

# Planning Statement

## Air Quality Assessment

### 197 Kentish Town Road

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#### Document information

**Prepared for:**

Tara Fitzpatrick  
Maddox Planning  
Second Home Spitalfields  
68 Hanbury Street  
London E1 5JL

**Date of current issue:**

17/01/2020

**Issue number:** 3**Our reference:**

4314-197 Kentish Town Road-Air Quality  
Assessment-2001-17rm.docx

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#### Assessment information

**Prepared by:**

Ryan Menezies

**Quality assured by:**

Nathan Shelley

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# Executive Summary

## Air Quality Assessment

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#### Executive summary

Eight Associates has been commissioned to carry out an Air Quality Assessment (AQA) for the proposed 197 Kentish Town Road development within the London Borough of Camden. The project comprises the change of use of the existing building from professional services (Use class A2) to flexible retail/professional services (Use classes A1/A2) at ground and part first floor with part first and second to fourth floors comprising of five residential units.

The development site is located in an Air Quality Management Area (AQMA), which has been declared due to continued exceedances of National Air Quality Objectives (NAQOs) for NO<sub>2</sub> and PM<sub>10</sub>.

A number of diffusion tubes have been identified in the area surrounding the development site. The NAQO for mean annual NO<sub>2</sub> concentration has been achieved at one of the six closest diffusion tubes (CA24) for the latest reporting year (2018). The NAQO was not achieved at the closest automatic monitoring station, CD9, during 2015 to 2018. Mean annual PM<sub>10</sub> concentrations are monitored at the CD9 station and the respective NAQO has been achieved for all reporting years (2015 to 2018). It is noted that all nearby diffusion tubes and automatic monitoring stations are situated at roadside locations, close to roadside emission sources, so are likely to record higher concentrations than locations situated further away from roads.

The LAIE modelled concentrations indicate that the mean annual NO<sub>2</sub> concentrations at the site for 2016 were approximately 46 µg/m<sup>3</sup>, PM<sub>10</sub> concentrations were approximately 24 µg/m<sup>3</sup> and PM<sub>2.5</sub> concentrations were approximately 14 µg/m<sup>3</sup>. In 2016, the mean annual NAQOs for PM<sub>10</sub> and PM<sub>2.5</sub> were achieved but the NAQO for NO<sub>2</sub> was exceeded. The WHO guidelines for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> were also exceeded. Based on local trends in monitored pollutant concentrations, it is likely that concentrations of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> will have decreased at the site since 2016.

The DEFRA modelled background concentrations show that the background concentrations for the local area will likely decrease between 2017 and 2022. The mean NAQOs for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are achieved for background concentrations, along with the WHO guidelines for NO<sub>2</sub> and PM<sub>10</sub>, but the WHO guideline for PM<sub>2.5</sub> (mean annual concentration below 10 µg/m<sup>3</sup>) is likely to still be exceeded by 2022. It cannot be determined whether concentrations at the site will decrease at a comparable rate to the modelled background concentrations, but it is considered likely that concentrations will decrease from the existing concentrations at the site to the handover and occupancy date of the development.

The unmitigated risk to local sensitive receptors from emissions of dust and pollution from construction is deemed to be low. The risk will be mitigated further to negligible through the measures set out in the Air Quality & Dust Management Plan (AQDMP), which will be implemented through the principal contractor's Construction Environmental Management Plan.

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# Introduction

## Air Quality Assessment

### 197 Kentish Town Road

#### Project overview

Eight Associates has been commissioned to carry out an Air Quality Assessment (AQA) for the proposed 197 Kentish Town Road development.

The project comprises the change of use of the existing building from professional services (Use class A2) to flexible retail/professional services (Use classes A1/A2) at ground and part first floor with part first and second to fourth floors comprising of five residential units. The development is located in the London Borough of Camden and an Air Quality Assessment is required to accompany the planning submission to Camden Borough Council.

The aspiration for the scheme is to significantly improve the existing site and its immediate environment by providing an efficient and inclusive development, which meets the policy recommendations of the London Borough of Camden.

#### Scope of the assessment

An Air Quality Assessment (AQA) has been undertaken in accordance with relevant planning policy and best-practice guidance at a national, regional and local level. The AQA includes:

- Establishment and review of existing air quality;
- Establishment of nearby sensitive receptors to air pollution;
- Assessment of air quality and dust impacts during the construction phase;
- Assessment of air quality impacts expected during the operation of the new development;
- Assessment of the mitigation strategy to limit the exposure of building users and nearby receptors, to air pollution.

Key policy and guidance documents that are considered in the AQA are outlined in Table 1.

**Table 1:** national, regional and local policy and guidance.

National	Clean Air Strategy (Department for Environment, Food & Rural Affairs (DEFRA), 2019)
	National Planning Policy Framework (Ministry of Housing, Communities & Local Government, 2018)
	Land-Use Planning & Development Control: Planning for Air Quality (Environmental Protection UK (EPUK), Institute of Air Quality Management (IAQM), 2017)
	Air quality plan for nitrogen dioxide (NO <sub>2</sub> ) in UK (DEFRA, 2017)
	Guidance on the Assessment of Dust from Demolition and Construction (IAQM, 2014)
Regional	Local air quality management: Technical guidance LAQM.TG (09) (DEFRA, 2012)
	The London Plan (Greater London Authority (GLA), 2016)
	Sustainable Design and Construction: Supplementary Planning Guidance (GLA, 2014)
	The Control of Dust and Emissions during Construction and Demolition: Supplementary Planning Guidance (GLA, 2014)
Local	Cleaning the Air – The Mayor’s Air Quality Strategy (GLA, 2010)
	Air Quality and Planning Guidance (London Councils, 2007)
	Camden Local Plan 2017 (Camden Borough Council, 2017)
	Camden’s Clean Air Action Plan 2019–2022 (Camden Borough Council, 2019)

# Policy Review

## Air Quality Assessment

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#### International legislation and policy

EU Directive 2008/50/EC1 on Ambient Air Quality and Cleaner Air for Europe (the CAFE Directive) sets out the ambient air quality standards for a range of key pollutants, requiring specific objectives for ambient concentrations for pollutants (EU limit values) to be achieved and maintained (Table 2). EU Directive 2008/50/EC1 also contains a series of limit values for the protection of human health and critical levels for the protection of vegetation.

