to minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates*) (+/--/?) as whilst it includes reference to a Feasibility and Design Study for a sustainable vacuum waste collection (a short term high priority for the Masterplan Area) (a minor positive effect on the Objective), it will not reduce the overall amount waste produced or reused (a significant adverse effect on the Objective).

Uncertain Effects

- 6.191 The Delivery section of the Masterplan is likely to have uncertain effects on Objectives, 12 (*to protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population*), 13 (*to maximise the health and well-being of the population and reduce inequalities in health*), 14 (*to ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability*), 15 (*to provide all residents with the opportunity of employment, particularly in deprived areas*) and 16 (*to reduce pollution to land through direct action or mitigation; to seek to improve the quality of the land as far as possible*) as it makes no specific reference to: educational facilities, healthcare facilities, affordable housing, employment or land quality and/ or remediation.

Conclusion

- 6.192 The assessment undertaken assessed the individual components of the Masterplan including the Vision, Place Making Principles, Density Guidance, Connections and Public Spaces Guidance, Massing and Urban Blocks Guidance, Skyline Guidance, Infrastructure Guidance and the Delivery section of the Masterplan.
- 6.193 On the whole, the Masterplan performs well against the SEA Objectives with the majority of the effects considered to be minor positive. A number of significant positive effects were also recorded with regards to housing, education and healthcare facilities and encouraging walking and cycling
- 6.194 However, the Masterplan is also likely to result in a number of significant adverse effects which include effects on biodiversity, sustainable use of water resources, waste and air and noise pollution.
- 6.195 This reflects the substantial new population which would need to be accommodated within the Masterplan Area, with potential to impact indirectly on the natural environment and place increased pressure on existing infrastructure. It is recommended that LBTH continue to address and manage these issues during implementation of the Masterplan.
- 6.196 **Table 6.3** overleaf provides a summary of all the Masterplan's pre-mitigation effects against each objective.

Table 6.3 – Summary of SEA of Draft Masterplan SPD (Pre-mitigation)

SEA Objectives	Likely Effects							
	The Vision	Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing & Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
1. To create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place	++/--/?	+/?	++/--/?	++/--/?	++/--/?	+/?	+	+
2. To protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses	--/?	+/?	+/-/?	+/?	-/+/?	0	+	+
3. To minimise flood risk to people and property within the Masterplan Area, the wider borough and elsewhere, and promote the use of sustainable urban drainage systems	+/--/?	0	+/-/?	+/?	-/+/?	0	+	+
4. To enhance and protect the significance of heritage assets and archaeological heritage	+/--/?	0	+/-/?	0	+/-/?	+	0	+
5. To enhance local townscape/ landscape character and improve the quality of the built environment and public open spaces	+/?	+/?	+/?	+/?	+/?	0	0	0
6. To achieve a planned and aesthetically balanced skyline, as seen in protected views	0	+	0	0	+/?	+/?	0	0
7. To protect views and the visual amenity of people living and working in and visiting the area and surroundings	+	+	+/?	+/?	+/?	+/?	0	0
8. To increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)	+/--/?	+/?	+/-/?	+++?	+/--/?	+	++	++
9. To maximise the accessibility to key services and amenities	+/?	+	+/-/?	+	+	0	+/?	+
10. To improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources	--/?	0	+/-/?	0	0	0	--/?	--/?
11. To minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates	--/?	0	+/-/?	0	0	0	+/--/?	+/--/?
12. To protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population	+++/?	+/?	+/-/?	+	+++/?	0	+++/?	?
13. To maximise the health and well-being of the population and reduce inequalities in health	+/?	+/?	+/-/?	+/?	+++/?	0	+++/?	?
14. To ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability	+++/?	+/?	++/--/?	+/?	+++/?	+	+/?	?
15. To provide all residents with the opportunity of employment, particularly in deprived areas	+/-/?	0	+/-/?	+	+/?	0	0	?
16. To reduce pollution to land through direct action or mitigation; to seek to improve the quality of the land as far as possible	+	0	+	+	0	0	0	?
17. To reduce pollution to air and reduce disruption from noise and vibration through direct action or mitigation measures; to	--/?	0	+/--/?	+	+/?	0	0	+

SEA Objectives	Likely Effects							
	The Vision	Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing & Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
seek to improve the quality of the air as far as possible								
18. To ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels	+/-/?	0	+/-/?	+	+/-/?	0	+	+

Mitigation, Recommendations and Identification of Residual Effects

- 6.197 The appraisal work summarised in this chapter and detailed in the matrices in **Appendix 4** is pre-mitigation. A series of mitigation proposals and recommendations have been put forward at each stage in the assessment in order to help minimise effects. These are set out in **Table 6.4** and **Table 6.5** below along with LBTH's response. The tables then identify the residual effects (i.e. the effects remaining post-mitigation).
- 6.198 It is also recognised that there are a number of policy safeguards within the extant London and adopted Local Plan for LBTH (the Core Strategy and Managing Development Document) which could also serve to reduce the magnitude of effects, particularly in respect of individual developments. These are referred to in the mitigation and recommendation columns where relevant.

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Different Development Amounts)					Residual Effect (Different Delivery Options)					
			Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
	<p>8) Ensure design of development considers and responds to the need to provide appropriate levels of daylight/sunlight for building occupants and public spaces.</p> <p>9) Ensure all development maintains a setback of taller elements of built form from the street and public spaces.</p> <p>10) Maximise the amount of open/ green space which can be provided on site to respond to the proposed density.</p> <p>11) Ensure the design and height of new developments does not adversely affect the usability of the proposed new and existing public open space. This would need to be tested through appropriate wind and daylight-sunlight modelling, considering changes across the seasons.</p> <p>12) Include components such as green gyms and allotments within new open spaces to encourage physical activity and access to healthy food.</p>	<p>8) It is considered that the Local Plan and London Plan provide guidance to deliver this aspiration.</p> <p>9) It is considered that the Local Plan and Masterplan provide adequate flexibility for this aspiration to be delivered where required.</p> <p>10) Refer to response to point one.</p> <p>11) Refer to response to point eight.</p> <p>12) It is considered that the Local Plan and London Plan provide guidance to deliver this aspiration.</p>											
2: To protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses	<p>1) Ensure that ecological enhancement measures are secured within the detailed development of the sites within the Masterplan Area (e.g. green walls, green roofs, bat and bird boxes).</p> <p>2) Ensure that developers contribute to a monitoring programme to ascertain whether development is having adverse effects on the aquatic ecology of the docks and the reasons for this (this should include consideration of overshadowing).</p>	<p>1) It is considered that the Local Plan provides guidance to deliver this aspiration.</p> <p>2) It is considered that the delivery arrangements set out in the Masterplan enables the delivery of this recommendation to be explored.</p>	+/?	+/?	+/-/?	--/+/?	--/+/?	+/-/?	+/?	+/-/?	+/?	++/?	+/?

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Different Development Amounts)					Residual Effect (Different Delivery Options)							
			Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6		
	<p>3) Detailed mitigation/ enhancement proposals include:</p> <ul style="list-style-type: none"> Provision of green roofs (a priority for the Council). Development should aim to achieve the actions in the LBTH Biodiversity Action Plan 2014-2019. Improve habitat in the Dock e.g. floating reedbeds. Orientate green spaces to the South of buildings to maximise sunlight to vegetation. Include nectar rich planting in the landscaping. <p>4) Ensure new public and private open spaces provide a range of habitat types, including areas designed for lower public access to maximise biodiversity gains.</p>	<p>3) It is considered that the Local Plan, London Plan and Masterplan provide guidance to deliver these proposals.</p> <p>4) It is considered that the Masterplan provides guidance to deliver this recommendation.</p>													
3: To minimise flood risk to people and property within the Masterplan Area, the wider borough and elsewhere, and promote the use of sustainable urban drainage systems	<p>1) There is the potential to increase permeable surfaces into the Masterplan Area, and incorporate sustainable urban drainage, which will reduce the risk of flooding. All developments should demonstrate how they have maximised the amount of new permeable surfaces as part of development design.</p> <p>2) SuDs to be included as part of all development design. Updated SuDs Guidance is available on the LBTH website.</p> <p>3) Provide natural/ green spaces within development plots to maximise permeable surfaces and provision of SUDs across the Masterplan Area.</p> <p>4) Maintain a set-back between development and the Docks. Consider potential for green infrastructure alongside the Docks.</p> <p>5) Work with Thames Water to address foul water issues.</p>	<p>1) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>2) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>3) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>4) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>5) It is considered that the delivery arrangements set out in the Masterplan enables the delivery of this recommendation to be explored.</p>													
			+/-/?	+/-/?	+/-/?	+/-/?	-- /+/?	+/-/?	+/-/?	+/-/?	+/-/?	+	0		

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Different Development Amounts)					Residual Effect (Different Delivery Options)				
			Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2	Option 3	Option 4	Option 5
	<p>6) New public open spaces and private spaces should be designed to maximise the amount of new permeable surfaces and minimise hard-standing.</p> <p>7) Provide opportunities for the design of open spaces across development plots to create genuinely useable spaces. These will also have a flood mitigation function.</p>	<p>6) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>7) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p>										
4: To enhance and protect the significance of heritage assets and archaeological heritage	<p>1) Archaeological Trial Trenching followed by excavation/ watching brief due to the location of the Masterplan within an area of archaeological potential.</p> <p>2) Continue to liaise with Maritime Greenwich World Heritage Site and inform development of WHS guidance.</p> <p>3) Design of the development to ensure massing, scale and grain is such that development is not imposing or dominant in views from the WHS and does not overwhelm listed structures or conservation areas. Also to ensure the heritage significance of heritage assets and special historical and architectural interest of conservation areas is sustained and enhanced as far as possible.</p> <p>4) Ensure each development application provides visualisations incorporating existing and consented developments and demonstrates the impact on the wider skyline and setting of heritage assets.</p> <p>5) Ensure it is possible to see sky between the towers, particularly as seen from the Greenwich Maritime World Heritage Site (WHS), to avoid a 'wall' of development in the setting to the WHS.</p> <p>6) New public open spaces could be designed to incorporate heritage interpretation/ heritage trails, reflecting the historic importance of the docks.</p>	<p>1) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>2) It is considered that the delivery arrangements set out in the Masterplan enables the delivery of this recommendation to be explored.</p> <p>3) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>4) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>5) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>6) It is considered that the Local Plan and Masterplan provide guidance to explore this recommendation.</p>	+/-/?	+/-/?	--/+/?	--/+/?	--/+/?	+/-/?	--/+/?	+/-/?	0	0

