

Air Quality Assessment
Spring Place, Kentish Town

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Prepared by	Alicia Dale	Alicia Dale	Alicia Dale	Alicia Dale
Position	Air Quality Consultant	Air Quality Consultant	Air Quality Consultant	Air Quality Consultant
Reviewed by	Emily Pears-Ryding	Liam Shelmerdine	Liam Shelmerdine	Liam Shelmerdine
Position	Principal Air Quality Consultant	Graduate Air Quality Consultant	Graduate Air Quality Consultant	Graduate Air Quality Consultant
Reviewed by	Jethro Redmore	Jethro Redmore	Jethro Redmore	Jethro Redmore
Position	Director	Director	Director	Director
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Taylor Road, Urmston, Manchester, M41 7JQ

info@red-env.co.uk | 0161 706 0075 | www.red-env.co.uk

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Executive Summary

Redmore Environmental Ltd was commissioned by SEGRO to undertake an Air Quality Assessment in support of a planning application for an industrial development at Spring Place, Kentish Town.

The proposed development has the potential to cause air quality impacts during the operational phase. As such, an Air Quality Assessment was undertaken in order to determine baseline conditions at the site and assess potential air quality effects as a result of the scheme.

During the operational phase of the development there is the potential for air quality impacts as a result of traffic exhaust emissions associated with vehicles travelling to and from the site. These were assessed against the relevant screening criteria. Due to the limited number of trips anticipated to be produced by the proposals, road traffic exhaust impacts were not predicted to be significant.

Based on the assessment results, there is no technical justification on the grounds of Air Quality to refuse planning permission.

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1.0 INTRODUCTION

1.1 Background

1.1.1 Redmore Environmental Ltd was commissioned by SEGRO to undertake an Air Quality Assessment in support of an industrial development at Spring Place, Kentish Town.

1.1.2 The proposals have the potential to cause air quality impacts at sensitive locations. As such, an Air Quality Assessment was undertaken in order to determine baseline conditions and consider potential effects as a result of the scheme.

1.2 Site Location and Context

1.2.1 The site is located at 3-6 Spring Place, Kentish Town, at approximate National Grid Reference (NGR): 528568, 185000. Reference should be made to Figure 1 for a map of the site and surrounding area.

1.2.2 The proposals comprise the change of use from Class B2 general Industrial use to flexible Class E commercial, business and service, B2 general industrial and B8 storage and distribution. No external alterations are proposed.

1.2.3 The development has the potential to cause impacts associated with road traffic exhaust emissions from vehicles travelling to and from the site during the operational phase. An Air Quality Assessment was therefore undertaken in order to determine baseline conditions and consider potential air quality effects as a result of the proposals. This is detailed in the following report.

2.0 LEGISLATION AND POLICY

2.1 UK Legislation

2.1.1 The Air Quality Standards Regulations (2010) came into force on 11th June 2010 and include Air Quality Limit Values (AQLVs) for the following pollutants:

- Nitrogen dioxide (NO₂);
- Sulphur dioxide;
- Lead;
- Particulate matter with an aerodynamic diameter of less than 10µm (PM₁₀);
- Particulate matter with an aerodynamic diameter of less than 2.5µm;
- Benzene; and,
- Carbon monoxide

2.1.2 Target Values were also provided for several additional pollutants.

2.1.3 Part IV of the Environment Act (1995) requires UK government to produce a national Air Quality Strategy (AQS) which contains standards, objectives and measures for improving ambient air quality. The most recent AQS was produced by the Department for Environment, Food and Rural Affairs (DEFRA) and published in July 2007¹. The AQS sets out Air Quality Objectives (AQOs) that are maximum ambient pollutant concentrations that are not to be exceeded either without exception or with a permitted number of exceedences over a specified timescale. These are generally in line with the AQLVs, although the requirements for the determination of compliance vary.

2.1.4 Table 1 presents the AQOs for pollutants considered within this assessment.

Table 1 Air Quality Objectives

Pollutant	Air Quality Objective	
	Concentration (µg/m ³)	Averaging Period
NO ₂	40	Annual mean

¹ The AQS for England, Scotland, Wales and Northern Ireland, DEFRA, 2007.