Compliance with the EU limit values is mandatory. However, Member States can apply for a time extension for compliance, subject to approval of an action plan by the European Commission. The UK Government applied in autumn 2011 for a time extension for compliance with the NO<sub>2</sub> limit values until 2015 for a number of areas throughout England. However, the UK Government has withdrawn its application for those zones where compliance is not expected until after 2015, which includes central London.

**Table 2:** EU limit values for key pollutants<sup>1</sup>.

Pollutants	Concentrations	Measured as	Date to be achieved by
Nitrogen dioxide (NO <sub>2</sub> )	200 µg/m <sup>3</sup> not to be exceeded more than 18 times per year	1 hour mean	31 December 2005
	40 µg/m <sup>3</sup>	Annual mean	31 December 2005
Coarse particulates (PM <sub>10</sub> )	50 µg/m <sup>3</sup> not to be exceeded more than 35 times per year	24 hours mean	31 December 2004
	40 µg/m <sup>3</sup>	Annual mean	31 December 2004
Fine particulates (PM <sub>2.5</sub> )	25 µg/m <sup>3</sup>	Annual mean	31 December 2010
Carbon monoxide (CO)	10 µg/m <sup>3</sup>	Max. daily 8-hour mean	31 December 2003
Sulphur dioxide (SO <sub>2</sub> )	266 µg/m <sup>3</sup> not to be exceeded more than 35 times per year	15 minute mean	31 December 2005
	350 µg/m <sup>3</sup> not to be exceeded more than 24 times per year	1 hour mean	31 December 2004
	125 µg/m <sup>3</sup> not to be exceeded more than 3 times per year	24 hour mean	31 December 2004
Ozone (O <sub>3</sub> )	100 µg/m <sup>3</sup> not to be exceeded more than 35 times per year	8 hour mean	31 December 2005

The World Health Organisation (WHO) provides guidelines on air quality. Guideline concentrations for NO<sub>2</sub> are equal to EU limit values, but for PM<sub>10</sub> and PM<sub>2.5</sub> are lower than the EU limit values (Table 3).

**Table 3:** WHO guidelines on annual mean concentrations for key pollutants<sup>2</sup>.

Pollutants	Concentrations	Measured as
Nitrogen dioxide (NO <sub>2</sub> )	40 µg/m <sup>3</sup>	Annual mean
Coarse particulates (PM <sub>10</sub> )	20 µg/m <sup>3</sup>	Annual mean
Fine particulates (PM <sub>2.5</sub> )	10 µg/m <sup>3</sup>	Annual mean

<sup>1</sup> The full UK and EU limit values can be viewed on DEFRA's UK AIR website; <https://uk-air.defra.gov.uk/air-pollution/uk-eu-limits>

<sup>2</sup> The full World Health Organisation (WHO) guidelines for particulate matter, ozone, nitrogen dioxide and sulphur dioxide can be viewed on the WHO website; <https://www.who.int/en/>

# Policy Review

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#### National legislation and policy

The Air Quality Standards Regulations 2010 implements the requirements of EU Directive 2008/50/EC1 into UK legislation. DEFRA, on behalf of the UK Government, has produced a series of plans for the UK to meet the EU targets in the shortest possible time, the latest being the UK plan for tackling roadside NO<sub>2</sub> concentrations in July 2017 (NO<sub>2</sub> being identified as the primary pollutant for which the EU limit values are exceeded). An overview document has been produced, together with detailed plans for 37 zones where the objectives for NO<sub>2</sub> were not met in 2015. The plan for the Greater London area sets out a range of measures to reduce NO<sub>2</sub> concentrations and indicates that with these measures, London will be compliant by 2025.

The National Planning Policy Framework (NPPF) published in January 2019 sets out the UK Government's planning policies for England. Planning law requires that applications for planning permission must be determined in accordance with the local development plan, unless material considerations indicate otherwise.

The NPPF is also a material consideration in planning decisions. It states that the purpose of the planning system is to contribute to the achievement of sustainable development; and that planning decisions on individual applications must reflect relevant EU obligations and statutory requirements. Specifically, in terms of air quality, it requires the planning system to prevent development from contributing to or being put at unacceptable risk from unacceptable levels of air pollution.

Planning policies should promote compliance with or contribute towards achievement of EU limit values and NAQOs, taking into account the presence of AQMAs and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that new development within an AQMA is consistent with the local Air Quality Action Plan (AQAP).

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#### National air quality management

Part IV of the Environment Act 1995, requires the UK Government to publish an Air Quality Strategy and for local authorities to review, assess and manage air quality within their areas. This is known as Local Air Quality Management (LAQM).

The 2007 Air Quality Strategy establishes the policy for ambient air quality in the UK. It includes the National Air Quality Objectives (NAQOs) for the protection of human health and vegetation for 11 pollutants. Those NAQOs included as part of LAQM are prescribed in the Air Quality Standards Regulations 2010 (superseding the Air Quality Standards Regulation 2007) and the Air Quality (Amendment) (England) Regulations 2002.

It should be noted that the EU limit values are numerically the same as the NAQO values but differ in terms of compliance dates, locations where they apply and legal responsibility. For instance, the compliance date for the EU NO<sub>2</sub> limit values is 1 January 2010, which is five years later than the date for the NAQO.

The EU limit values are mandatory whereas the NAQOs are policy objectives. Local authorities are not required to achieve them but have to work towards their achievement. In addition, the EU limit values apply in all locations except where members of the public do not have access and there is no fixed habitation, on factory premises or at industrial installations, and on the carriageway/central reservation of roads except where there is normally pedestrian access.

Where a local authority's review and assessment of its air quality identifies that it is likely to exceed the NAQOs, it must designate these areas as AQMAs and develop an Air Quality Action Plan (AQAP) setting out measures to reduce pollutant concentrations with the aim of meeting the NAQOs.