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Different Development Amounts)					Residual Effect (Different Delivery Options)					
			Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
5: To enhance local townscape/landscape character and improve the quality of the built environment and public open spaces	<p>1) There is limited scope to mitigate against the disparity in scale between the Masterplan Area and existing development to the north and south. In a limited number of areas, namely those located directly to the south of Canary Wharf, there is scope for detailed consideration of positioning and siting of tall buildings to create a transition to Canary Wharf.</p> <p>2) Ensure the development has a positive relationship to surrounding areas by providing a suitable transition in scale from the smaller scale residential areas to the south and the large scale of Canary Wharf.</p> <p>3) Development design should be based on principles such as the creation of a human scale environment, integration of attractive vibrant public open spaces which respond to and enhance local features and assets (such as the docks), and maximising opportunities to access these.</p> <p>4) Create attractive and high quality public spaces which include greenspace. Ensure the open spaces help to create a unique sense of place for South Quay, responding to and enhancing local features and assets (such as the docks).</p>	<p>1) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>2) It is considered that the London Plan, Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>3) Refer to point one above.</p> <p>4) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p>	-/?	+	+	-/+	--	--/?	--/?	+/-?/	+/-/?	++	+
6: To achieve a planned and aesthetically balanced skyline, as seen in protected views	<p>1) Aim for variety in heights of buildings to avoid a 'blocky' appearance in longer distance views.</p> <p>2) Ensure the massing, scale and grain is such that development does not form a 'wall' and is not imposing or dominant in the backdrop to the 'London Panorama' from The General Wolfe Statue and the backdrop to the 'River Prospect' from London Bridge. Aim to create a more balanced skyline than exists at present, with a clear visual 'layering' of buildings (i.e. with space between blocks).</p>	<p>1) It is considered that the London Plan, Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>2) It is considered that the London Plan, Local Plan and Masterplan provide guidance to deliver this recommendation.</p>	0	0	+	-/+/?	--/?	+/-	+	+/-	+	0	0

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Different Development Amounts)					Residual Effect (Different Delivery Options)							
			Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6		
	3) Ensure the skyline is considered when placing taller elements and open spaces within development sites.	3) It is considered that the London Plan, Local Plan and Masterplan provide guidance to deliver this recommendation.													
7: To protect views and the visual amenity of people living and working in and visiting the area and surroundings	<p>1) The adverse effects could be mitigated through high quality streetscapes with a human scale at street level (for example by inclusion of podium elements), active frontages to the street and water fronts, inclusion of green elements such as trees, retention/ opening up of views and links to the docks, and considered siting and design of buildings to reduce their dominance in views and preserve views of the sky.</p> <p>2) At larger scales, it may be difficult to reduce the adverse effects on visual amenity resulting from the imposing nature of buildings and reduction in views of the sky, although good design which includes high quality streetscapes with a human scale at street level (for example by inclusion of podium elements), active frontages to the street and water fronts, inclusion of green elements such as trees, retention/ opening up of views and links to the docks, and careful siting of buildings in relation to views up and down streets could reduce effects to some extent.</p> <p>3) Create attractive and high quality public spaces which enable people to see the sky, water and greenspace. Ensure the open spaces help to create a unique sense of place for South Quay, responding to and enhancing local features and assets (such as the docks).</p>	<p>1) It is considered that the London Plan, Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>2) It is considered that the Masterplan provide guidance to deliver this recommendation.</p> <p>3) It is considered that the London Plan, Local Plan and Masterplan provide guidance to deliver this recommendation.</p>													
8: To increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by car)	1) Construction logistics plans (CLP) and construction environmental management plans (CEMP) should be submitted and approved in writing by LBTH to encourage sustainable travel by construction vehicles and set out measures to minimise effects.	1) It is considered that the Local Plan provides guidance to deliver this recommendation.	+/-/?	+/-/?	+/-/?	-/+/?	--/+/?	+/-/?	+/-/?	+/-/?	+/-/?	+/-/?	+	0	

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Different Development Amounts)					Residual Effect (Different Delivery Options)						
			Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	
	<p>2) Operational travel plans should also be submitted to and approved in writing by LBTH which actively promote walking and cycling as viable alternatives to road and public transport.</p> <p>3) Plan for increased footbridge capacity.</p> <p>4) There is a need for further planned investment in public transport and pedestrian/ cycle solutions beyond Cross-rail and the provision of new foot bridges at South Dock and Millwall Cutting.</p> <p>5) Crossrail could provide mitigation but TfL have confirmed that this will only provide mitigation until 2031.</p>	<p>2) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>3) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>4) It is considered that the London Plan, Local Plan, Masterplan and forthcoming OAPF will provide guidance to deliver this recommendation.</p> <p>5) It is considered the OAPF will assess the capacity of Crossrail in relation to the Isle of Dogs.</p>												
9: To maximise the accessibility to key services and amenities	<p>1) This Option should ensure that a sufficient number and mix of facilities are provided to support the predicted population growth. The provision of offsite facilities should only be allowed where onsite provision is not possible.</p> <p>2) New developments would be expected to deliver sufficient uses to meet need arising from the proposed development density within the Masterplan Area.</p> <p>3) When considering new development applications, the number, distribution and potential location of existing and proposed non-retail uses such as A5 Hot Food Takeaways and Betting Shops should be considered on a cumulative basis to minimise potential amenity and health impacts on new and existing residents.</p>	<p>1) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>2) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>3) It is considered that the Local Plan provides guidance to deliver this recommendation.</p>												
10: To improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources	<p>1) New developments should provide scope for the re-use of surface water run-off e.g. for grey water uses; include sufficient space for water collection (e.g. water butts) in development design and demonstrate the highest level of water efficiency.</p>	<p>1) It is considered that the Local Plan provides guidance to deliver this recommendation.</p>												

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Different Development Amounts)					Residual Effect (Different Delivery Options)					
			Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
	<p>2) Monitor the quality of surface water run-off to the Docks.</p> <p>3) Complete a strategic capacity study in respect of water supply and wastewater capacity for the potentially highest density of development likely to come forward in South Quay.</p> <p>4) SuDS to be included as part of all development design.</p> <p>5) All developments should demonstrate how they have maximised the amount of new permeable surfaces as part of development design.</p> <p>6) Provide natural/ green spaces within development plots to maximise permeable surfaces and provision of SUDs across the Masterplan Area.</p> <p>7) Maintain a set-back between development and the Docks. Consider potential for green infrastructure alongside the Docks.</p>	<p>2) It is considered that the delivery arrangements set out in the Masterplan enables the delivery of this recommendation to be explored.</p> <p>3) It is considered that the delivery arrangements set out in the Masterplan enables the delivery of this recommendation to be explored.</p> <p>4) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>5) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>6) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>7) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p>											
11: To minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates	<p>1) Construction Environmental Management Plans and Site Waste Management Plans should be submitted and approved in writing by the LBTH to ensure waste is being dealt with appropriately.</p> <p>2) Developments within the Masterplan Area should provide sufficient space for waste recycling and storage to meet the needs and demands of the predicted development's population and its proposed uses.</p> <p>3) Waste collections should be planned and designed to accommodate the maximum amount of waste. Waste collections should be coordinated across the Masterplan Area utilising sustainable new technologies and capturing benefits for local people.</p>	<p>1) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>2) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>3) It is considered that the delivery arrangements set out in the Masterplan enables the delivery of this recommendation to be explored.</p>	+/-/?	+/-/?	--/+/?	--/+/?	--/+/?	--/+/?	+/-/?	--/+/?	+/-/?	0	0

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Different Development Amounts)					Residual Effect (Different Delivery Options)							
			Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6		
	<p>4) Development which promotes Masterplan-wide sustainable waste management solutions e.g. energy from waste plants will be supported.</p> <p>5) Developments would be expected to demonstrate how they plan to reduce the overall amount of construction and operational waste produced.</p>	<p>4) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>5) It is considered that the Local Plan provides guidance to deliver this recommendation.</p>													
12: To protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population	<p>1) Financial contributions could be secured through s106 agreements/ Community Infrastructure Levy (CIL), which could be used to improve existing and provide new education facilities. It is however noted that the Isle of Dogs has the fewest options for school expansion and potential new schools, and therefore the capacity for financial contributions to offset adverse effects within the immediate locality is limited.</p> <p>2) New developments could incorporate onsite (i.e. within the Masterplan Area) primary school and early learning facilities, which could serve the new residents and the wider community.</p> <p>3) It will be more difficult to accommodate secondary schools onsite due to the size of the institutions and the associated land requirements.</p> <p>4) Developments which provide onsite education facilities must also provide financial contributions to delivery of school playing fields/ pitches whether onsite or offsite.</p> <p>5) When considering the design of new public open spaces, consider opportunities for supporting education facilities – e.g. inclusion of education centres, provision of school playing fields/ pitches.</p>	<p>1) It is considered that the Local Plan, Planning Obligations SPD and Masterplan provide guidance to deliver this recommendation.</p> <p>2) It is considered that the Masterplan provides guidance to deliver this recommendation.</p> <p>3) It is considered that the Local Plan provides guidance to deliver secondary schools.</p> <p>4) It is considered that the Local Plan, Planning Obligations SPD and Masterplan provide guidance to explore the delivery of this recommendation.</p> <p>5) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p>													
13: To maximise the health and well-being of the population and reduce inequalities in health	<p>1) Financial contributions could be secured through s106 agreements/ CIL, which could be used to improve existing and provide new health facilities.</p>	<p>1) It is considered that the Local Plan, Planning Obligations SPD and Masterplan provide guidance to deliver this recommendation.</p>													

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Different Development Amounts)					Residual Effect (Different Delivery Options)						
			Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	
	<p>2) New developments could incorporate onsite health facilities (i.e. within the Masterplan Area), which could serve the new residents and the wider community.</p> <p>3) When considering the design of new public open spaces, consider opportunities for supporting health – e.g. inclusion of green gyms, trim trails, walking and cycling routes etc.</p>	<p>2) It is considered that the Masterplan provides guidance to deliver this recommendation.</p> <p>3) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p>												
14: To ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability	<p>1) Developments within the Option should provide a mix of unit sizes, tenures and types to meet the needs of the population (e.g. for single person, co-habiting couples and families).</p> <p>2) Developments within the Option should also provide a mix of uses on ground and lower above ground floors (e.g. employment, retail, open space) enabling new and existing residents to live and work locally.</p> <p>3) Delivery of onsite (i.e. within the Masterplan Area) affordable housing should be a priority for development within the Masterplan Area.</p>	<p>1) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>2) It is considered that the Masterplan provides guidance to deliver this recommendation.</p> <p>3) It is considered that the Local Plan provides guidance to deliver this recommendation.</p>	++/?	++/-/?	++/-/?	++/-/?	++/-/?	++/--/?	++/--/?	++/-/?	++/?	++/?	+	0
15: To provide all residents with the opportunity of employment, particularly in deprived areas	<p>1) Developers within the Masterplan area should work with existing onsite occupants to find suitable relocation Options, in the local area where possible. They should also work in partnership with LBTH, appropriate local agencies and other key stakeholders to ensure the maximum benefits of demolition and construction employment are realised within the local area.</p> <p>2) Developments within the Masterplan Area should provide a mix of uses (e.g. employment, retail, open space) enabling new and existing residents to live and work locally.</p>	<p>1) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>2) It is considered that the Masterplan provides guidance to deliver this recommendation.</p>	+/?	+/?	+/?	+/?	+/?	+/-/?	+/-/?	++/-/?	++/-/?	0	0	