Pollutant	Air Quality Objective	
	Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period
	200	1-hour mean, not to be exceeded on more than 18 occasions per annum
PM ₁₀	40	Annual mean
	50	24-hour mean, not to be exceeded on more than 35 occasions per annum

2.1.5 Table 2 summarises the advice provided in the Greater London Authority (GLA) guidance² on where the AQOs for pollutants considered within this report apply.

Table 2 Examples of Where the Air Quality Objectives Apply

Averaging Period	Objective Should Apply At	Objective Should Not Apply At
Annual mean	All locations where members of the public might be regularly exposed Building façades of residential properties, schools, hospitals, care homes etc.	Building façades of offices or other places of work where members of the public do not have regular access Hotels, unless people live there as their permanent residence Gardens of residential properties Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term
24-hour mean	All locations where the annual mean objective would apply, together with hotels Gardens of residential properties	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term
1-hour mean	All locations where the annual mean and 24 and 8-hour mean objectives apply. Kerbside sites (for example, pavements of busy shopping streets) Those parts of car parks, bus stations and railway stations etc which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more Any outdoor locations where members of the public might reasonably be expected to spend one hour or longer	Kerbside sites where the public would not be expected to have regular access

² London Local Air Quality Management (TG16), Technical Guidance 2016 (LLAQM.TG (2016)), GLA, 2016.

2.2 Local Air Quality Management

2.2.1 Under Section 82 of the Environment Act (1995) (Part IV) Local Authorities (LAs) are required to periodically review and assess air quality within their area of jurisdiction under the system of Local Air Quality Management (LAQM). This review and assessment of air quality involves comparing present and likely future pollutant concentrations against the AQOs. If it is predicted that levels at locations of relevant exposure, as summarised in Table 2, are likely to be exceeded, the LA is required to declare an Air Quality Management Area (AQMA). For each AQMA the LA is required to produce an Air Quality Action Plan (AQAP), the objective of which is to reduce pollutant concentrations in pursuit of the AQOs.

2.3 National Planning Policy

2.3.1 The revised National Planning Policy Framework³ (NPPF) was published in February 2019 and sets out the Government's planning policies for England and how these are expected to be applied.

2.3.2 The purpose of the planning system is to contribute to the achievement of sustainable development. In order to ensure this, the NPPF recognises three overarching objectives including the following of relevance to air quality:

"c) An environmental objective - to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

2.3.3 Chapter 15 of the NPPF details objectives in relation to conserving and enhancing the natural environment. It states that:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

³ NPPF, Ministry of House, Communities and Local Government, 2019.

[...]

e) Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality [...]"

2.3.4 The NPPF specifically recognises air quality as part of delivering sustainable development and states that:

"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan."

2.3.5 The implications of the NPPF have been considered throughout this assessment.

2.4 National Planning Practice Guidance

2.4.1 The National Planning Practice Guidance⁴ (NPPG) web-based resource was launched by the Department for Communities and Local Government on 6th March 2014 and updated on 1st November 2019 to support the NPPF and make it more accessible. The air quality pages are summarised under the following headings:

1. What air quality considerations does planning need to address?
2. What is the role of plan-making with regard to air quality?

⁴ <https://www.gov.uk/guidance/air-quality--3>.

3. Are air quality concerns relevant to neighbourhood planning?
4. What information is available about air quality?
5. When could air quality considerations be relevant to the development management process?
6. What specific issues may need to be considered when assessing air quality impacts?
7. How detailed does an air quality assessment need to be?
8. How can an impact on air quality be mitigated?

2.4.1 These were reviewed and the relevant guidance considered as necessary throughout the undertaking of this assessment.

2.5 Local Planning Policy

The London Plan

2.5.1 The London Plan March 2016⁵ was published by the GLA and along with the adopted alterations, sets out a fully integrated economic, environmental, transport and social framework for the development of the capital to 2031. London boroughs' local plans need to be in general conformity with the London Plan, and its policies guide decisions on planning applications by councils and the Mayor.

2.5.2 The London Plan policies relating to air quality are outlined below:

"Policy 5.3 - Sustainable design and construction

Strategic

- A. The highest standards of sustainable design and construction should be achieved in London to improve the environmental performance of new developments and to adapt to the effects of climate change over their lifetime.