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#### London-wide policy and guidance

##### **The London Plan (Greater London Authority (GLA), 2015)**

Policy 7.14 in the London Plan 'Improving air quality' states that development proposals should:

- Minimise increased exposure to existing poor air quality and make provision to address local problems of air quality (particularly within Air Quality Management Areas (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;
- Be at least 'Air Quality Neutral' and not lead to further deterioration of existing poor air quality (such as areas designated as Air Quality Management Areas (AQMAs));
- 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; and
- Where the development requires a detailed air quality assessment and biomass boilers are included, the assessment should forecast pollutant concentrations. Permissions should only be granted if no adverse air quality impacts from the biomass boiler are identified."

##### **The New Draft London Plan (GLA, 2018)**

Policy SI1 in the new draft London Plan 'Improving air quality' states:

- London's air quality should be significantly improved and exposure to poor air quality, especially for vulnerable people, should be reduced. Development proposals should not:
  - 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
  - c) Compliance will be achieved in areas that are currently in exceedance of legal limits
  - d) Reduce air quality benefits that result from the Mayor's or boroughs' activities
  - e) To improve air quality
  - f) Create unacceptable risk of high levels of exposure to poor air quality.
- For major developments, a preliminary AQA should be carried out before designing the development to inform the design process. The aim of a preliminary assessment is to assess:
  - The most significant sources of pollution in the area.
  - Constraints imposed on the site by poor air quality.
  - Appropriate land uses for the site.
  - Appropriate design measures that could be implemented to ensure that development reduces exposure and improves air quality.
- 1) Further assessments should then be carried out as the design evolves to ensure that impacts from emissions are prevented or minimised as far as possible, and to fully quantify the expected effect of any proposed mitigation measures, including the cumulative effect where other nearby developments are also underway or likely to come forward.

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#### Camden Local Plan (2017)

Improving local air quality, mitigating the impact of development on air quality and reducing exposure to poor air quality in the borough is vital in safeguarding public health and the environment. The focus of Policy CC4 is to mitigate the impact of development on air quality and to ensure exposure to poor air quality is reduced in the borough.

It is recognised that parts of Camden have some of the poorest air quality levels in London and since 2000 the whole of the borough has been declared an Air Quality Management Area (AQMA) for both NO<sub>2</sub> (Nitrogen Dioxide) and PM<sub>10</sub> (Particulate Matter). Camden is also working to assess and address PM<sub>2.5</sub> (the smallest fraction of particulate) because despite Camden meeting EU limit values for PM<sub>2.5</sub>

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

Development that involves significant demolition, construction or earthworks will also be required to assess the risk of dust and emissions impacts in an AQA and include appropriate mitigation measures to be secured in a Construction Management Plan.

#### **Air Quality Assessments**

The Council will require Air Quality Assessments (AQA) where any of the following apply:

- major applications where occupants will be exposed to poor air quality (along a busy road, diesel railway lines or in a generally congested area);
- development that has potential to significantly change road traffic on a busy road;
- the development has more than 75 new residences;
- commercial developments with a floorspace of 2,500 sqm or more;
- developments that include biomass boilers or CHP (combined heat and power) and connections to existing decentralised energy networks (whereby the increased capacity is not already covered by an existing AQA); and
- substantial earthworks or demolition.

We will also require a basic AQA for all newly erected buildings/substantial refurbishments and changes of use where occupants will be exposed to poor air quality (due to its location next to a busy road, diesel railway line or in a generally congested area).

Air Quality Assessments must outline the predicted and forecast pollutant concentrations at the proposed development and the planned mitigations. The Air Quality Assessment should also consider wider cumulative impacts on air quality arising from a number of smaller developments.

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# Policy Review

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#### Camden's Clean Air Action Plan 2019–2022

The overarching aim of the Clean Air Action Plan is to:

- Continue to meet EU objectives for Carbon Monoxide, Benzene, 1,3-Butadiene, Lead and PM<sub>10</sub>
- Continue to reduce concentrations of PM<sub>10</sub> and PM<sub>2.5</sub>, and meet the EU objectives for NO<sub>2</sub>
- Drive forward compliance with WHO Guidelines by 2030

The key priorities with relevance to the scheme can be seen below.

#### **Reducing construction emissions**

- Enforcing NRMM via our planning regime
- Ensuring all major sites have a demolition management plan (DMP) and a construction management plan (CMP)
- Ensuring all medium and high-risk sites have real-time PM monitoring on site and that the information from this monitoring is easily accessible to the public
- Support the development of community led Neighbourhood Construction Site Watch groups to assist in monitoring construction sites in line with air quality CMP requirements
- Ensuring HS2 assurances with respect to air pollution and green space are complied with

#### **Reducing building emissions**

- Promoting and enforcing smoke control legislation
  - Promoting and delivering energy efficiency retrofitting projects in workplaces and homes
  - Enforcing Air Quality Neutral and Air Quality Positive policies for new developments
  - Ensuring adequate, appropriate and well-located green space and infrastructure is included in new and existing developments
  - Ensuring master planning and major regeneration areas such as the Kentish Town Goods Area are low emission zones with zero combustion from on-site plant
  - Continue to control emissions from permitted process via inspections and enforcement
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# Site Overview

## Air Quality Assessment

### 197 Kentish Town Road

#### Site overview

#### Site location

The 0.017-hectare site proposed for this development is situated at 197 Kentish Town Road. The OS grid reference for the site is X (Eastings) 528968, Y (Northings) 184542, and the closest post code is NW5 2JU. The site is approximately 0.43km from Kentish Town station and 0.36km from Kentish Town West Station.

Within the direct locality of the site there is a variety of different building styles, but predominantly 3 to 5 storey buildings comprising commercial uses at ground floor level with residential on the floors above. The site is not in a conservation area, nor is it nationally listed. The conservation areas nearby are toned orange on the plan opposite.



**Figure 1:** Plan showing the location of the overall development site (red outline).

# Site Overview

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**Site overview**  
(continued)

**Site description**

The 197 Kentish Town Road development site is approximately 0.017 hectares (170m<sup>2</sup>) in area. The site layout is defined by site restrictions, daylight impacts and visual impacts to neighbouring residents.

The new 2 storey extension will be proposed to match the existing mixed use building at no. 199 Kentish Town Road. The outdoor amenity lightwell space will be pushed back from the rear line of block no.195 to ensure the privacy and amenity of neighbouring residents is not impacted by the proposals.