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Different Development Amounts)					Residual Effect (Different Delivery Options)							
			Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6		
	3) Developers would be expected to deliver more appropriate employment floorspace within the Masterplan Area for example B1(a) all proposals, B1(b) (where the proposed use would not compromise the safety or amenity of surrounding occupants and residents and B1(c) (where the proposed use would not compromise the amenity of the surrounding residents.	3) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.													
16: To reduce pollution to land through direct action or mitigation; to seek to improve the quality of land as far as possible	<p>1) Ensure development layout and the proposed mix of uses is compatible with contaminated land investigations.</p> <p>2) The Masterplan should ensure developers remediate the land in accordance with the most recent industry standards, regardless of what previous remediation has taken place.</p> <p>3) Implementation of the CEMP.</p> <p>4) UXO risk assessment and appropriate preconstruction survey.</p> <p>5) The location of new public and private open space will need to take account of the nature and type of previously contaminated land. Some previous land uses may be less suitable for development as open space.</p>	<p>1) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>2) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>3) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>4) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>5) It is considered that the Local Plan provides guidance to deliver this recommendation.</p>													
17: To reduce pollution to the air and reduce disruption from noise and vibration through direct action or mitigation measures; To seek to improve the quality of the air as far as possible	<p>1) Accord with Local Plan Standards.</p> <p>2) CEMP and Dust Management Plan (DMP).</p> <p>3) Appropriate design of energy centres e.g. ultra Low NOx boilers should be installed if background concentrations of NO₂ do not improve in future years.</p> <p>4) Use of low noise plant items and demolition and construction techniques.</p>	<p>1) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>2) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>3) It is considered that the Local Plan provides guidance to explore the delivery of this recommendation.</p> <p>4) It is considered that the London Plan and Local Plan provide guidance to deliver this recommendation.</p>													

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Different Development Amounts)					Residual Effect (Different Delivery Options)					
			Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
	<p>5) Taller building design to incorporate additional insulation and triple glazing.</p> <p>6) Street greening e.g. maximising natural habitats such as trees.</p> <p>7) Promotion of car free developments.</p> <p>8) Promotion of car pools/ car clubs to encourage car sharing.</p> <p>9) Provision of vehicle electric charging points.</p> <p>10) The design of new public and private spaces should incorporate natural habitats, including trees.</p>	<p>5) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>6) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>7) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>8) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>9) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>10) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p>											
<p>18: To ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels</p>	<p>1) Developments are currently required to demonstrate a 50% reduction in carbon dioxide.</p> <p>2) Ensure climate change adaptation measures are built into new development design.</p> <p>3) Developments to connect to Barkantine District Heat Centre. Connection needs to be built into overall design of development.</p> <p>4) Potential for renewable energy should be built into the design of all development e.g. solar panels on roofs.</p> <p>5) All buildings should be designed to the highest standards of sustainability and design. This includes demonstration of reducing overall energy demand and achieving energy efficient buildings.</p>	<p>1) Noted.</p> <p>2) It is considered that the London Plan and Local Plan provide guidance to deliver this recommendation.</p> <p>3) It is considered that the Local Plan and Masterplan provide guidance to deliver this recommendation.</p> <p>4) It is considered that the London Plan and Local Plan provide guidance to deliver this recommendation.</p> <p>5) It is considered that the London Plan and Local Plan provide guidance to deliver this recommendation.</p>	+/-/?	+/-/?	+/-/?	--/+/?	--/+/?	+/-/?	+/-/?	+/-/?	+	0	

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Different Development Amounts)					Residual Effect (Different Delivery Options)						
			Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	
	6) Ensure climate change adaptation measures are built into new development design, for example, include trees (to provide natural shade), include green space to absorb heat etc.	6) It is considered that the London Plan and Local Plan provide guidance to deliver this recommendation.												

Table 6.5 – Summary of Mitigation/ Recommendations and Identification of Residual Effects for the Appraisal of the Draft Masterplan SPD

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
1: To create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place	<p>1) The vision could reference an aspiration to achieve 'a high quality of living'; high standards of design <u>and sustainability</u>; highly energy efficient developments. Delivery of new healthcare facilities could be specifically mentioned within the vision.</p> <p>2) It would be helpful if the SPD could define what impacts it requires developers to take into consideration. For example, in respect of this Objective there are concerns over: the quantity of open space available on site to meet the population needs arising from higher density development; impacts on daylight/ sunlight/ wind funnelling particularly on spaces which are proposed for amenity/ recreation (both within individual developments and in relation to amenity/ open space within the wider Masterplan Area).</p> <p>3) The supporting text should state that "Development must not impact adversely on the quality of the existing <u>and proposed new principal open spaces</u> by overshadowing open spaces causing poor sunlight/ daylight to those spaces." Reference should also be made to wind – i.e. development design should be tested to ensure that new/ existing open spaces are not affected adversely by wind tunnelling. (see paragraph 3, page 41).</p> <p>4) Figures 2.3 -2.6 set out the expected design of the Primary and Secondary Streets, Shared Surfaces and Dock Edges. Only the Primary Street (Figure 2.3) provides genuinely dedicated cycle lanes. It is assumed that the other streets will have pedestrian/ cycle access shared. It is recommended that separate cycle lanes be provided along all routes to avoid pedestrian/ cyclist conflict. This would also encourage more safe cycling and walking to take place.</p> <p>5) The Design and Delivery Study for Principal and DLR Public Open Spaces should take account of the various recommendations referenced throughout this appraisal in respect of delivery of new open spaces.</p>	<p>1) The Masterplan has been revised to deliver this recommendation.</p> <p>2) Common to all density comments: Mitigation of impacts requires applicants to demonstrate how they do this in accordance with all London Plan, Housing SPG, Local Plan and Masterplan guidance. This will be made clearer in the supplementary text. To set out a comprehensive list would require repetition of policies.</p> <p>3) The Masterplan has been revised to deliver this recommendation.</p> <p>4) Disagree. Not all streets are suitable for separate cycle lanes.</p> <p>5) Noted.</p>	++/--/?	+/?	++/--/?	++/--/?	++/--/?	+/?	+	+
2: To protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses	<p>1) Include reference to biodiversity protection and enhancement, including new habitat creation as part of the overall community benefits.</p> <p>2) As this Masterplan Area will be highly urbanised, a placemaking principle relating specifically to provision of landscaping and new habitats is recommended. This could set out expectations in terms of development landscaping such as inclusion of green roofs, nectar rich planting as well as supporting new habitats within the Docks e.g. floating reedbeds.</p>	<p>1) Disagree. This is not considered appropriate for a strategic vision. However, reference to sustainability has been made.</p> <p>2) The Masterplan (public open spaces principle) has been revised to deliver this recommendation.</p>	+/--/?	+/?	+/--/?	+/?	-/--/?	0	+	+

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>3) It would be helpful if the SPD could define what impacts it requires developers to take into consideration. Potential direct and indirect impacts on the SINC (from each development and the wider cumulative impact of all developments).</p> <p>4) The SPD could also specify expected mitigation, including:</p> <ul style="list-style-type: none"> Biodiverse green roofs, particularly on less tall buildings. Nectar rich planting in the landscaping. Creation of new habitats within the Dock e.g. floating reedbeds. <p>5) Orientate green/ amenity spaces to the south of buildings where possible.</p> <p>6) All new open spaces should incorporate some form of new habitat of value to biodiversity and include nectar rich planting.</p> <p>7) New green/ amenity spaces should be orientated to the south of buildings where possible.</p> <p>8) Require developers to contribute to creation of improved habitats for biodiversity within existing open spaces.</p> <p>9) Developers should provide biodiverse green roofs, particularly on less tall buildings e.g. podiums/ plinths.</p> <p>10) Developers should contribute to creation of new habitats within the Docks e.g. floating reedbeds.</p> <p>11) The Design and Delivery Study for Principal and DLR Public Open Spaces should take account of the various recommendations referenced throughout this appraisal in respect of delivery of new open spaces, including maximising potential for biodiversity enhancement.</p>	<p>3) Disagree. SINC's are managed through the Local Plan.</p> <ul style="list-style-type: none"> Biodiverse Green Roofs are managed by the Local Plan. Nectar rich planting – this is too detailed for the Masterplan. Creation of new habitats - agree. This will be included in public open spaces supplementary text. <p>5) This is included in supplementary text in SQ2.</p> <p>6) It is considered that the London Plan and amendments to the Masterplan above deliver this recommendation.</p> <p>7) Noted.</p> <p>8) Noted.</p> <p>9) Noted.</p> <p>10) The Masterplan has been amended to take account of biodiversity.</p> <p>11) Noted.</p>								
3: To minimise flood risk to people and property within the Masterplan Area, the wider borough and elsewhere, and promote the use of sustainable urban drainage systems	<p>1) Refer to the intention for development within the Masterplan Area to mitigate the impacts and adapt to future climate change e.g. through provision of sustainable drainage systems. A 'climate proofed' Masterplan Area could be part of the vision and/ or community benefits.</p> <p>2) The placemaking principles could make reference to maximising permeability in design e.g. through provision of green space and inclusion of sustainable drainage systems.</p> <p>3) It would be helpful if the SPD could define what impacts it requires developers to take into consideration.</p>	<p>1) The Masterplan has been revised to deliver this recommendation (reference has been made to sustainability).</p> <p>2) It is considered that the Local Plan provides guidance to deliver SUDs.</p> <p>3) It is considered that the Local Plan provides guidance to deliver SUDs.</p>	+/-/?	0	+/-/?	+/?	-/+/?	0	+	+

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>4) This should include consideration of future flood risk.</p> <p>5) The SPD could also specify expected mitigation, including:</p> <ul style="list-style-type: none"> Maximising inclusion of Sustainable Urban Drainage Systems and the amount of permeable spaces across the Masterplan Area. <p>6) Any future Design Guide for new open/ amenity spaces should seek to maximise the amount of green and permeable spaces which can be delivered. Provision of SUDs is a priority.</p> <p>7) The SPD should provide a definition for what is meant by 'infrastructure'. This should include SUDs. The SPD should include a commitment to maximise delivery of SUDs and increase the permeable surfaces across the Masterplan Area.</p>	<p>4) Noted.</p> <p>5) Noted.</p> <p>6) Disagree. The amount of infrastructure to be provided is defined by the Community Infrastructure Levy (CIL) process. .</p> <p>7) It is considered that the Local Plan provides guidance to deliver SUDs.</p>								
4: To enhance and protect the significance of heritage assets and archaeological heritage	<p>1) In the vision or community benefits make reference to development that responds to existing heritage assets and character (both designated and undesignated, drawing on the latest Local List of Heritage Assets).</p> <p>2) Include an additional placemaking principle which relates to the design of development responding positively to existing heritage structures (including statutorily listed structures, structures on the Local List and structures identified as being of heritage and local townscape interest through the ongoing Masterplanning process).</p> <p>3) It would be helpful if the SPD could define what impacts it requires developers to take into consideration.</p> <p>4) This should include consideration of impacts on both designated and undesignated heritage assets, drawing on the Local List and any buildings/ structures of townscape interest which emerge through the Masterplanning process.</p>	<p>1) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>2) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>3) See earlier comments.</p> <p>4) See earlier comments.</p>	+/-/?	0	+/-/?	0	+/-/?	+	0	+