⁵ The London Plan March 2016, GLA, 2016.

Planning decisions

B. Development proposals should demonstrate that sustainable design standards are integral to the proposal, including its construction and operation, and ensure that they are considered at the beginning of the design process.

C. Major development proposals should meet the minimum standards outlined in the Mayor's supplementary planning guidance and this should be clearly demonstrated within a design and access statement. The standards include measures to achieve other policies in this Plan and the following sustainable design principles:

[...]

d) minimising pollution (including noise, air and urban run-off)

[...]"

"Policy 7.14 - Improving air quality

Strategic

A. The Mayor recognises the importance of tackling air pollution and improving air quality to London's development and the health and well-being of its people. He will work with strategic partners to ensure that the spatial, climate change, transport and design policies of this plan support implementation of his Air Quality and Transport strategies to achieve reductions in pollutant emissions and minimise public exposure to pollution.

Planning decisions

B. Development proposals should:

a) minimise increased exposure to existing poor air quality and make provision to address local problems of air quality (particularly within AQMAs) and where development is likely to be used by large numbers of those particularly vulnerable to poor air quality, such as children or older people) such as by design solutions,

buffer zones or steps to promote greater use of sustainable transport modes through travel plans (see Policy 6.3)

b) promote sustainable design and construction to reduce emissions from the demolition and construction of buildings following the best practice guidance in the GLA and London Councils' 'The control of dust and emissions from construction and demolition'

c) be at least 'air quality neutral' and not lead to further deterioration of existing poor air quality (such as areas designated as AQMAs).

d) ensure that where provision needs to be made to reduce emissions from a development, this is usually made on-site. Where it can be demonstrated that on-site provision is impractical or inappropriate, and that it is possible to put in place measures having clearly demonstrated equivalent air quality benefits, planning obligations or planning conditions should be used as appropriate to ensure this, whether on a scheme by scheme basis or through joint area-based approaches

e) where the development requires a detailed air quality assessment and biomass boilers are included, the assessment should forecast pollutant concentrations.

Permission should only be granted if no adverse air quality impacts from the biomass boiler are identified [...]"

2.5.3 Although the current 2016 London Plan⁶ is still the adopted Development Plan, the Intend to Publish London Plan 2019⁷ is also a material consideration in planning decisions. Review of this document indicated the following of relevance to this report:

"Policy SI 1 - Improving Air Quality

A. Development plans, through relevant strategic, site specific and area-based policies should seek opportunities to identify and deliver further improvements to air quality and should not reduce air quality benefits that result from the Mayor's or boroughs' activities to improve air quality.

B. To tackle poor air quality, protect health and meet legal obligations the following criteria should be addressed.

1. Development proposals should not:

⁶ The London Plan March 2016, GLA, 2016.

⁷ The London Plan - Intend to Publish, GLA, 2019.

- a) lead to further deterioration of existing poor air quality
- b) create any new areas that exceed air quality limits, or delay the date at which compliance will be achieved in areas that are currently in exceedence of legal limits
- c) create unacceptable risk of high levels of exposure to poor air quality.

2. In order to meet the requirements of Part 1, as a minimum:

- a) development proposals must be at least Air Quality Neutral
- b) development proposals should use design solutions to prevent or minimise increased exposure to existing air pollution and make provision to address local problems of air quality in preference to post-design or retro-fitted mitigation measures.
- c) major development proposals must be submitted with an Air Quality Assessment. Air quality assessments should show how the development will meet the requirements of B1
- d) development proposals in Air Quality Focus Areas or that are likely to be used by large numbers of people particularly vulnerable to poor air quality, such as children or older people, should demonstrate that design measures have been used to minimise exposure.

C. Masterplans and development briefs for large-scale development proposals subject to an Environmental Impact Assessment should consider how local air quality can be improved across the area of the proposal as part of an air quality positive approach. To achieve this a statement should be submitted demonstrating:

- a) How proposals have considered ways to maximise benefits to local air quality, and
- b) What measures or design features will be put in place to reduce exposure to pollution, and how they will achieve this.

D. In order to reduce the impact on air quality during the construction and demolition phase development proposals must demonstrate how they plan to comply with the Non-Road Mobile Machinery Low Emission Zone and reduce emissions from the demolition and construction of buildings following best practice guidance.