**Figure 2:** Plan showing the layout of the development site (red outline).

# Site Overview

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#### Description of proposed development

The project comprises the change of use of the existing building from professional services (Use class A2) to flexible retail/professional services (Use classes A1/A2) at ground and part first floor with part first and second to fourth floors comprising of five residential units. The development is located in the London Borough of Camden and an Air Quality Assessment is required to accompany the planning submission to Camden Borough Council.

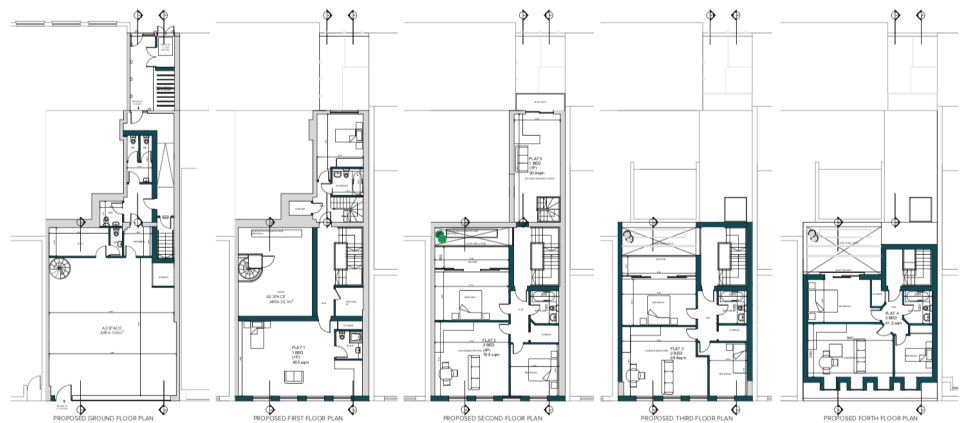


Figure 3: Plan showing the proposed development

# Local Receptors

## Air Quality Assessment

### 197 Kentish Town Road

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#### Overview of local sensitive receptors

A sensitive receptor is a location that may be affected by the emission of pollutants and/or particulate matter during construction or from the operation of a completed development, including from building plant and transport uses as a result of the new development.

In accordance with the Institute of Air Quality Management (IAQM) 'Guidance on the assessment of dust from demolition and construction', the need for a detailed assessment of the air quality impacts from construction should be determined where the following receptors are present:

- Where there is a human receptor within:
  - 50m of the boundary of the site; and/or,
  - 50m of the route used by construction vehicles on the public highway, up to 500m from the site entrance(s).
- Where there is an ecological receptor within:
  - 50m of the boundary of the site; and/or,
  - 50m of the route(s) used by construction vehicles on the public highway, up to 500m from the site entrance(s).

A Construction Management and Logistics Plan has been prepared for the planning application; however, a principal contractor has not yet been appointed and as such construction transport is not within the scope<sup>3</sup>. For the purposes of identifying human and ecological receptors that may be sensitive to potential air quality impacts of dust and emissions from construction, a 50m radius from the development site and from the first 500m of the proposed HGV route should be assessed, to screen the need for a detailed assessment, before conducting an assessment of receptors within a 500m radius of the development site.

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<sup>3</sup> See Construction Management and Logistics Plan by CLPM Construction Project Consultancy, dated October 2019

# Local Receptors

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#### Human receptors

A human receptor refers to any location where a person or property may experience the adverse effects of airborne dust or dust soiling, or exposure to PM<sub>10</sub> over a time period relevant to the air quality objectives, as defined in the Government's technical guidance for Local Air Quality Management. In terms of annoyance effects, this will most commonly relate to residential dwellings, but may also refer to other premises such as schools, hospitals, museums, vehicle showrooms, food manufacturers and amenity areas.

Key human receptors are identified below (all distances detailed are approximate):

#### Schools

No receptors have been identified within 50m of the development or trackout route. The following receptors have been identified within 500m of the development:

- School of Intuition & Healing – approximately 55m northeast.
- St Patrick's Catholic Primary School – approximately 260m northeast.
- Razzamataz Theatre Schools Hampstead – approximately 330m northwest.
- Kentish Town Church of England Primary School – approximately 360m northeast.
- Holy Trinity & St Silas C of E Primary School – approximately 410m southwest.
- Camden Centre for Learning – approximately 460m southwest.

#### Nurseries

No receptors have been identified within 50m of the development or trackout route. The following receptors have been identified within 500m of the development:

- The Kentish Town Day Nursery – approximately 280m west.
- Little Garden Kentish Town Day Nursery – approximately 280m west.
- Caversham Nursery – approximately 325m northeast.
- Woodentrots Montessori Nursery School – approximately 360m southeast
- Rooftops Nursery – approximately 400m northwest.

#### Hospitals

No receptors have been identified within 500m of the development or trackout route.

#### Doctors

No receptors have been identified within 50m of the development or trackout route. The following receptors have been identified within 500m of the development:

- Kentish Town Health Centre James Wigg Group – approximately 160m southeast.
  - Prince of Wales Group Practice – approximately 290m west.
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# Local Receptors

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#### Ecological receptors

Potential sensitive ecological receptors have been determined using geographic information obtained from the MAGIC website. No receptors have been identified within 500m of the development or trackout route.

The ecological receptors that have been identified in proximity to the development are sites without international or national designations and it is not known whether there are particularly dust sensitive species such (i.e. those included in the Red Data List), ecological features that are sensitive to dust soiling or deposition. The sites identified are not designated as Special Conservation Areas (SAC), non-statutory Sites of Nature Conservation Important (SINCs) or Sites of Special Scientific Interest (SSSI).