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>5) The SPD could also specify expected mitigation, including:</p> <ul style="list-style-type: none"> Design of development to ensure massing, scale and grain is such that developments are not imposing or dominant in views from the WHS and do not overwhelm listed structures or Conservation Areas. Also to ensure that the heritage significance of heritage assets and special historic and architectural interest of Conservation Areas is protected as far as possible. Ensure each development application provides visualisations incorporating existing and consented developments and demonstrates the impact on the wider skyline and setting of heritage assets. Provision of basement car parks, constructing deep piles etc. has potential to impact on buried archaeology. Developers should consult extant archaeological reports and current monuments data held by the Greater London HER for the area and immediate environs and prepare a geotechnical and geoarchaeological model of the area to allow areas of relative sensitivity to be more easily identified. 	<p>5) It is considered that the mitigation set out in bullet point one is managed by the Masterplan (SQ4) and the Local Plan and bullet point three is managed by the Local Plan. The Masterplan (Development Management section) has been revised to deliver the recommendation set out in bullet point two.</p>								
	<p>6) Archaeological trial trenching followed by excavation/ watching brief may be necessary both pre and during construction.</p>	<p>6) Noted.</p>								
	<p>7) Any future Design Guide for new open spaces should seek to incorporate heritage interpretation/ heritage trails, reflecting the historic importance of the Docks.</p>	<p>7) Agree. Change to be made to SQ2 supporting text.</p>								
	<p>8) The design of new open spaces should also take account of the setting of any new buildings emerging through the refresh of the Local List of heritage assets.</p>	<p>8) Noted.</p>								
	<p>9) Massing Guidance 1b. should be amended to state 'conserve and enhance heritage assets, their setting and significance...'). A definition should be provided for 'heritage assets' and should include designated and undesignated buildings and structures, including any on the existing and emerging Local List and any which are noted as being of townscape interest during the ongoing Masterplanning process.</p>	<p>9) It is considered that the Local Plan provides guidance to deliver this recommendation.</p>								
	<p>10) Developers within and adjacent to the Coldharbour Conservation Area would be expected to demonstrate how development has been designed to enhance the special architectural and historic interest of the Conservation Area.</p>	<p>10) Noted.</p>								
	<p>11) The Guidance should also make reference to archaeological potential.</p>	<p>11) Noted.</p>								

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>12) Developers should consult extant archaeological reports and current monuments data held by the Greater London HER for the area and immediate environs and prepare a geotechnical and geoarchaeological model of the area to allow areas of relative sensitivity to be more easily identified.</p> <p>13) An additional project related study for LBTH should include updating the Local List of Heritage Assets to reflect the emerging context in South Quay.</p>	<p>12) Noted. See earlier comments.</p> <p>13) Agree. It is recommended that those delivering the Masterplan include liaison with those involved in the local list updates.</p>								
5: To enhance local townscape/ landscape character and improve the quality of the built environment and public open spaces	<p>1) Include reference to the relationship with adjacent areas and the potential to create a transition between the large scale of Canary Wharf and the smaller scale of the surrounding residential areas.</p> <p>2) Include reference to the creation of attractive, high quality and vibrant public open spaces which enhance local features and assets.</p> <p>3) Include reference to local distinctiveness and sense of place.</p> <p>4) Density could refer to the need to provide a transition from Canary Wharf to the lower density residential neighbourhoods surrounding.</p> <p>5) Massing could refer to the need to create a transition between the large scale of Canary Wharf and smaller scale surrounding residential areas.</p> <p>6) Public open spaces could refer to creation of vibrant spaces (including greenspace) that responds to and enhances local features/ assets and sense of place.</p> <p>7) Is there a need for a separate point on character/ sense of place (account should be taken of the character and context provided by existing places and neighbourhoods and their contribution to the sense of place – including the surrounding historic environment – reference The Mayor’s ‘Character and Context’ SPG (June 2014).</p>	<p>1) Disagree. It is considered this is inferred by being ‘integrated’ with surrounding area.</p> <p>2) Disagree. It is considered that this recommendation is too detailed for this strategic Masterplan vision.</p> <p>3) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>4) It is considered that the Masterplan (SQ3) already provides guidance to deliver this recommendation.</p> <p>5) It is considered that the Masterplan (SQ3) already provides guidance to deliver this recommendation.</p> <p>6) The Masterplan has been revised to deliver this recommendation (green spaces referred to in principles).</p> <p>7) It is considered that the Local Plan provides guidance to deliver this recommendation.</p>	+/?	+/?	+/?	+/?	+/?	0	0	0

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>8) Could include additional points to SQ1:</p> <ul style="list-style-type: none"> Create a distinctive sense of place that relates to underlying landscape and historic character and provides a transition between Canary Wharf and surrounding lower density residential areas. Create high quality and vibrant public open spaces (unless these are encompassed in the general "deliver the principles and the guidance in the Masterplan"). <p>9) SQ2.1: Include the creation of vibrant public realm that relates to underlying landscape and historic character, and responds to and enhances local features and assets.</p> <p>10) Add need to provide a transition between the larger scale Canary Wharf and smaller scale surrounding residential neighbourhoods to SQ3.</p>	<p>8) It is considered that the Masterplan (SQ3) already provides guidance to deliver this recommendation.</p> <p>9) The Masterplan supporting text has been revised to deliver this recommendation.</p> <p>10) It is considered that the Masterplan already provides guidance to deliver this recommendation (stated in supporting text to SQ3).</p>								
6: To achieve a planned and aesthetically balanced skyline, as seen in protected views	<p>1) Include reference to the fact that the neighbourhood will impact positively on the skyline.</p> <p>2) May be an opportunity to suggest that the development should enhance the existing situation. Add 'and balanced' after visually engaging?</p> <p>3) Could add ... "particularly as seen from the Maritime Greenwich World Heritage Site, the 'London Panorama' from the General Wolfe Statue and the 'River Prospect' from London Bridge" (as referenced in the Mayor's London View Management Framework SPG).</p> <p>4) It is assumed that the achievement of a planned and aesthetically balanced skyline is encompassed within SQ1 1.a.ii (i.e. the requirement to "deliver the principles and the guidance in the Masterplan")</p> <p>5) Add "achieve an aesthetically balanced skyline, particularly as seen in protected views" to SQ3.6</p> <p>6) As stated in previous comments it is not clear that 1. A. ii follows on from 1A i.e. "define the Grand Axis... by stepping down in height and scale towards the Maritime Greenwich World Heritage Site". The stepping down in height is more to do with respecting the setting of the World Heritage Site more generally, and achieving a balanced skyline. It is an important point to retain, but belongs in a section on 'views'. Points 1.a.i and 1.c. remain relevant to the Maritime Grand Axis.</p>	<p>1) It is considered that this is not suitable for the Vision of this strategic Masterplan.</p> <p>2) The Masterplan has been revised to deliver this recommendation.</p> <p>3) It is considered that the Masterplan (SQ4) already provides guidance to deliver this recommendation.</p> <p>4) Noted.</p> <p>5) Noted.</p> <p>6) Agree. Amendment to be made to SQ4. Stepping down is addressed in the taller elements guidance in SQ3. This is specific to the axis and provides a link to future OAPF guidance.</p>	0	+	0	0	+/?	+/?	0	0

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>7) It is queried whether it is acceptable to have materials and design different along the grand axis? What is the reason for this? [consult with EH/WHS committee?]. This may draw attention to the cluster of buildings. If desirable, there needs to be more guidance on what colours and materials will be expected (otherwise there will be no coordination).</p> <p>8) A better approach may be to ensure the buildings in the Masterplan Area form a background in which buildings are no more visually prominent than the existing Canary Wharf cluster (in terms of height form and materials/ colour?</p> <p>9) The current text under the sub-heading 'views' should be under 'visualisations'. And new text should be included under 'Views' which focuses on achieving an aesthetically balanced skyline as seen in views, particularly protected views – avoiding development that is imposing, dominant or creates a 'wall' of development and aiming to create a more balanced skyline than exists at present.</p> <p>10) The first para on p56 also needs updating accordingly. This needs to include reference to "how development can contribute to an aesthetically balanced skyline".</p> <p>11) The previous text in SQ4 which states that 1 Canada Square forms the defining point has been lost – why is this? (although it is noted it is in the detailed wording that follows)</p> <p>12) Is the word 'impact' missing after potential in the 2nd para p56? A number of other spelling typos are in this section.</p> <p>13) 3rd para – note that the WHS Management Plan states that the dominance of All Saints on Blackheath and the vista along Blackheath Avenue remains.</p> <p>14) Include reference to Important Views and Tall Buildings (November 2006)</p>	<p>7) Reasoning underpinning this is provided in supplementary text. Guidance to be developed alongside new WHS management plan.</p> <p>8) Noted.</p> <p>9) The Masterplan will be revised to deliver this recommendation (added in relation to visual layering).</p> <p>10) The Masterplan will be revised to deliver this recommendation (added in relation to visual layering).</p> <p>11) Noted.</p> <p>12) The Masterplan will be revised to deliver this recommendation (added in relation to visual layering).</p> <p>13) Noted.</p> <p>14) Noted.</p>								
7: To protect views and the visual amenity of people living and working in and visiting the area and surroundings	<p>1) Include reference to enhanced views and visual amenity.</p> <p>2) Does the area want to have its own sense of place rather than be designed to the character of the 'Isle of Dogs' as is currently written (what is the 'emerging character of the Isle of Dogs'?)</p> <p>3) Add reference to the importance of creating a human scale at street level and in open spaces – in Principles 3 and 4.</p>	<p>1) It is considered that the Local Plan delivers this recommendation.</p> <p>2) Noted.</p> <p>3) It is considered that the Masterplan (SQ3) already delivers this recommendation.</p>	+	+	+/?	+/?	+/?	+/?	0	0

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>4) It is assumed that the protection and enhancement of views and visual amenity is encompassed within SQ1 1.iii (i.e. the requirement to "deliver the principles and the guidance in the Masterplan").</p> <p>5) Add requirement to protect and enhance views including retaining the ability of people to see the sky, water and greenspace (e.g. SQ3.1)</p>	<p>4) Noted.</p> <p>5) The Masterplan will be revised to deliver this recommendation.</p>								
<p>8: To increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by car)</p>	<p>1) The vision should make reference to a Masterplan which enables all day-to-day needs can to be met by walking.</p> <p>2) Community Benefits could include making use of the Dock for deliveries, freight traffic etc to further reduce vehicular road traffic.</p> <p>3) Expand on existing placemaking principle 2. Connections & Public Realm to prioritise movement by walking and cycling, followed by public transport.</p> <p>4) Furthermore, make reference to maximising use of the Docks for movement e.g. freight movement and for deliveries</p> <p>5) It would be helpful if the SPD could define what impacts it requires developers to take into consideration.</p> <p>6) This should include consideration of the contribution of each development to vehicular travel (both during construction and operation) and how design has been used to maximise travel by walking and cycling as a priority.</p> <p>7) The SPD could also specify expected mitigation, including: use of the Docks for deliveries and freight based movements. This should be set out in a Construction Logistics Plan and Construction Environmental Management Plan.</p> <p>8) Figures 2.3 -2.6 set out the expected design of the Primary and Secondary Streets, Shared Surfaces and Dock Edges. Only the Primary Street (Figure 2.3) provides genuinely dedicated cycle lanes. It is assumed that the other streets will have pedestrian/ cycle access shared. It is recommended that separate cycle lanes be provided along all routes to avoid pedestrian/ cyclist conflict. This would also encourage more safe cycling and walking to take place.</p> <p>9) The supporting text could be expanded to encourage and actively support car-free developments.</p>	<p>1) The Masterplan (SQ2) will be revised to deliver this recommendation.</p> <p>2) Noted.</p> <p>3) It is considered that the Masterplan (SQ2) already delivers this recommendation.</p> <p>4) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>5) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>6) Noted.</p> <p>7) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>8) Disagree. Not all streets are suitable for separate cycle lanes.</p> <p>9) Disagree.</p>								
			+/--/?	+/?	+/-/?	++/?	+/-/?	+	++	++