E. Development proposals should ensure that where emissions need to be reduced to meet the requirements of Air Quality Neutral or to make the impact of development on local air quality acceptable, this is done on-site. Where it can be demonstrated that emissions cannot be further reduced by on-site measures, off-site measures to improve local air quality may be acceptable, provided that equivalent air quality benefits can be demonstrated within the area affected by the development."

2.5.4 The requirements of these policies have been considered throughout the Air Quality Assessment.

Local Plan

2.5.5 London Borough of Camden (LBoC) adopted the Local Plan⁸ on 3rd July 2017. This provides the basis for planning decisions and development in the borough, covering the period from 2016 to 2031. A review of the Local Plan indicated the following policy of relevance to this report:

"Policy CC4 Air Quality

The Council will ensure that the impact of development on air quality is mitigated and ensure that exposure to poor air quality is reduced in the borough.

The Council will take into account the impact of air quality when assessing development proposals, through the consideration of both the exposure of occupants to air pollution and the effect of the development on air quality. Consideration must be taken to the actions identified in the Council's Air Quality Action Plan.

Air Quality Assessments (AQAs) are required where development is likely to expose residents to high levels of air pollution. Where the AQA shows that a development would cause harm to air quality, the Council will not grant planning permission unless measures are adopted to mitigate the impact. Similarly, developments that

⁸ Local Plan, LBoC, 2017.

introduce sensitive receptors (i.e. housing, schools) in locations of poor air quality will not be acceptable unless designed to mitigate the impact [...]"

2.5.6 The implications of the above policy were taken into consideration throughout the undertaking of the assessment.

3.0 METHODOLOGY

3.1.1 The development has the potential to impact on existing air quality as a result of road traffic exhaust emissions associated with vehicles travelling to and from the site during the operational phase. A screening assessment was therefore undertaken using the criteria contained within the Institute of Air Quality Management (IAQM) 'Land-Use Planning & Development Control: Planning for Air Quality'⁹ guidance to determine the potential for trips generated by the development to affect local air quality.

3.1.2 The following criteria are provided to help establish when an assessment of potential impacts on the local area is likely to be considered necessary:

- A change of Light Duty Vehicle (LDV) flows of more than 100 Annual Average Daily Traffic (AADT) within or adjacent to an AQMA or more than 500 AADT elsewhere;
- A change of HDV flows of more than 25 AADT within or adjacent to an AQMA or more than 100 AADT elsewhere;
- Realignment of roads where the change is 5m or more and the road is within an AQMA; or,
- Introduction of a new junction or removal of an existing junction near to relevant receptors.

3.1.3 Should these criteria not be met, then the IAQM guidance¹⁰ considers air quality impacts associated with a scheme to be **negligible** and no further assessment is required.

3.1.4 Should screening of the relevant data indicate that any of the above criteria are met, then potential impacts at sensitive receptor locations can be assessed by calculating the change in pollutant concentrations as a result of the proposed development. The significance of predicted impacts can then be determined in accordance with the methodology outlined in the IAQM guidance¹¹.

⁹ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

¹⁰ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

¹¹ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

4.0 **BASELINE**

4.1 **Introduction**

4.1.1 Existing air quality conditions in the vicinity of the proposed site were identified in order to provide a baseline for assessment. These are detailed in the following Sections.

4.2 **Local Air Quality Management**

4.2.1 As required by the Environment Act (1995), LBoC has undertaken Review and Assessment of air quality within their area of jurisdiction. This process has indicated that annual mean concentrations of NO₂ and 24-hour mean concentrations of PM₁₀ are above the AQOs within the borough. As such, one AQMA has been declared. This is described as follows:

"The whole borough."

4.2.2 The development is located within the AQMA. As such, there is the potential for vehicles travelling to and from the site to increase pollution levels in this sensitive area. This has been considered throughout the assessment.

4.2.3 LBoC has concluded that concentrations of all other pollutants considered within the AQS are currently below the relevant AQOs. As such, no further AQMAs have been designated.

4.3 **Air Quality Monitoring**

4.3.1 Monitoring of pollutant concentrations is undertaken by LBoC throughout their area of jurisdiction. Recent NO₂ results from sites in the vicinity of the development are shown in Table 3. Exceedences of the AQO are shown in **bold**.