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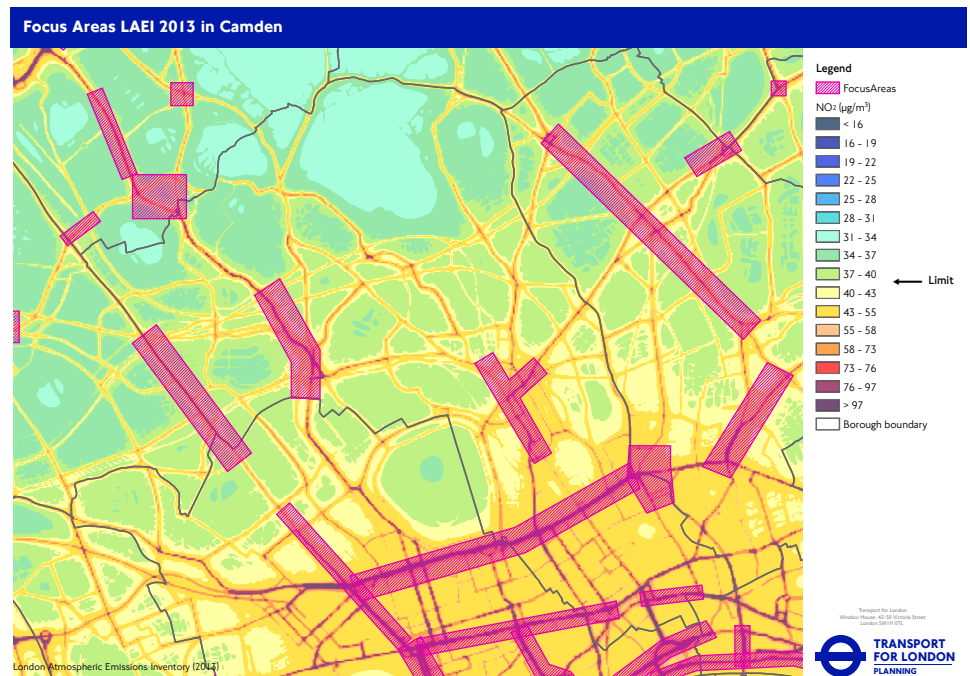
# Existing Air Quality

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### 197 Kentish Town Road

**Current local status**

An Air Quality Management Area (AQMA) has been declared for the entire London Borough of Camden due to continued exceedances of NO<sub>2</sub> and PM<sub>10</sub> NAQOs. A number of focus areas for NO<sub>2</sub> have been declared due to these areas having both high concentrations of NO<sub>2</sub> and significant human exposure (Figure 4). The site is not located in a NO<sub>2</sub> focus area.



**Figure 4:** London Borough of Camden's NO<sub>2</sub> focus areas.

# Existing Air Quality

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#### Local monitoring stations

There are currently three automatic monitoring stations (monitoring a PM<sub>10</sub> and NO<sub>2</sub>) and 14 diffusion tubes (monitoring NO<sub>2</sub> only) across the London Borough of Camden. The closest monitoring sites identified in proximity to the development site are outlined in Table 4.

**Table 4:** Air quality monitoring stations identified near to the site.

Site ID	Site name and type	Pollutants monitored	Distance to exposure (m)	Distance to kerb (m)	Distance from site (km)
CA23	Highstone Mansions, 84, Camden Road, NW1 9DY, diffusion tube, Roadside	NO <sub>2</sub>	5	<1	0.461
CA16	Kentish Town Library, Kentish Town Road, Kentish Town, NW5 2AA, diffusion tube, Roadside	NO <sub>2</sub>	1	1	0.562
CA24	Chetwynd Road, Tufnell Park, NW5 1HR, diffusion tube, Roadside	NO <sub>2</sub>	2	1	1.429
CA20	Brill Place, Holborn, Somers Town, NW1 1AT, diffusion tube, Roadside	NO <sub>2</sub>	9	<5	1.684
CA4	Camden Town Hall, Bidborough Street, Holborn, Bloomsbury, WC1H 9NS, diffusion tube, Roadside	NO <sub>2</sub>	1	5	2.085
CD9	Premier Inn London Euston, Euston Road, Holborn, Bloomsbury, London NW1 2AU, automatic monitoring, Roadside	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>	1	0.5	2.099



# Existing Air Quality

## Air Quality Assessment

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Local monitoring stations (continued)

A map showing the approximate locations of the closest NO<sub>2</sub> diffusion tubes in relation to the development site is shown in Figure 5 below. The blue circle indicates a 1km radius from the site (green pointer). There red pointers are non-automatic monitoring sites, while the orange pointers are automatic monitoring sites.

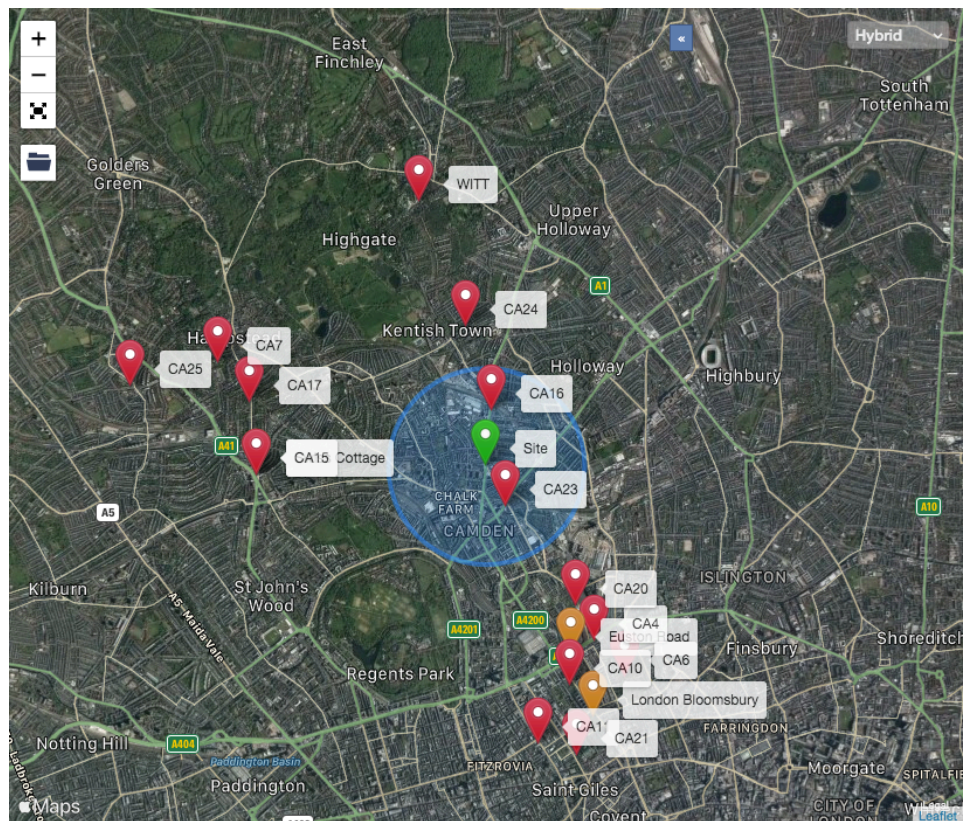


Figure 5: Map showing location of development site in relation to nearby automatic NO<sub>2</sub> diffusion tubes.