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	10) The supporting text should state that development that makes use of the Docks for construction and operational traffic would be actively supported.	10) It is considered that the Local Plan provides guidance to deliver this recommendation.								
9: To maximise the accessibility to key services and amenities	<p>1) Community Benefits could include specific reference to Marsh Wall as the new local high street for the Masterplan Area incorporating a range of uses including retail.</p> <p>2) The vision should make reference to a Masterplan which enables all day-to-day needs can to be met by walking.</p> <p>3) It would be helpful if the SPD could define what impacts it requires developers to take into consideration.</p> <p>4) This should include consideration of the contribution of each development to infrastructure (in this respect, leisure facilities and Idea stores and retail including shop(s) which meets day to day needs within walking distance) and how this will be met (with delivery of facilities onsite a priority).</p> <p>5) When considering the balance and mix of uses proposed with each development application, consider the number, distribution and location of existing and proposed non-retail uses such as A5 uses, betting shops etc to minimise potential amenity and health impacts on new and existing residents (in particular consider the proximity to existing and proposed schools and open spaces).</p>	<p>1) The Masterplan has been revised to deliver this recommendation.</p> <p>2) It is considered that the Masterplan (SQ2) already delivers this recommendation.</p> <p>3) Noted.</p> <p>4) Noted.</p> <p>5) It is considered that the Local Plan provides guidance to deliver this recommendation.</p>	+/?	+	+/-/?	+	+	0	+/?	+
10: To improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources	<p>1) The vision should set out the requirement for new development to meet exceptional standards for sustainability and efficiency, including water reuse and recycling.</p> <p>2) It would be helpful if the SPD could define what impacts it requires developers to take into consideration. In this respect this relates to the requirement of each development in relation to water supply and wastewater treatment capacity.</p> <p>3) The SPD could also specify expected mitigation/ design considerations, including:</p> <ul style="list-style-type: none"> Demonstrating how the development has met exceptional standards for sustainability and efficiency including water reuse and recycling. 	<p>1) The Masterplan has been revised to deliver this recommendation (sustainability referenced to in principles).</p> <p>2) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>3) The Masterplan (SQ5) will be revised to deliver this recommendation.</p>	--/+/?	0	+/-/?	0	0	0	--/+/?	--/+/?

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	4) Complete a strategic capacity study in respect of water supply and wastewater capacity for the potentially highest density of development likely to come forward in South Quay. If this will form part of the Isle of Dogs & South Poplar Opportunity Area Planning Framework this should be made explicit and reference made to Thames Water as a delivery organisation.	4) Agree.								
11: To minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates	<p>1) The vision should set out the requirement for new development to meet exceptional standards for sustainability and efficiency, including waste reuse and recycling. Reference should be made to the aspiration for delivery of a Masterplan-wide waste management system. This could include reference to an Area-wide Energy from Waste Facility.</p> <p>2) It would be helpful if the SPD could define what impacts it requires developers to take into consideration. In this respect this relates to the development's contribution to waste during construction and operation.</p> <p>3) The SPD could also specify expected mitigation/ design considerations, including:</p> <ul style="list-style-type: none"> Demonstrating how the development has met exceptional standards for sustainability and efficiency including waste reuse and recycling; demonstrating how the development will contribute/ deliver the ENVAC waste system; consideration of any other innovative proposals e.g. energy from waste and how these link into other developments within the Masterplan Area. <p>4) The SPD should encourage developments to develop innovative and highly sustainable waste management solutions to reduce and reuse waste as far as possible e.g. contribute to a Masterplan-wide energy from waste sites.</p> <p>5) Prepare a project-related looking at the feasibility, design and delivery of innovative, sustainable waste management technologies, for example, a Masterplan-wide Energy from Waste Plant.</p>	<p>1) The Masterplan has been revised to deliver this recommendation (reference has been made to sustainability).</p> <p>2) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>3) Noted. See earlier comments.</p> <p>4) Agree. Change to be made.</p> <p>5) Agree. Change to be made.</p>	--/+/?	0	+/-/?	0	0	0	+/-/?	+/-/?
12: To protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population	<p>1) Provide a definition for 'infrastructure' as set out in placemaking principle 7.</p> <p>2) It would be helpful if the SPD could define what impacts it requires developers to take into consideration.</p> <p>3) This should include consideration of the contribution of each development to infrastructure (in this respect, primary and secondary school, early years learning and further education) and how and where this will be delivered (with delivery of primary schools onsite a priority).</p>	<p>1) Disagree.</p> <p>2) Noted. See earlier comments.</p> <p>3) Noted. See earlier comments</p>	++/?	+/?	+/-/?	+	++/?	0	++/?	?

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>4) When considering the balance and mix of uses proposed with each development application, consider the number, distribution and location of existing and proposed non-retail uses such as A5 uses, betting shops etc to minimise potential amenity and health impacts on new and existing residents (in particular consider the proximity to existing and proposed schools and open spaces).</p> <p>5) Developers also need to demonstrate how they have taken into account delivery of the supporting and ancillary requirements of education facilities e.g. playing fields/ sports pitches.</p> <p>6) Any future Design Guide for new open spaces should consider opportunities for supporting education facilities e.g. inclusion of education centres, provision of school playing fields/ pitches.</p> <p>7) Determine the capacity of existing secondary schools within walking/ cycling distance of the Masterplan Area. Consider what further provision is necessary.</p> <p>8) Include reference to the timeframe for delivery of primary schools and the delivery body responsible.</p>	<p>4) Noted.</p> <p>5) Noted.</p> <p>6) Noted.</p> <p>7) Disagree. Secondary school catchment is borough wide. As such, this level of detail is not required for the Masterplan.</p> <p>8) It is considered that the Masterplan (SQ5) already delivers this recommendation.</p>								
13: To maximise the health and well-being of the population and reduce inequalities in health	<p>1) Provide a definition for 'infrastructure' as set out in placemaking principle 7.</p> <p>2) It would be helpful if the SPD could define what impacts it requires developers to take into consideration.</p> <p>3) This should include consideration of the contribution of each development to infrastructure (in this respect, healthcare) and how and where this will be delivered.</p> <p>4) When considering the balance and mix of uses proposed with each development application, consider the number, distribution and location of existing and proposed non-retail uses such as A5 uses, betting shops etc to minimise potential amenity and health impacts on new and existing residents (in particular consider the proximity to existing and proposed schools and open spaces).</p> <p>5) More generally, developers would be expected to demonstrate how they are contribute to the wider aspirations for a 'genuinely liveable place' - this would include consideration of the wider determinants of health and how these are supported through development design.</p>	<p>1) Disagree.</p> <p>2) Noted. See earlier comments.</p> <p>3) Noted. See earlier comments.</p> <p>4) Noted.</p> <p>5) The Masterplan will be revised to deliver this recommendation.</p>	+/?	+/?	+/-/?	+/?	++/?	0	++/?	?

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>6) The supporting text should state that "Development must not impact adversely on the quality of the existing <u>and proposed new principal open spaces</u> by overshadowing open spaces causing poor sunlight/ daylight to those spaces." Reference should also be made to wind – i.e. development design should be tested to ensure that new/ existing open spaces are not affected adversely by wind tunnelling (see paragraph 3, page 41).</p> <p>7) Figures 2.3 -2.6 set out the expected design of the Primary and Secondary Streets, Shared Surfaces and Dock Edges. Only the Primary Street (Figure 2.3) provides genuinely dedicated cycle lanes. It is assumed that the other streets will have pedestrian/ cycle access shared. It is recommended that separate cycle lanes be provided along all routes to avoid pedestrian/ cyclist conflict. This would also encourage more safe cycling and walking to take place.</p> <p>8) When considering the design of new open spaces, consider opportunities for supporting health – e.g. inclusion of green gyms, trim trails etc.</p> <p>9) The SPD could provide definitions for key terms including 'social infrastructure' so it is clear what this includes.</p> <p>10) Include reference to the timeframe for delivery of healthcare facilities and the delivery body responsible.</p>	<p>6) Noted.</p> <p>7) Noted.</p> <p>8) Agreed. Change to be made.</p> <p>9) It is considered that the Local Plan provides definitions and therefore delivers this recommendation.</p> <p>10) It is considered that the Masterplan (SQ5) already delivers this recommendation.</p>								
14: To ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability	<p>1) In order to respond to issues around social inclusivity and affordable housing, the vision should explicitly set out the ambition to achieve genuinely inclusive, mixed neighbourhoods through delivery of affordable housing onsite.</p> <p>2) It would be helpful if the SPD could define what impacts it requires developers to take into consideration.</p> <p>3) This should include consideration of the contribution of each development to a balanced mix of housing.</p> <p>4) Developers should demonstrate how they have incorporated affordable housing onsite as well as a mix of house sizes and other uses seeking to deliver genuinely liveable places which are socially inclusive.</p> <p>5) This Guidance section should specifically refer to the need for a mix of housing tenures, including provision of affordable housing to ensure a genuinely mixed community is achieved within the Masterplan Area.</p>	<p>1) It is considered that the Local Plan sets out LBTH's ambition to deliver affordable housing onsite.</p> <p>2) It is considered that the London Plan provides guidance to deliver this recommendation.</p> <p>3) Noted. See earlier comments.</p> <p>4) Noted. See earlier comments.</p> <p>5) Noted.</p>	++/?	+/?	++/-/?	+/?	++/?	+	+/?	?

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>6) Include reference to the timeframe for delivery of affordable housing and the delivery body responsible.</p> <p>7) The Development Management section of the Draft SPD identifies a recognised need to explore the creation of a panel comprising members from Registered Providers who are responsible for design, management and maintenance of affordable housing in the Borough. It is recommended that creation of this panel is explicitly set out in the Delivery section of the Draft SPD.</p>	<p>6) Noted.</p> <p>7) Agree. Change to be made.</p>								
15: To provide all residents with the opportunity of employment, particularly in deprived areas	<p>1) The vision should make reference to provision of new employment within easy reach.</p> <p>2) There is no section relating to expected Land Use mix/ expectations re: locations of different land uses in the SPD. It is recommended that cross-reference be made to the relevant sections in the Adopted Local Plan/ London Plan.</p> <p>3) It would be helpful if the SPD could define what impacts it requires developers to take into consideration.</p> <p>4) This should include consideration of the contribution of each development to employment through the balance and mix of other types of developments proposed and how this will be met either within the existing development plot, the wider Masterplan Area or through delivery offsite. In particular, developers would be expected to demonstrate how the employment needs of higher population densities would be met.</p>	<p>1) It is considered that the Masterplan (SQ3) already delivers this recommendation.</p> <p>3) Disagree. Managed through active frontages and block components in SQ3</p> <p>3) Noted. See earlier comments.</p> <p>4) Noted. See earlier comments.</p>	+/-/?	0	+/-/?	+	+/?	0	0	?
16: To reduce pollution to land through direct action or mitigation; to seek to improve the quality of land as far as possible	<p>1) It would be helpful if the SPD could define what impacts it requires developers to take into consideration and the expectations in terms of mitigation.</p> <p>2) In respect of this Objective developers would need to robustly demonstrate their construction requirements e.g. depth of piling/ basement car parks/ buildings, the nature and types of contaminants present and how these will be remediated. Developers would be expected to demonstrate how the detailed contamination investigative work has informed the design e.g. in terms of construction depth, the location of different uses (e.g. open space versus buildings and basement car parks), recognising that open space may not be a suitable end use depending on the types of contaminants present.</p> <p>3) A UXO risk assessment should be undertaken as well as an appropriate pre construction survey.</p>	<p>1) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>2) Noted.</p> <p>3) Noted.</p>	+	0	+	+	0	0	0	?