Table 3 Monitoring Results - NO₂

Monitoring Site		Monitored NO ₂ Concentration (µg/m ³)		
		2017	2018	2019
CA16	Kentish Town Road	74.9	54.7	45.0

4.3.2 As shown in Table 3, the annual mean AQO for NO₂ was exceeded at the CA16 monitor in recent years. As the site is positioned at a roadside location within an AQMA, elevated concentrations would be expected.

4.3.3 LBoC do not undertake monitoring of PM₁₀ concentrations within the vicinity of the site.

4.3.4 Reference should be made to Figure 2 for a map of the survey position.

4.4 Background Pollutant Concentrations

4.4.1 Predictions of background pollutant concentrations on a 1km by 1km grid basis have been produced by DEFRA for the entire of the UK to assist LAs in their Review and Assessment of air quality. The proposed development site is located in grid square NGR: 528500, 185500. Data for this location was downloaded from the DEFRA website¹² for the purpose of this assessment and is summarised in Table 4.

Table 4 Background Pollutant Concentrations

Pollutant	Predicted Background Pollutant Concentration (µg/m ³)		
	2019	2020	2022
NO ₂	27.17	25.63	24.31
PM ₁₀	18.07	17.56	17.14

4.4.2 As shown in Table 4, predicted background NO₂ and PM₁₀ concentrations are below the AQOs at the development site.

¹² <https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018>.

5.0 ASSESSMENT

- 5.1.1 Any vehicle movements associated with the development will generate exhaust emissions on the local and regional road networks. Predicted trip generation from the proposals was provided by Vectos, the Transport Consultants for the project, for two development scenarios. This assumed operation of either Class E/B2 or Class B8/Last Mile Depot uses. The scenario that is anticipated to produce the highest number of total trips was therefore utilised in order to provide a worst case assessment.
- 5.1.2 A review of the trip generation data indicated that the Class B8/Last Mile Depot development scenario is predicted to produce the highest number of total trips. These include 92 two-way daily vehicle trips, split between 14 two-way car movements, 68 two-way LGV movements and 10 two-way HGV movements.
- 5.1.3 Based on the above information, the worst case development scenario is not anticipated to result in a change of LDV flows of more than 100 AADT or HDV flows by more than 25 AADT on any individual road link. Additionally, the proposals do not include significant highway realignment or the introduction of a junction. As such, potential air quality impacts associated with operational phase road vehicle exhaust emissions are predicted to be **negligible**, in accordance with the IAQM¹³ screening criteria shown in Section 3.0.