# Existing Air Quality

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#### Monitored nitrogen dioxide (NO<sub>2</sub>)

A summary of the latest monitoring results for NO<sub>2</sub> annual mean concentrations at the closest monitoring stations to the development site is given in Table 5<sup>4</sup>. Results for each monitoring station and reporting year are shown in green where the NAQO is achieved and in red where the NAQO is exceeded.

The NAQO for mean annual NO<sub>2</sub> concentration (for the mean annual concentration to be no more than 40 µg/m<sup>3</sup>) has only been achieved by one of the six closest monitoring sites for 2018 (CA24).

**Table 5:** 2015–2018 NO<sub>2</sub> annual mean concentrations near to the site.

Site ID	Monitoring station type	Distance from site (km)	Annual mean concentration (µg/m <sup>3</sup> )			
			2018	2017	2016	2015
CA23	Highstone Mansions, 84, Camden Road, NW1 9DY, Roadside	0.461	55.6	75.42	61.74	63.33
CA16	Kentish Town Library, Kentish Town Road, Kentish Town, NW5 2AA, Roadside	0.562	54.7	74.92	58.72	63.55
CA24	Chetwynd Road, Tufnell Park, NW5 1HR, Roadside	1.429	39.7	55.02	41.96	46.52
CA20	Brill Place, Holborn, Somers Town, NW1 1AT, Roadside	1.684	41.1	57.3	47.53	48.94
CA4	Camden Town Hall, Bidborough Street, Holborn, Bloomsbury, WC1H 9NS, Roadside	2.085	69.2	<u>92.45</u>	<u>82.71</u>	<u>86.76</u>
CD9	Premier Inn London Euston, Euston Road, Holborn, Bloomsbury, London NW1 2AU, Roadside	2.099	<u>82.34</u>	<u>83</u>	<u>88</u>	<u>90</u>

<sup>4</sup> Data obtained from the London Borough of Camden's Annual Air Quality Status Reports 2018. Reports accessed from; <https://www.camden.gov.uk/air-quality#dfmo>

# Existing Air Quality

## Air Quality Assessment

### 197 Kentish Town Road

#### Monitored nitrogen dioxide (NO<sub>2</sub>) (continued)

The closest automatic monitoring station is CD9. The NAQO was not achieved at the CD9 site during 2015 to 2018.

**Table 6:** 2015–2018 NO<sub>2</sub> annual mean concentration near to the site.

Site ID	Monitoring station type	Distance from site (km)	Annual mean concentration (µg/m <sup>3</sup> )			
			2018	2017	2016	2015
CD9	Premier Inn London Euston, Euston Road, Holborn, Bloomsbury, London NW1 2AU, Roadside	2.099	82.34	83	88	90

#### Monitored particulate matter (PM<sub>10</sub>)

The NAQO for mean annual PM<sub>10</sub> concentration (for the mean annual concentration to be no more than 40 µg/m<sup>3</sup>) has been achieved at the nearby CD9 site for 2015–2018 (Table 7).

**Table 7:** 2015–2018 PM<sub>10</sub> annual mean concentrations near to the site.

Site ID	Monitoring station type	Distance from site (km)	Annual mean concentration (µg/m <sup>3</sup> )			
			2018	2017	2016	2015
CD9	Premier Inn London Euston, Euston Road, Holborn, Bloomsbury, London NW1 2AU, Roadside	2.099	22.6	20	24	18

# Existing Air Quality

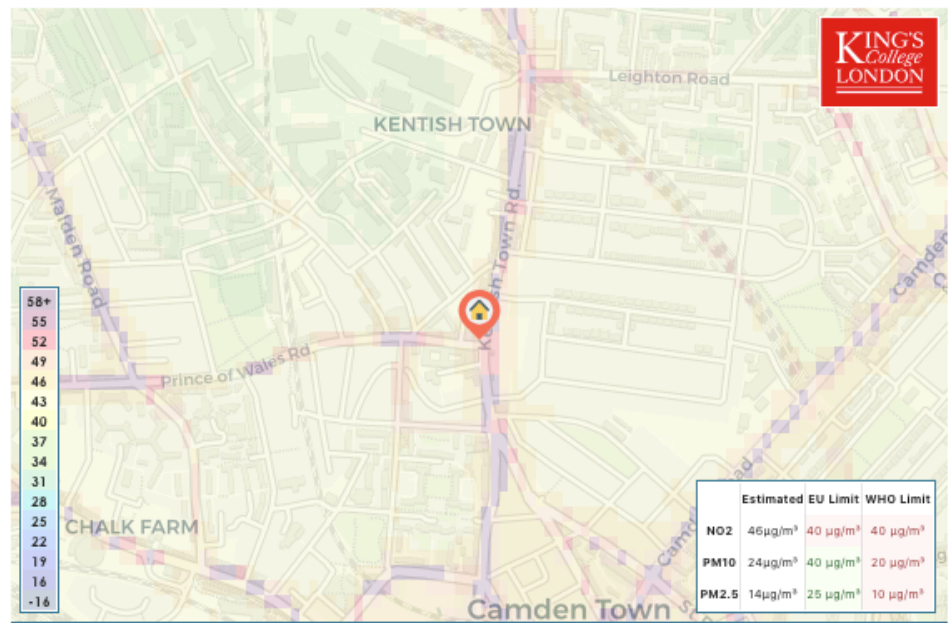
## Air Quality Assessment

### 197 Kentish Town Road

#### Modelled nitrogen dioxide (NO<sub>2</sub>) concentrations

The London Atmospheric Emissions Inventory (LAEI)<sup>5</sup> is a database of geographically referenced datasets of pollutant emissions and sources in Greater London. The base year for the latest and current LAEI is 2016 and includes NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> as key pollutants.