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>4) The location of new open spaces will need to take account of the nature and type of previously contaminated land. Some previous land uses may be less suitable for redevelopment as open space.</p> <p>5) Table 1: Indication of Infrastructure Requirements should be expanded to include scope for land remediation, particularly where there are cross-development issues e.g. the need to deliver new open spaces that expand across development plots.</p> <p>6) CIL could be used to fund appropriate remediation (e.g. where new open spaces are required to be delivered across development plots). This should be seen as a high priority for the Masterplan Area and referenced in the Delivery Section.</p>	<p>4) Noted.</p> <p>5) Disagree. This is not considered to be 'infrastructure' as it is ancillary to the development of infrastructure.</p> <p>6) Disagree. This is not considered to be 'infrastructure' as it is ancillary to the development of infrastructure.</p>								
17: To reduce pollution to the air and reduce disruption from noise and vibration through direct action or mitigation measures; To seek to improve the quality of the air as far as possible	<p>1) The vision should set out the requirement for new development to meet exceptional standards for sustainability and efficiency, including energy efficiency. Reference should be made to the aspiration for delivery of a Masterplan-wide CHP plant or inclusion of development-wide plants.</p> <p>2) It would be helpful if the SPD could define what impacts it requires developers to take into consideration.</p> <p>3) For this specific Objective this should include, but not be limited to:</p> <ul style="list-style-type: none"> Construction noise, vibration and air pollution and how this will be managed. Operational noise and air pollution from cars/ other vehicles accessing the site and how this will be managed. Operational emissions from energy plant and any other predicted operational pollution sources and how this will be managed. Operational noise from aircraft and how this will be managed. <p>4) Possible sources of mitigation/ embedded design considerations include:</p> <ul style="list-style-type: none"> Designing the layout to maximise access on foot and by public transport and clearly demonstrating the need for onsite car parking. Promotion of car free developments as a priority and consideration of other tools to manage car use e.g. use of car pools/ car clubs. Use of low noise plant items and demolition and construction techniques. Appropriate design of energy centres e.g. ultra low NOx boilers should be installed. Taller building design to incorporate additional insulation and triple glazing. Use of CEMP and Dust Management Plan. 	<p>1) The Masterplan will be revised to deliver this recommendation (reference to sustainability has been made).</p> <p>2) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>3) Noted.</p> <p>4) The Masterplan (SQ2 supplementary text) will be revised to deliver this recommendation</p>	--/+/?	0	+/-/?	+	+/?	0	0	+

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>5) Recognising the substantial amount of development taking place in the Masterplan Area much of which would be happening concurrently, developers would be expected to work together to demonstrate how construction phasing can be managed to minimise potential cumulative impacts from construction. Furthermore developers would be expected to work together to deliver, for example, large-scale CHP plants.</p> <p>6) Any future Design Guide for new open spaces should maximise scope for inclusion of natural habitats (including trees).</p> <p>7) Developers should be encouraged to work together to adopt a coordinated approach to responding to energy demand e.g. through use of a Masterplan-wide CHP plant.</p> <p>8) Use the outputs from the SEA to help define the types of cumulative impacts which should be identified, monitored and managed.</p> <p>9) Include reference to a feasibility, design and delivery study for a Masterplan-wide CHP plant.</p>	<p>5) Noted.</p> <p>6) The Masterplan will be revised to deliver this recommendation.</p> <p>7) The Masterplan will be revised to deliver this recommendation.</p> <p>8) Noted.</p> <p>9) Noted.</p>								
<p>18: To ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels</p>	<p>1) Refer to recommendations set out in relation to Objectives 3, 8 and 17.</p> <p>2) A new placemaking principle relating to climate change should be included. This should include the need for new development design to be future-proofed against climate change.</p> <p>3) It would be helpful if the SPD could define what impacts it requires developers to take into consideration.</p> <p>4) For this specific Objective this should include, but not be limited to:</p> <ul style="list-style-type: none"> Managing flood risk – demonstrating inclusion of permeable surfaces and SUDs. Maximising accessibility on foot and by bike and clearly justifying the need for car parking. Promotion of car free developments as a priority and consideration of other tools to manage car use e.g. use of car pools/ car clubs. Maximising use of the Docks for deliveries/ freight travel. Managing energy demand during both construction and operation. 	<p>1) Noted.</p> <p>2) It is considered that the Local Plan provides guidance to deliver this recommendation.</p> <p>3) Noted. See earlier comments.</p> <p>4) Noted. See earlier comments.</p>	+/-/?	0	+/-/?	+	+/-/?	0	+	+

SEA Objective	Mitigation/ Recommendation	LBTH Officer Response	Residual Effect (Draft Masterplan SPD)							
			The Vision	Placemaking Principles	Guidance: Housing Density	Guidance: Connections and Public Spaces	Guidance: Massing and Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery
	<p>5) Possible sources of mitigation/ embedded design considerations include:</p> <ul style="list-style-type: none"> • Design of all buildings/ spaces to include climate change adaptation measures e.g. through provision of adequate shade in summer, green spaces (as oppose to hard surfacing), outside shelters (for use during wetter winters) etc. • Maximising the inclusion of renewable energy technologies e.g. solar panels on roofs. • Contribution to Masterplan-wide heating solutions. • Contribution/ inclusion of sustainable technologies/ solutions including energy from waste. • Demonstrating a high level of efficiency – in terms of energy, water, waste etc. <p>6) Any future Design Guide for new open spaces should maximise scope for inclusion of natural habitats (including trees).</p> <p>7) CIL funding for item 6 (in Table 1: Indication of infrastructure requirements) should include requirement for measures that enable new open spaces to adapt to climate change e.g. provision of trees and other forms of natural shade; inclusion of SUDs and permeable surfaces etc.</p> <p>8) The Open Space study should take account of the various recommendations referenced throughout this appraisal in respect of delivery of new open spaces, including maximising potential for climate change adaptation measures.</p>	<p>5) Noted.</p> <p>6) The Masterplan will be revised to deliver this recommendation.</p> <p>7) Noted.</p> <p>8) Noted.</p>								

Duration and Scale of Sustainability Effects

- 6.201 The Masterplan SPD provides guidance (alongside policies in the adopted Local Plan and London Plan) to manage development coming forward in the Masterplan Area in the long term (i.e. up to 2024 and beyond).
- 6.202 Developers in the earlier phases of development i.e. during pre-application discussions, early development design, would be expected to liaise with development management officers to ensure the principles of the SPD are embedded into to design early on. This expected to happen in the short (2014 – 2018), medium (2019 to 2023) and long term (2024 onwards) and will help to ensure that potential effects from development construction (e.g. noise, air pollution, vehicular movements, decontamination etc) are properly managed and coordinated. This would minimise the scale of adverse effects experienced by new and existing residents (which are likely to be experienced in the long term given the scale of development which will be coming forward).
- 6.203 As development is delivered in accordance with the SPD (this is likely to be phased over the next 10 years) positive, long term, permanent effects are expected to be realised – for example, delivery of new housing, employment, improved public transport infrastructure, further land remediation and provision of new and improved public open green-spaces and public realm.
- 6.204 Long-term permanent adverse effects will include increased waste generation from a growing population, climate change implications arising from the energy required to deliver and run new housing and employment, changes to the overall skyline within the Borough (and London), changes at street level and the disturbance and / or removal of archaeological remains. However, these will be mitigated to some extent through adherence to the guidance in the SPD and policies in the adopted Plan.

Cumulative Effects

- 6.205 As already specified earlier in this report, Schedule 2 of the SEA Regulations requires consideration of cumulative effects.
- 6.206 The SEA of the Masterplan has been conducted at three levels:
- 1 Considering the likely effects of different amounts of development across the Masterplan Area.
 - 2 Considering the likely effects of different ways of delivering development across the Masterplan Area and
 - 3 Considering the likely effects of applying the Draft Masterplan SPD Guidance across the Masterplan Area.
- 6.207 As such, the potential cumulative effects of delivering multiple high density developments across the Masterplan Area (**item 1** in the list above); and the potential cumulative effects of delivering multiple developments to a particular architectural form across the Masterplan Area (**item 2** in the list above) on each of the SEA Objectives has been considered.
- 6.208 However, in addition to this there are two types of cumulative effects that also require consideration:
- The cumulative effect of delivering the SPD (i.e. what is the combined effect of delivering the whole SPD on each SEA Objective) and
 - Inter-project cumulative effects (i.e. the cumulative effects arising from this Masterplan in combination with other current and reasonably foreseeable development projects outside the Masterplan Area).

Cumulative Effect of delivering the Draft SPD

- 6.209 Table 6.6 below provides a summary of the predicted effects of the whole SPD on each SEA Objective. Recognising the inherent uncertainty in the assessment it is clear that in a number of instances significant positive/ significant positive mixed effects (e.g. on Objectives 1, 5, 7, 12, 13,

and 14) are predicted. This recognises that the principles set out in the SPD should help deliver a better designed, more liveable environment overall, contribute to an improved public realm and improve open/ greenspaces across the Masterplan Area and contribute to an improved, more coherent and legible environment particularly at street level. Recognising that the overall amount of development to be delivered within the Masterplan Area remains uncertain, there is potential for significant mixed adverse effects (with uncertainty) effects on a number of the natural environment and natural resource Objectives (e.g. Objectives 10, 11, 17 and 18). The SPD Guidance and adopted policies will help mitigate effects to some extent.

