

## Appendix 10.4: Air Quality Positive Statement

### Introduction

This Air Quality Positive Statement has been prepared following the structure below, in line with the Air Quality Positive Draft Guidance:

- Introduction
- Constraints and opportunities
- Measures adopted
- Implementation and monitoring

Waterman Infrastructure & Environment Limited (Waterman) have been engaged throughout the design process to maximise the potential benefits for air quality as part of the planning applications for the Development in the London Borough of Richmond upon Thames (LBRuT).

The purpose of the statement is to demonstrate how the Development has considered ways to improve air quality and minimise exposure to existing sources of air pollution as part of an air quality approach, across all aspects of the development including the buildings, public spaces, landscaping and infrastructure.

An air quality assessment has been undertaken to determine baseline conditions at the Site, assess its suitability for the proposed land uses, and consider the effects of the Development given its location, size and nature in accordance with the requirements of the National Planning Policy Framework (NPPF). The air quality assessment is detailed in **Chapter 10: Air Quality** and associated technical appendices contained within the Environmental Statement.

### Development

The Applications seek planning permission for:

Application A:

*“Hybrid application to include the demolition of existing buildings to allow for comprehensive phased redevelopment of the site:*

*Planning permission is sought in detail for works to the east side of Ship Lane which comprise:*

- a) Demolition of existing buildings (except the Maltings and the façade of the Bottling Plant and former Hotel), walls, associated structures, site clearance and groundworks*
- b) Alterations and extensions to existing buildings and erection of buildings varying in height from 3 to 9 storeys plus a basement of one to two storeys below ground*
- c) Residential apartments*
- d) Flexible use floorspace for:*
  - i. Retail, financial and professional services, café/restaurant and drinking establishment uses*
  - ii. Offices*
  - iii. Non-residential institutions and community use*
  - iv. Boathouse*

- e) *Hotel / public house with accommodation*
- f) *Cinema*
- g) *Offices*
- h) *New pedestrian, vehicle and cycle accesses and internal routes, and associated highway works*
- i) *Provision of on-site cycle, vehicle and servicing parking at surface and basement level*
- j) *Provision of public open space, amenity and play space and landscaping*
- k) *Flood defence and towpath works*
- l) *Installation of plant and energy equipment*

*Planning permission is also sought in outline with all matters reserved for works to the west of Ship Lane which comprise:*

- a) *The erection of a single storey basement and buildings varying in height from 3 to 8 storeys*
- b) *Residential development*
- c) *Provision of on-site cycle, vehicle and servicing parking*
- d) *Provision of public open space, amenity and play space and landscaping*
- e) *New pedestrian, vehicle and cycle accesses and internal routes, and associated highways works”*

Application B:

*“Detailed planning permission for the erection of a three-storey building to provide a new secondary school with sixth form; sports pitch with floodlighting, external MUGA and play space; and associated external works including landscaping, car and cycle parking, new access routes and other associated works”*

Together, Applications A and B described above along with the Section 278 highways works comprise the ‘Development’.

## **Constraints**

### **Construction**

#### *Dust Emissions*

Potential Air Quality effects likely to arise because of the Development during the construction phase include:

- Temporary increases in dust deposition at sensitive receptors;
- Temporary increases in air pollutant concentrations near the local road network due to emissions from construction traffic; and
- Temporary increases in air pollutant concentrations near the Development due to emissions from non-road mobile machinery and plant.

During the construction phase, general construction activities and processes may cause dust and particulate matter to be emitted to the atmosphere, which could have an adverse impact on local air quality at nearby sensitive receptors unless suitable mitigation measures are applied. Through

the implementation of mitigation measures during the construction phase, it is unlikely that the effect of dust and particulate matter generation and deposition will be significant.

#### *Construction Vehicle Exhaust Emissions*

Construction traffic associated with the proposals will contribute to existing traffic levels on the surrounding road network. The greatest potential for effects on air quality from traffic associated with this phase of the proposals will be in the areas immediately adjacent to the construction works and the route construction vehicles take to access the site. The atmospheric emissions from construction vehicles will primarily be NO<sub>2</sub> and PM<sub>10</sub>.

Exhaust emissions from construction vehicles could have an impact on local air quality both on-site and adjacent to the routes used by these vehicles to access the construction sites. However, this is not considered to pose a constraint to Development given the fact that any change will be temporary.

## Complete and Operational Development

#### *Impacts of Traffic Emissions on Local Air Quality*

LBRuT has declared an Air Quality Management Area (AQMA) for the entire Borough for annual mean NO<sub>2</sub> and annual mean and 24-hour mean PM<sub>10</sub>. The Development is located within the LBRuT AQMA.