The LAEI 2016 modelled mean annual concentrations of NO<sub>2</sub> for the site and surrounding area is shown in Figure 6. NO<sub>2</sub> concentrations are approximately 46 µg/m<sup>3</sup> at the site. Road traffic emissions are likely to be the primary source of NO<sub>2</sub> pollution in the area. The modelled data indicates that the NAQO and WHO guideline (mean annual concentration no greater than 40 µg/m<sup>3</sup>) for 2016 was not achieved at the site.



**Nitrogen Dioxide (µg/m<sup>3</sup>) - Camden, NW5 2JU**

**Figure 6:** 2016 modelled NO<sub>2</sub> concentrations for the site and surrounding area.

<sup>5</sup> London Atmospheric Emissions Inventory (LAEI) 2016, Greater London Authority. Accessed from; <http://www.londonair.org.uk/map-maker/>

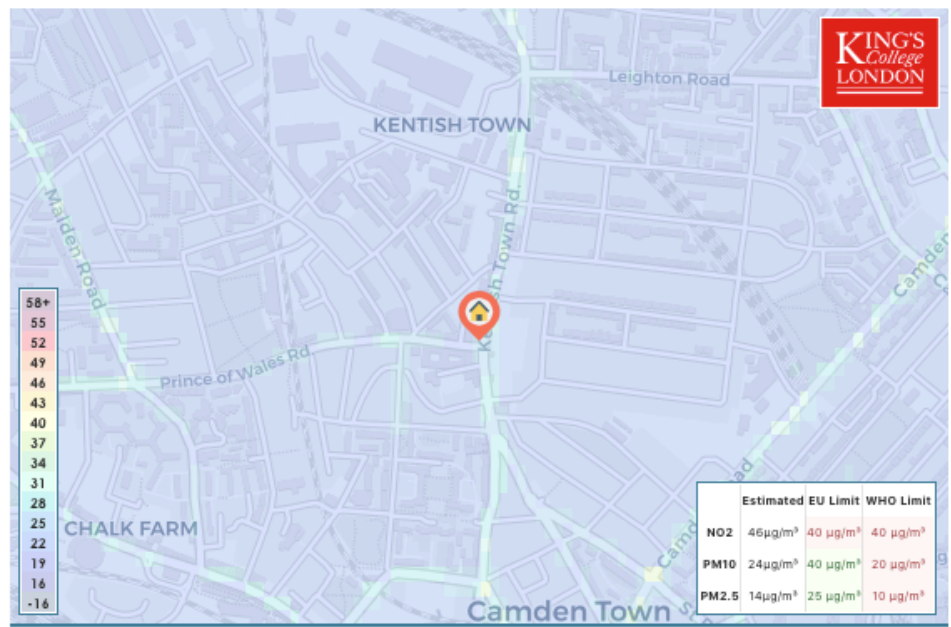
# Existing Air Quality

## Air Quality Assessment

### 197 Kentish Town Road

#### Modelled PM<sub>10</sub> concentrations

The LAEI 2016 modelled mean annual concentrations of PM<sub>10</sub> are shown in Figure 7. PM<sub>10</sub> concentrations at, and surrounding the site, are approximately 24 µg/m<sup>3</sup>. The modelled data indicates that the NAQO (mean annual concentration no greater than 40 µg/m<sup>3</sup>) for 2016 was achieved at the site but the WHO guideline (mean annual concentration no greater than 20 µg/m<sup>3</sup>) was not achieved at the site.



PM<sub>10</sub> Particulates (µg/m<sup>3</sup>) - Camden, NW5 2JU

Figure 7: 2016 modelled PM<sub>10</sub> concentrations for the site and surrounding area.

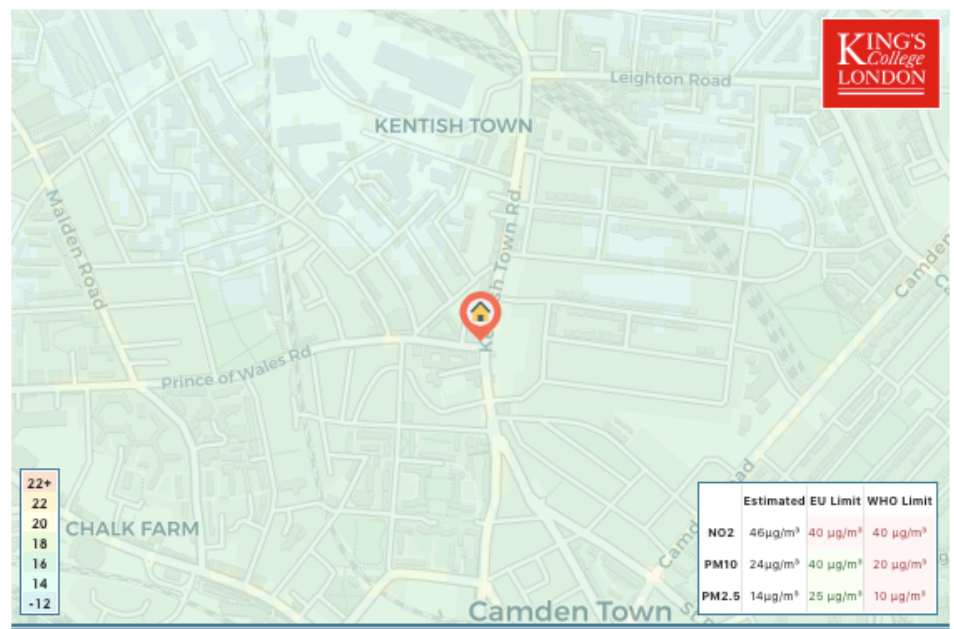
# Existing Air Quality

## Air Quality Assessment

### 197 Kentish Town Road

Modelled PM<sub>2.5</sub> concentrations

The LAEI 2016 modelled mean annual concentrations of PM<sub>2.5</sub> are shown in Figure 8. PM<sub>2.5</sub> concentrations at, and surrounding the site, are approximately 14 µg/m<sup>3</sup>. The modelled data indicates that the NAQO (mean annual concentration no greater than 25 µg/m<sup>3</sup>) for 2016 was achieved at all nearby locations. However, the WHO guideline (mean annual concentration no greater than 10 µg/m<sup>3</sup>) for PM<sub>10</sub> was not achieved for the site and surrounding area.