Table 6.6 – Draft Masterplan SPD – Summary Table of likely Cumulative Impacts

SEA Objectives	Likely Effects								
	The Vision	Principles	Guidance: Density	Guidance: Connections and Public Spaces	Guidance: Massing & Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery	Cumulative effects of the Draft Masterplan SPD
1. To create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place	++/--/?	+/?	++/--/?	++/--/?	++/--/?	+/?	+	+	++/--/?
2. To protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses	+/--/?	+/?	+/--/?	+/?	-/+/?	0	+	+	+/--/?
3. To minimise flood risk to people and property within the Masterplan Area, the wider borough and elsewhere, and promote the use of sustainable urban drainage systems	+/--/?	0	+/--/?	+/?	-/+/?	0	+	+	+/--/?
4. To enhance and protect the significance of heritage assets and archaeological heritage	+/--/?	0	+/--/?	0	+/--/?	+	0	+	+/--/?
5. To enhance local townscape/ landscape character and improve the quality of the built environment and public open spaces	+/?	+/?	+/?	+/?	+/?	0	0	0	++/?
6. To achieve a planned and aesthetically balanced skyline, as seen in protected views	0	+	0	0	+/?	+/?	0	0	+/?
7. To protect views and the visual amenity of people living and working in and visiting the area and surroundings	+	+	+/?	+/?	+/?	+/?	0	0	++/?
8. To increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)	+/--/?	+	+/--/?	++/?	+/--/?	+	++	++	++/--/?
9. To maximise the accessibility to key services and amenities	+/?	+	+/--/?	+	+	0	+/?	+	++/?
10. To improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources	--/+/?	0	+/--/?	0	0	0	--/+/?	--/+/?	--/+/?
11. To minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates	--/+/?	0	+/--/?	0	0	0	+/--/?	+/--/?	+/--/?
12. To protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population	++/?	+/?	+/--/?	+	++/?	0	++/?	?	++/?
13. To maximise the health and well-being of the population and reduce inequalities in health	+/?	+/?	+/--/?	+/?	++/?	0	++/?	?	++/?
14. To ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability	++/?	+/?	++/--/?	+/?	++/?	+	+/?	?	++/?
15. To provide all residents with the opportunity of employment, particularly in deprived areas	+/--/?	0	+/--/?	+	+/?	0	0	?	+/--/?

SEA Objectives	Likely Effects								
	The Vision	Principles	Guidance: Density	Guidance: Connections and Public Spaces	Guidance: Massing & Urban Blocks	Guidance: The Skyline	Guidance: Infrastructure	Delivery	Cumulative effects of the Draft Masterplan SPD
16. To reduce pollution to land through direct action or mitigation; to seek to improve the quality of the land as far as possible	+	0	+	+	0	0	0	?	+/?
17. To reduce pollution to air and reduce disruption from noise and vibration through direct action or mitigation measures; to seek to improve the quality of the air as far as possible	--/+/?	0	+/--/?	+	+/?	0	0	+	+/--/?
18. To ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels	+/--/?	0	+/--/?	+	+/-/?	0	+	+	+/--/?

Inter-Project Cumulative Effects

- 6.210 It is recognised that development within South Quay does not exist in isolation and that there is significant growth provided in the remainder of the Borough and in London more widely. This has been emphasised in the recent Further Alterations to the London Plan (GLA, January 2014) which proposes a ten year minimum housing target for LBTH of 39,300 (an increase from 28,850 in the adopted Plan). For London the new ten year housing target is 423,887 (an increase from 322,100 in the adopted Plan).
- 6.211 Evidently this scale of development has potential to exacerbate the adverse effects identified through development within South Quay (e.g. on the natural environment and on natural resources with effects likely be experienced at a Borough and pan-London level). In respect of the Objective related to housing, delivering of housing in South Quay would significantly positively contribute to the overall London-wide housing targets, particularly when added to the wider regional housing development underway. Conversely there is potential for positive or adverse effects on the wider skyline in London and the Borough depending on how well development in South Quay accords with other tall development proposed in other parts of the borough and in London. Overall there is considerable uncertainty and coordination between the South Quay delivery bodies and other key Masterplan delivery bodies (within LBTH, and in London) will be necessary.
- 6.212 It is recognised that the SPD has limited scope to manage pan-London impacts, however, it is recommended that the other key Masterplan/ significant housing/ mixed use development projects (within LBTH and London more widely) are identified. This list could form part of the reasonably foreseeable projects which are considered during applicant cumulative assessments in South Quay (considering for example, wider visual impacts on London's skyline, planned use of key transport routes during construction, etc).

7 Monitoring

7.1 The SEA Directive requires that

“Member states shall monitor the significant environmental effects of the implementation of plans or programmes... in order , inter alia, to identify at an early stage, unforeseen adverse effects, and be able to undertake appropriate remedial action (Article 10.1) and that the environmental report should provide information on ‘a description of the measures envisaged concerning monitoring” (Annex 1 (i)).

Monitoring proposals should be designed to provide information that can be used to highlight specific issues and significant effects, and which could help decision-making.

7.2 It is recommended that monitoring of the environmental effects of the Masterplan SPD is tied into the overall approach to monitoring the sustainability effects of other plans and strategies developed within the LBTH (in particular the Local Plan). Annual Monitoring Reports are already produced for the Borough. Therefore, it is recommended that monitoring of the potential environmental effects of the Masterplan be combined with the annual monitoring process carried out for the Local Plan. The responsibility for carrying out the monitoring would lie with the officer team tasked with delivering the South Quay Masterplan.

7.3 As described within **Chapter 5**, a number of Options could have potential significant effects (both positive and adverse) on the SEA Objectives. **Table 7.1** below sets out a number of suggested indicators for monitoring the potential significant effects of implementing the Masterplan, drawing on indicators that are used for the LBTH Local Plan sustainability monitoring where relevant. Note that the indicators proposed are included as suggestions at this stage, as it is recognised that the necessary datasets may not be available for monitoring some of the environmental effects of the Masterplan (or may not be available at the Ward level), and that the indicators included may change.

Table 7.1– Proposed indicators for monitoring the potential significant environmental effects of the Masterplan SPD

SEA Objectives for which potential significant effects have been identified	Suggested indicators for monitoring effects of the Masterplan SPD
1. To create and sustain a liveable, well-designed environment that promotes long-term social cohesion, sustainable healthy lifestyles and a sense of place	See Table 3.2 for the key indicators of each SEA Objective.
2. To protect, conserve and enhance the biodiversity within the Masterplan Area and wider borough and where appropriate create habitats, green and open spaces and watercourses	
3. To minimise flood risk to people and property within the Masterplan Area, the wider borough and elsewhere and promote the use of sustainable urban drainage systems	
4. To enhance and protect the significance of heritage assets and archaeological heritage	
5. To enhance local townscape/ landscape character and improve the quality of the built environment and public open spaces	
6. To achieve a planned and aesthetically balanced skyline, as seen in protected views	

SEA Objectives for which potential significant effects have been identified	Suggested indicators for monitoring effects of the Masterplan SPD
7. To protect views and the visual amenity of people living and working in and visiting the area and surroundings	
8. To increase the proportion of journeys made by walking and cycling followed by bus or train (relative to those taken by the car)	
9. To maximise the accessibility to key services and amenities	
10. To improve the quality of water within the Masterplan Area and to achieve the wise management and sustainable use of water resources	
11. To minimise the production of waste across all sectors and increase reuse, recycling, remanufacturing and recovery rates	
12. To protect existing, make provision for new, and maximise accessibility to education facilities to meet the needs of all sectors of the population	
13. To maximise the health and well-being of the population and reduce inequalities in health	
14. To ensure that all residents have access to good quality, well-located, affordable housing that promotes liveability	
15. To provide all residents with the opportunity of employment, particularly in deprived areas	
17. To reduce pollution to air and reduce disruption from noise and vibration through direct action or mitigation measures; to seek to improve the quality of the air as far as possible	
18. To ensure the Masterplan adapts to the effects of climate change (both now and in the future) and contributes to climate change mitigation, achieves greater energy efficiency and reduces its reliance on fossil fuels	

- 7.4 It will be particularly important to monitor the overall density of development being delivered on a regular basis to keep track of the total amount of development being delivered.
- 7.5 This is needed to ensure infrastructure provision is adequate to meet the needs of the new population.
- 7.6 Thames Water (amongst other infrastructure providers) has raised concerns regarding the net increase in demand on their infrastructure and the level of uncertainty at this stage. Thames Water is concerned that the network in this area may be unable to support the demand anticipated from this development.

8 Conclusions and Summary

Summary

- 8.1 LUC was commissioned by LBTH to carry out SEA of the South Quay Masterplan SPD. The SEA process is concerned with assessing the potential environmental effects that may arise from implementation of development within the Masterplan Area. SEA is an 'Objectives-led' process and 18 Objectives were developed to enable the potential effects on a range of environmental and socio-economic factors to be tested. SEA is conducted at a strategic level and has been undertaken drawing primarily on the professional judgement of LUC, technical and local input from LBTH officers and drawing on the consultee responses raised during the process. This means there is an inherent level of uncertainty in the appraisal, however, the results have provided an appropriate level of guidance and steer to officers developing the Masterplan.
- 8.2 South Quay is located to the south of LBTH on the Isle of Dogs. The area comprises a series of development plots (nearly 30) which are at varying stages in the planning process. All of these sites are brownfield comprising existing residential or commercial buildings and associated public realm. Some of the sites are vacant and the buildings are unoccupied.
- 8.3 Since 2010, interest from the development industry and landowners has resulted in a high number of development proposals which seek to maximise densities along Marsh Wall (within the South Quay area), specifically proposing tall building typologies and for residential-led redevelopment. LBTH are of the view that if these developments are not appropriately managed, there is a risk that the wider environment of the South Quay area will suffer and development opportunities across the whole area will not be optimised (e.g. delivery of social and physical infrastructure in line with proposed levels of growth). This will result in the lost opportunity to deliver a sustainable place, that is genuinely liveable and capture benefits for the community (both new and existing residents).
- 8.4 Development in South Quay is currently managed in accordance with the development management policies set out in the Local Plan (the adopted Core Strategy and Managing Development Document) as well as higher tier policies in the London Plan. The Western side of the South Quay also falls within the boundary covered by the Millennium Quarter Masterplan, which was produced in 2000.
- 8.5 Given the scale of development which has been coming forward in this area (and to ensure benefits are maximised, whilst adverse impacts are appropriately managed at a strategic scale), LBTH consider that a bespoke Masterplan is required for the South Quay area as a whole. It is intended that the Masterplan be adopted as an SPD and will become a material consideration in future planning consents.
- 8.6 There is significant support for housing development within London and LBTH specifically. This was emphasised in the recent Further Alterations to the London Plan (FALP) (GLA, January 2014) which proposes an increase in the minimum ten year housing supply target for London from 322,100 to 423,887 with a specific increase in LBTH from 28,850 to 39,314. Recent National Government announcements have also reiterated their support for the bulk of housing development to take place on brownfield sites. It is also important, however, to create places that contribute to a high quality of living, as well as delivering higher amounts of housing. There are concerns that extremely high density development within the Masterplan Area may result in overcrowding, create a place devoid of meaningful open space, with limited amenities and facilities available within walking distance, whilst potentially exceeding the capacity of existing infrastructure (including transport infrastructure and the water supply and wastewater treatment network).
- 8.7 The purpose of the SEA was to test a suite of Options related to the amount (Stage 1 of the assessment) and form of development (Stage 2 of the assessment) which could reasonably come forward within the Masterplan Area.