The Greater London Authority has identified 187 Air Quality Focus Areas (AQFA) in London that exceed the EU annual mean limit value for NO<sub>2</sub> and have high levels of human exposure. The Site is located approximately 160m east of the Chalkers Corner / Clifford Avenue / A205 / Upper Richmond Rd / Millstone Green AQFA – see **Figure A1**.

Detailed dispersion modelling has been undertaken as part of the air quality assessment for the Development to determine the air quality impacts on the surrounding sensitive locations.

Potential Air Quality effects likely to arise once the Development is operational include increased NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations along local roads due to additional traffic movements and heating plant emissions generated by the Development.

#### *Exposure of Future Residents to Poor Air Quality*

The Development is located within the LBRuT AQMA. The Development would introduce new human exposure into an area of potentially poor existing air quality.

## Opportunities

There are opportunities to go beyond best practice with the use of mitigation measures at the Site.

## Complete and Operational Development

There are opportunities to ensure the design is both Air Quality Neutral and Air Quality Positive by introducing measures such as:

- Sustainable Transport Plans: – a sustainable travel plan which will ensure that traffic generation is minimized, and the Development will provide excellent routes and connectivity for cycling and walking;
- Increasing site permeability;

- Provision of charging points for electric vehicles;
- Promotion of ultra-low and zero local emission local energy generation;
- Promotion of awareness of local air quality and actions that can be taken to reduce emissions;
- Green Infrastructure; and
- Sustainable Energy.

### **Measures Adopted**

Details of adopted measures, including the rationale for adoption / non-adoption of measures and technical evaluations and assessments that have informed the measures adopted are provided within the matrix below in **Table A1**.

Table A1: Air Quality Positive Matrix

Measure	Summary of the measure	Reason for undertaking measure	Expected benefits	Assessment and reporting			How this measure will be secured
				Methods	Quantitative	Qualitative	
<b>Better design and reducing exposure</b>							
Best practice construction - dust	Best practice controls will be in place to mitigate demolition and construction dust.	Reducing exposure to existing and future residents to construction phase dust.	Negligible effects from construction dust.	Dust assessment in the air quality assessment.	N	Y	Agreed through the CEMP
Best practice construction – emissions	The Site construction logistics will be designed to reduce exposure for existing residents nearby and to reduce exposure for the workforce. NRMM will meet and where possible exceed the GLA requirements. Euro IV HGVs will be used.	Reducing emissions from the construction phase.	Reduced emissions from the construction phase.	Reported via commitment from contractors.	N	Y	Agreed through the CEMP
Building Design	The Development has been designed with commercial elements generally on the ground floor to keep future residents away from the main sources of road pollution.	Reducing NO <sub>2</sub> , PM <sub>10</sub> and PM <sub>2.5</sub> exposure to residents.	Reduced exposure from poor air quality.	Air quality assessment, detailed dispersion modelling.	Y	N	Secured through approved plans.
Non-toxic building materials	Non-toxic building materials to be used during construction and refit.	The use of 'healthy' material options can contribute towards	Protect health of residents.	BREEAM assessment.	Y	N	Secured through approved

Measure	Summary of the measure	Reason for undertaking measure	Expected benefits	Assessment and reporting			How this measure will be secured
				Methods	Quantitative	Qualitative	
	To protect internal air quality, developers should specify environmentally sensitive (non-toxic) building materials and the use of materials or products that produce VOC (volatile organic compounds) and formaldehyde which can affect human health should be avoided.	attaining the BREEAM/Code for Sustainable Homes credits, but a clear audit trail will need to be provided to gain these credits.					plans and condition.
Landscape Strategy	<p>Green infrastructure incorporated into design of the Development.</p> <p>Integration of a mix of trees, mass planting and lawn areas would be incorporated into the design.</p> <p>Green or brown roofs to be incorporated as part of the Development.</p> <p>Provision of public park and Green Link between Mortlake Green via the Site to the riverside.</p> <p>Pedestrianised High Street within the Site.</p>	In line with the Sustainable Design and Construction SPG.	<p>Green infrastructure provides a comparatively large surface area for pollutant dispersion, with the rough surface of different heights increasing mixing and pollution dispersal.</p> <p>Hedges will form a barrier to street-level air pollution.</p> <p>Urban greening has been identified as a measure to help adapt London to future climates.</p> <p>Green infrastructure can have numerous benefits including: urban cooling, through shading and evapotranspiration; reduced runoff, through the absorption of rainfall; reduced energy demand, through insulation of the property; improved air quality; improved biodiversity; enhanced amenity and visual interest, including in neighbourhoods and high</p>	Landscape assessment.	N	Y	Secured through approved plans.