¹³ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

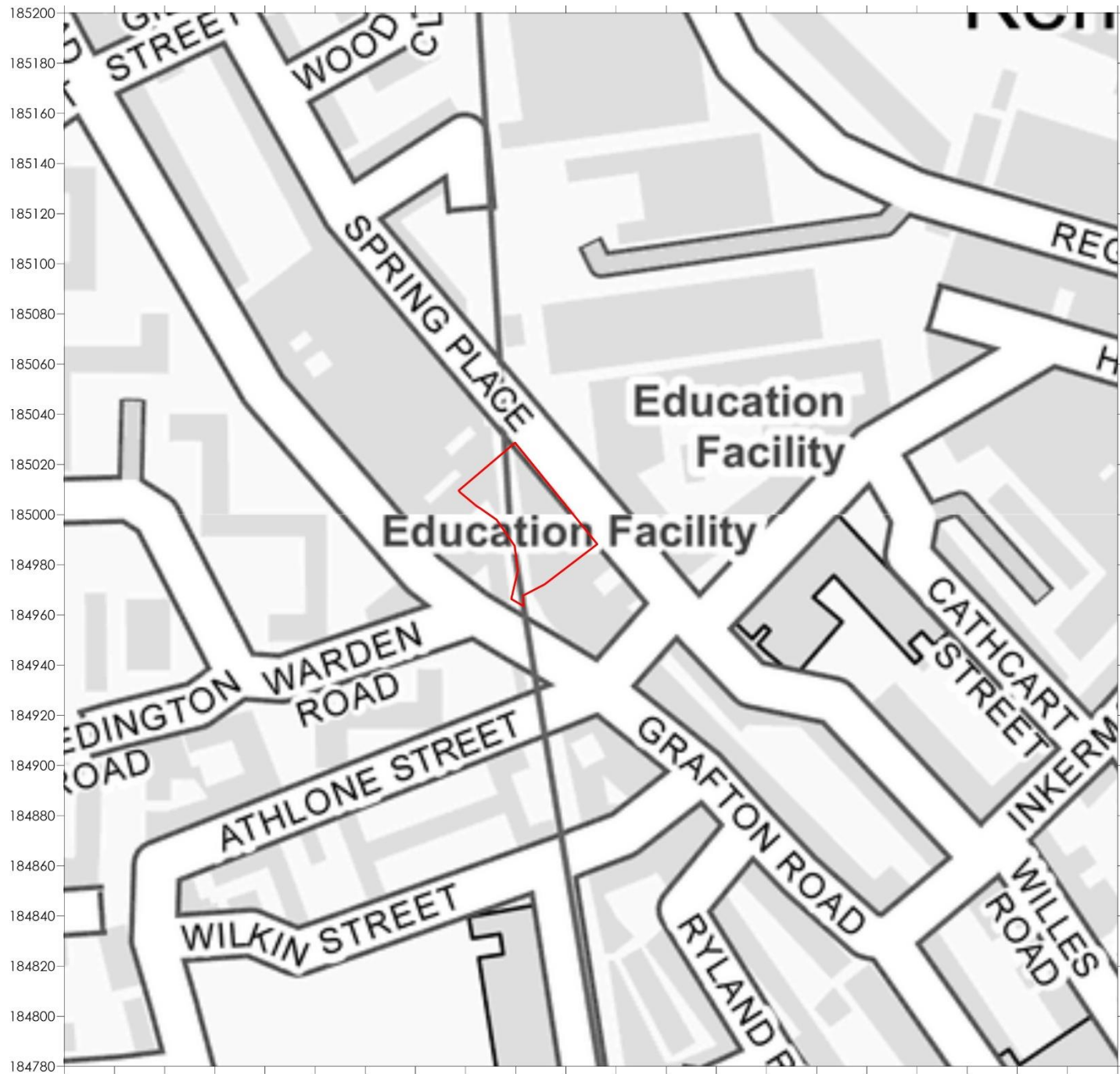
6.0 CONCLUSION

- 6.1.1 Redmore Environmental Ltd was commissioned by SEGRO to undertake an Air Quality Assessment in support of a planning application for an industrial development at Spring Place, Kentish Town.
- 6.1.2 The proposals have the potential to cause air quality impacts at sensitive locations. As such, an Air Quality Assessment was undertaken in order to determine baseline conditions and consider potential effects as a result of the scheme.
- 6.1.3 During the operational phase of the development there is the potential for air quality impacts as a result of traffic exhaust emissions associated with vehicles travelling to and from the site. These were assessed against the screening criteria provided within the IAQM guidance. Due to the low number of trips anticipated to be produced by the proposals, road traffic exhaust impacts were predicted to be **negligible**.
- 6.1.4 Based on the assessment results, there is no technical justification on the grounds of Air Quality to refuse planning permission.

7.0 **ABBREVIATIONS**

AADT	Annual Average Daily Traffic
AQAP	Air Quality Action Plan
AQLV	Air Quality Limit Value
AQMA	Air Quality Management Area
AQO	Air Quality Objective
AQS	Air Quality Strategy
DEFRA	Department for Environment, Food and Rural Affairs
GLA	Greater London Authority
HDV	Heavy Duty Vehicle
IAQM	Institute of Air Quality Management
LA	Local Authority
LAQM	Local Air Quality Management
LBoC	London Borough of Camden
LDV	Light Duty Vehicle
NGR	National Grid Reference
NPPF	National Planning Policy Framework
NPPG	National Planning Practice Guidance
NO ₂	Nitrogen dioxide
NO _x	Oxides of nitrogen
PM ₁₀	Particulate matter with an aerodynamic diameter of less than 10µm

Figures



528380 528400 528420 528440 528460 528480 528500 528520 528540 528560 528580 528600 528620 528640 528660 528680 528700 528720 528740 528760 528780 528800