- 8.8 The SEA firstly considered the potential effects of **delivering a number of different development amounts** (considered as average development densities across the Masterplan Area) ranging from the highest value of the London Plan density matrix (1,100 hr/ ha) through to 7,000 hr/ ha (recognising that developments above the London plan density maximum have already been consented within the South Quay area). The Options chosen were considered to provide a reasonable representation of the different levels of viable development which could come forward within the Masterplan Area.
- 8.9 As might be expected, the higher the development density the greater the likelihood of significant adverse effects arising (particularly in respect of the environmental SEA Objectives). The SEA assessment of different densities of development found that the threshold for the greatest number of significant adverse effect was 3,000 hr/ ha and above. This is not to say that significant effects would not be experienced at lower densities, however, significant adverse effects are considered to be more likely at these densities.
- 8.10 In particular, significant adverse effects (pre-mitigation) were predicted for Objective 1 (health), 2 (biodiversity), 3 (flood risk), 4 (heritage assets and archaeological heritage), 5 (local townscape/ landscape character), 6 (achieving a planned and aesthetically balanced skyline), 7 (to protect views and visual amenity), 8 (to increase the proportion of journeys made by walking and cycling followed by bus or train), 9 (to maximise accessibility to key services and amenities), 10 (water quality and wise and sustainable use of water resources), 11 (to minimise the production of waste across all sectors), 17 (noise and air pollution) and 18 (climate change). Significant mixed effects (++/--/?) (Pre-mitigation) are predicted for all Options in respect of Objective 12 (education) recognising the potential for all Options to deliver new education facilities either onsite or through financial contributions.
- 8.11 All Options are also considered to have significant positive (++/?) effects (pre-mitigation) on Objective 14 housing (recognising the significant contribution that development at all of the densities proposed would make to the LBTH housing targets (including the upward revised targets in the FALP). Options 2 – 5 (2,000hr/ ha, 3,000hr/ ha, 4,500hr/ ha and 7,000 hr/ ha) are also predicted to have minor adverse (-) effects on this Objective recognising that at higher densities it may be difficult to achieve a genuinely 'liveable' place due to the number of people residing in the area, the height of the buildings impacting on local townscape etc.
- 8.12 **In respect of the assessment of the different development amounts, Option 1 (1,100 hr/ ha) is considered to perform best overall, whilst Option 5 (7,000 hr/ ha) is considered to perform worst overall** (has the greatest number of significant adverse effects predicted (pre-mitigation)). Whilst the lower density Options are predicted to have fewer significant adverse effects, it is important to recognise that **ALL Options would result in a significant change compared to the baseline (i.e. what exists already)**.
- 8.13 LBTH reviewed the results of the initial SEA of the different development amounts and took the decision not to work to a preferred average development density across the Masterplan Area. It was, however, recognised that development above 3,000hr/ ha could potentially lead to thresholds for significant adverse effects becoming breached. The SEA work was considered to be a critical tool in understanding how the potential density of housing growth across South Quay will impact on the local natural and socio-economic environment. LBTH decided that the subsequent Masterplan would seek to optimise housing growth whilst maximising the capture of benefits for the wider community; as such the subsequent guidance in the SPD does not seek to specify a prescriptive limit to development but provides a framework to guide growth within the development management process, informed by the earlier assessment work.
- 8.14 The SEA subsequently tested **high level ways of delivering development** (in order to inform the guidance which was developed within the SPD). This included consideration of 'Towers in Space' (a development form which delivers all types of uses e.g. residential, employment, education etc. within a single tall tower, perhaps with open/ private amenity space alongside this development), an Option to deliver development as 'Podium/ Plinths/ Towers' (this is an architectural form which enables higher density residential development to be delivered in tall towers alongside podiums [1-2 stories] and plinths [3-10 stories] enabling non-residential uses to be provided at lower levels within the podium/ plinth elements and for private/ amenity space to be contained around the built form).

- 8.15 These two development delivery Options were tested at two different densities (1,100 hr/ ha and 3,000 hr/ ha) (essentially to see the effects development density would have alongside development delivery) i.e. four Options were tested in total.
- 8.16 Two further Options were tested (Options 5 and 6). Option 5 sought to require developers across different development plots to deliver large, principal public open spaces for use by all new and existing residents within the Masterplan Area. This new public open space would be in addition to any public open space delivered through individual developments. Option 6 would not proactively seek new principal open spaces and would rely on public open space coming forward through individual developments.
- 8.17 The pre-mitigation findings of the appraisal of Options 1 – 4 were then compared (where Option 1 was Towers in Space delivered to 3,000hr/ ha; Option 2 was Towers in Space delivered to 1,100hr/ ha, Option 3 was Podium/ Plinth/ Towers delivered at 3,000 hr/ ha and Option 4 was Podium/ Plinth/ Towers delivered to 1,100hr/ ha). As might be expected (and already illustrated through the appraisal of different development amounts), the lower density Options (i.e. 1,100 hr/ ha, Options 2 and 4) performed better (i.e. would result in fewer significant adverse effects) than the higher density Options (Options 1 and 3, 3,000hr/ ha) due to the lower population predicted overall. **Option 1 (3,000hr/ ha 'Towers in Space') was considered to perform worst overall, with Option 4 (1,100hr/ ha 'Podiums/ Plinths/ Towers') considered to perform best overall.** The 'Podium/ Plinth/ Towers' form of development delivery is considered to offer greater opportunities to deliver a more 'liveable' place both within individual development plots and across the Masterplan Area as a whole. For example, non-residential uses can be provided in the lower tier plinths and podiums providing a degree of separation between uses, more scope for residents to socially interact at lower levels rather than on middle/ higher floors within a single tall building, and provides an opportunity for private and public open space to be better defined and configured creating an understanding of place and urban grain and a more human scale context.
- 8.18 In respect of Options 5 and 6, **Option 5 (delivery of new principal public open space as well as private spaces) performs better than Option 6** – more positive effects (pre-mitigation) are predicted and in particular, significant positive (++) effects are predicted in respect of Objectives 5 (townscape/ landscape character) and 7 (views and visual amenity) through the opportunity to create a more human scale environment with well-defined gaps and views of the sky.
- 8.19 The results of the SEA of the development delivery Options was used alongside work by LBTH officers to inform the SPD – **the 'podium/ plinth/ towers' Option would be promoted within the SPD alongside delivery of principal public open spaces.**
- 8.20 The SEA then appraised the Draft SPD which contains a vision, a set of overarching placemaking principles and guidance on density, connections and public spaces, massing and urban blocks, the skyline, infrastructure and a section on delivery. The SEA demonstrated that there are number of likely positive effects arising on the environment and socio-economic Objectives (pre-mitigation). However, significant adverse (--/?) and significant mixed (+/--/? or ++/--/?) remain. These effects largely reflect uncertainty around the scale of development which will come forward and be consented and unresolved concerns (for example, in respect of water supply and wastewater treatment), concerns as to whether aspirations e.g. to minimise waste production and achieve carbon and energy reductions will actually be realised, and recognising that there is no requirement or provision for developers to deliver exemplars of sustainable development (e.g. in terms of energy, water, waste and through delivery of car free developments). This is considered to be required to offset likely significant adverse effects arising from development at this scale. However, it should be recognised that development of the Masterplan SPD will provide an important framework for developers to work towards helping to contribute to a higher quality of living than may be realised otherwise.
- 8.21 The assessment was then revaluated taking account of LBTH's response to mitigation and recommendations (as well as adopted policies which already exist in Local Plan and London Plan). Whilst this would result in the change to some scores from mixed (+/--/?) to minor positive (+) (refer to Tables 6.4 and 6.5 of the main report, which set out the overall residual impact assessment against all SEA objectives), overall the majority of significant adverse effects remain

(recognising the scale of development which could come forward. It is unlikely that all impacts could be mitigated in entirety).

Conclusion and Recommendations

- 8.22 Evidently the SPD does not exist in isolation and there are strong policies in the Local Plan and the London Plan which should help to respond to some of the concerns raised through the SEA. It is also recognised that there is substantial support both nationally and in London for delivery of new residential development and development within South Quay will help to respond to this.
- 8.23 A number of detailed recommendations and mitigation proposals have been set out within the SEA report (these are not all repeated here and reference should be made to the full SEA report and supporting Appendices). The pre-mitigation effects were reviewed in light of the recommendations and mitigation proposals and the residual effects were identified (see **Tables 6.4 and 6.5**). **It is expected that the recommendations and mitigation will be used to help inform applicant discussions and future assessment of individual developments within South Quay.**
- 8.24 Development management officers in LBTH should look more favourably on development which seeks to go beyond required standards in terms of sustainability and design.
- 8.25 In particular, positive support will be provided for development which:
- **Promotes exemplar standards of design and sustainability** focusing on demand reduction (e.g. in terms of energy and water) and demonstrates how overall waste production will be reduced.
 - **Promotes innovative technologies** e.g. inclusion of Combined Heat and Power proposals/ Energy from Waste Plants, delivered onsite.
 - **Designs to take account of protected views, is appropriate in scale** (for example, steps down from Canary Wharf Major Centre and appropriately reflects street scale at ground level) and **ensures there is open sky between buildings.**
 - **Designs to avoid significant adverse effects** as a first principle – for example, through genuinely building in daylight/ sunlight/ microclimate (including wind) considerations into development design at the outset.
 - **Incorporates ecological enhancement measures** into the building design.
 - **Promotes car free development and/or contributes to car clubs, electric vehicle charging points** in order to reduce car based travel and its consequent impacts.
 - **Designs to take account of surrounding new and existing development and vacant plots within the Masterplan Area** (i.e. schemes at scoping stage/ pre-application stage and other early stages in the planning system, in addition to consideration of consented schemes) In essence, developers should be demonstrating how they are responding to a better Masterplan overall. In particular, cumulative visualisations will be key. New development should not blight adjacent development sites.
 - **Designs to take account of features** set out in the Masterplan SPD such as principal open spaces (i.e. if a specific development plot is adjacent to a planned principal, public open space it would need to demonstrate that it would not adversely affect the usability of this space e.g. through microclimate effects/ daylight/ sunlight issues).
 - **Provides public and private open space and social infrastructure** (e.g. primary schools, healthcare facilities) onsite as a first principle rather than relying on financial contributions. Open spaces and social infrastructure should be of a sufficient size and quality to enable use by the wider population of LBTH.
 - **Provides appropriate employment onsite to meet development needs** (e.g. B1 use classes) as a first principle rather than relying on financial contributions.
- 8.26 **In respect of cumulative effects**, the SEA recognised the potential for other major developments proposed in the wider borough and in London to contribute cumulatively (both

positively and adversely) to the development proposed in South Quay. It is recommended that a list of other major developments be prepared and be used to inform developer cumulative assessments (i.e. schemes which are reasonably foreseeable and could impact in combination with development in South Quay). This includes consideration of schemes (both within the borough and elsewhere in London) which would contribute positively or adversely to the overall skyline. This could form one of the delivery projects for the South Quay Masterplan and/ or form part of the Isle of Dogs & South Poplar Opportunity Area Planning Framework.

- 8.27 As already set out in **Chapter 7**, it is a requirement of the SEA Regulations that the likely significant effects are monitored. This should be undertaken at a pan-Masterplan level to enable LBTH to keep track of the sustainability issues identified within the SEA and whether these are moving in a positive or adverse direction.
- 8.28 Finally, developers should keep abreast of and respond to emerging issues such as safety issues identified by London City Airport. This means that new tall buildings cannot be developed in isolation and each developer will need to work with neighbouring developers to consider the potential cumulative safety issues of numerous tall buildings.
- 8.29 LBTH will take on board the findings of the SEA and use this in future discussions with applicants. The findings will also be used to inform new and refreshed applicant guidance e.g. EIA Scoping Guidance.

Next Steps

- 8.30 The SEA report and this draft Masterplan will be published for consultation between January and February 2015. Following the six week formal consultation, responses will be assessed and the Masterplan amended where appropriate. Depending on the significance of these amendments, the SEA Report may also be updated.

LUC

November 2014