Measure	Summary of the measure	Reason for undertaking measure	Expected benefits	Assessment and reporting			How this measure will be secured
				Methods	Quantitative	Qualitative	
			streets and helping to create a sense of place; better quality of life for residents and workers; and for health and well-being, including tackling obesity and mental health by offering pleasant opportunities for exercise.				
<b>Building Emissions</b>							
Energy Strategy	The heat demand for the scheme will be met using communal air source heat pumps.	The Energy Strategy sets out the rationale for the measure and quantifies the impact on NO <sub>x</sub> emissions compared with other options such as CHP.	The selected option will meet the carbon emission targets but will also deliver a 95% reduction in on-site NO <sub>x</sub> emissions as compared to connection to a standalone energy centre with CHP/boilers.	Energy Strategy	N	Y	Secured through approved plans and by condition.
<b>Transport emissions</b>							
Low-emission construction plant and construction vehicles	Use of low-emission construction plant and construction vehicles during the construction phase.	In line with the Dust and Emissions, and Sustainable Design and Construction SPGs.	Reduced contribution of emissions to background pollution and pollution hotspots.	Transport Assessment	N	Y	Secured through approved plans. Subject to S106 agreement.
				Air Quality Assessment	N	Y	
EV charging points	Electric vehicle charging points will meet or exceed London Plan standards	To reduce transport related NO <sub>2</sub> , PM <sub>10</sub> and PM <sub>2.5</sub> emissions once the Development is operational.	Reduced contribution of emissions to background pollution and pollution hotspots.	Transport Assessment/ Travel Plan	N	Y	Secured through part condition / part section 106 agreement.

Measure	Summary of the measure	Reason for undertaking measure	Expected benefits	Assessment and reporting			How this measure will be secured
				Methods	Quantitative	Qualitative	
Cycle Parking	Cycle parking will meet or exceed London Plan standards.	To encourage active travel and reduce transport-related emissions	Reduced contribution of emissions to background pollution and pollution hotspots.	Transport Assessment/ Travel Plan	N	Y	Secured through part condition / part section 106 agreement.
Low Car Scheme	Limited car parking spaces.	To reduce transport related NO <sub>2</sub> , PM <sub>10</sub> and PM <sub>2.5</sub> emissions once the Development is operational.	Reduced emissions of NO <sub>2</sub> , PM <sub>10</sub> and PM <sub>2.5</sub> in the local area.	Transport Assessment / Travel Plan	N	Y	Secured through part condition / part section 106 agreement.
Sustainable Travel Plans	Travel Plans prepared for the Development's residential and non-residential land uses.	To reduce transport related NO <sub>2</sub> , PM <sub>10</sub> and PM <sub>2.5</sub> emissions once the Development is operational.	Reduced contribution of emissions to background pollution and pollution hotspots.	Transport Assessment/ Travel Plan	N	Y	Secured through part condition / part section 106 agreement.
<b>Innovation and Futureproofing</b>							
Future Resilience	Ensure that the buildings and spaces built today are suitable for occupation and use for their anticipated lifetime.	In line with the Sustainable Design and Construction SPG.	Developments last their anticipated lifetime.	Design and Access Statement	N	Y	Secured through approved plans.



## Implementation and Monitoring

The Air Quality Positive Measures detailed within the above matrix will be secured as part of the planning applications and implemented via part condition and part Section 106 agreements.

In order to secure and implement these measures consultation with the following will be required:

- the Local Planning Authority (LPA);
- Greater London Authority (GLA);
- Transport for London (TfL); and
- Other key stakeholders.

Table A2: Implementation Plan

Air Quality Positive Measures	How will the measure be secured?	Method of reporting	Monitoring
<b>Better design and reducing exposure</b>			
Best practice construction -dust	Through Planning	CEMP and dust management plans.	On-site updates and information on local air quality monitoring where necessary to be provided to the local authority.
Best practice construction – emissions	Through Planning	CEMP	On-site updates and information on local air quality monitoring where necessary to be provided to the local authority.
Building Design	Through Planning	Detailed design plans	None required
Non-toxic building materials	Through Planning	BREEAM	
Landscape Strategy	Through Planning	Detailed design plans	None required
<b>Building Emissions</b>			
Energy Strategy	Detailed design plans	None required	Energy Strategy
<b>Transport emissions</b>			
Low-emission construction plant and construction vehicles	Planning Condition	CEMP	None required
EV charging points	Planning Condition	Transport Assessment / Travel Plan	None required
Cycle Parking	Planning Condition	Transport Assessment / Travel Plan	None required
Low Car Scheme	Planning Condition	Transport Assessment / Travel Plan	None required
Sustainable Travel Plans	Planning Condition	Travel Plan	None required
<b>Innovation and Futureproofing</b>			
Future Resilience	Through Planning	DAS	None required