Legend



Title

Figure 1 - Site Location

Project

Air Quality Assessment
Spring Place, Kentish Town

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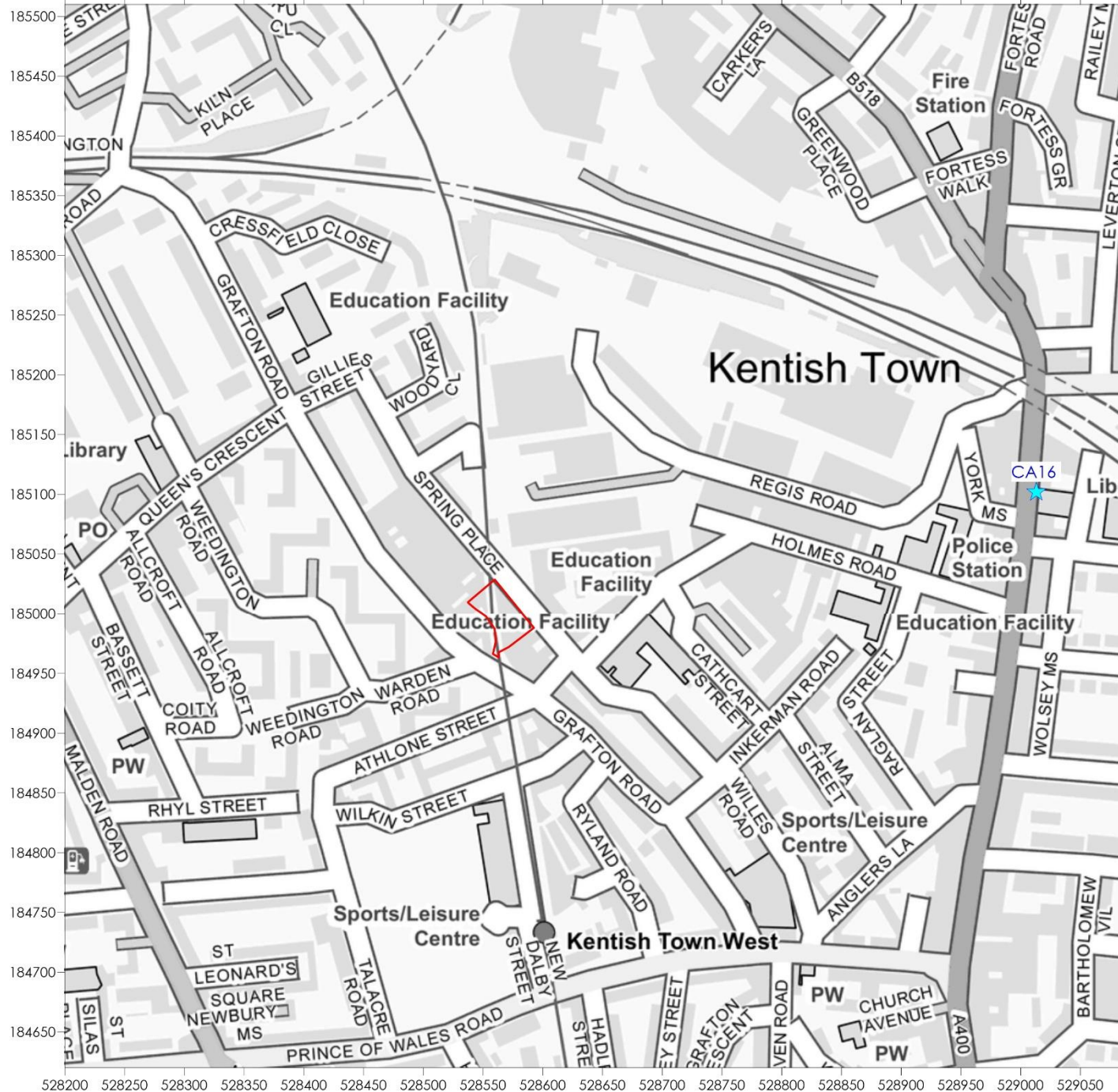
Client

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Legend

-  Site Boundary
-  Monitor

Title
Figure 2 - Monitor Positions

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