PM2.5 Particulates (µg/m<sup>3</sup>) - Camden, NW5 2JU

Figure 8: 2016 modelled PM<sub>2.5</sub> concentrations for the site and surrounding area.

# Existing Air Quality

## Air Quality Assessment

### 197 Kentish Town Road

#### Modelled background concentrations

DEFRA provides modelled background concentrations for key pollutants across the UK at 1km grid resolution. The latest and current 2017–2022 modelled background concentrations for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> for the area are given in Table 9.

Background concentrations account for the concentrations of pollutants, which are present as a result of being transported into an area (i.e. by dispersion from non-local emissions sources). Local sources of emissions (i.e. from roads, chimneystacks, etc. within the grid square) are excluded from the background concentrations. The background concentrations for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> consistently decrease across the modelled 2017–2022 years.

**Table 9:** 2017–2022 modelled background concentrations near to the site<sup>6</sup>.

Pollutant / particulate matter	Background concentration (µg/m <sup>3</sup> )					
	2022	2021	2020	2019	2018	2017
NO <sub>2</sub>	25.04	25.87	26.71	28.52	30.23	31.94
PM <sub>10</sub>	17.28	17.45	17.61	17.91	18.20	18.49
PM <sub>2.5</sub>	11.54	11.68	11.82	12.02	12.24	12.45

#### Existing air quality conclusions

##### Monitored concentrations

A number of diffusion tubes have been identified in the area surrounding the development site. The NAQO for mean annual NO<sub>2</sub> concentration has been achieved at one of the six closest diffusion tubes (CA24) for the latest reporting year (2018). The closest automatic monitoring station is CD9. The NAQO was not achieved at the CD9 site during 2015 to 2018. The mean annual PM<sub>10</sub> concentrations are monitored at the CD9 site and the respective NAQOs have been achieved for all reporting years (2015 to 2018). It is noted that some diffusion tubes and automatic monitoring stations are situated at roadside locations, close to roadside emission sources, so are likely to record higher concentrations than locations situated further away from roads.

##### LAIE modelled concentrations

The LAIE modelled concentrations indicate that the mean annual NO<sub>2</sub> concentrations at the site for 2016 were approximately 46 µg/m<sup>3</sup>, PM<sub>10</sub> concentrations were approximately 24 µg/m<sup>3</sup> and PM<sub>2.5</sub> concentrations were approximately 14 µg/m<sup>3</sup>. In 2016, the mean annual NAQOs for PM<sub>10</sub> and PM<sub>2.5</sub> were achieved but the NAQO for NO<sub>2</sub> was exceeded. The WHO guidelines for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> were also exceeded. Based on local trends in monitored pollutant concentrations, it is likely that concentrations of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> will have decreased at the site since 2016.

##### DEFRA modelled background concentrations

The DEFRA modelled background concentrations show that the background concentrations for the local area will likely decrease between 2017 and 2022. The mean NAQOs for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are achieved for background concentrations, along with the WHO guidelines for NO<sub>2</sub> and PM<sub>10</sub>, but the WHO guideline for PM<sub>2.5</sub> (mean annual concentration below 10 µg/m<sup>3</sup>) is likely to still be exceeded by 2022. It cannot be determined whether concentrations at the site will decrease at a comparable rate to the modelled background concentrations, but it is considered likely that concentrations will decrease from the existing concentrations at the site to the handover and occupancy date of the development.

<sup>6</sup> DEFRA Local Air Quality Management – Background Maps. Accessed from; <https://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html>. Data obtained for nearest 1km grid square (X coordinate 527500, Y coordinate 168500) for years 2017-2022 (from 2017 baseline).

# Construction Phase Impacts

## Air Quality Assessment

### 197 Kentish Town Road

#### Introduction

Construction phase impacts as a result of the proposed development have been assessed using the Institute of Air Quality Management (IAQM) 'Guidance on the assessment of dust from demolition and construction'. The construction phase impacts have been assessed for their risks in line with section 5 of the IAQM guidance.

#### Assessment of construction impacts

A Construction Environmental Management Plan will be prepared for the purposes of defining a detailed environmental management methodology for the construction project. Using the evaluation criteria within the IAQM's guidance, the potential dust emission magnitude has been identified for each stage of the proposed development as shown in Table 10.

**Table 10:** Dust emission magnitudes for construction activities.

Activity	Dust emission magnitude	Justification
Demolition	Small	The total building volume to be demolished will be less than 20,000 m <sup>3</sup> and demolition activities are likely to occur at no greater than 10m above ground. The dust emission magnitude is considered to be small.
Earthworks	Small	The total site area is less than 2,500m <sup>2</sup> . It is likely that the soil at the site is loamy soil, with naturally high ground water <sup>7</sup> . No details are yet known on the number of heavy earth-moving vehicles that will be active at any one time on the site, the volume of total material to be moved on the site or the likely maximum height of stockpile enclosures. The dust emission magnitude is considered to be small.
Construction	Small	The total new building volume is likely to be less than 25,000m <sup>3</sup> . The contribution of the total volume of construction materials from potentially dusty materials (e.g. concrete) and materials with low potential for dust release (e.g. metal cladding or timber) is not currently known. The dust emission magnitude is considered to be small.
Trackout	Small	It not yet known what the number of heavy-duty vehicle (>3.5 tonnes) outward trips per day will be, but a reasonable worst-case assumption of <10 trips is made. Similarly, there is likely to be no unpaved road. The dust emission magnitude is considered to be small.

<sup>7</sup> See Cranfield Soil and Agrifood Institute, Soilscales Map. Accessed from; <http://www.landis.org.uk/soilscales/>



# Construction Phase Impacts

## Air Quality Assessment

### 197 Kentish Town Road

Assessment of construction impacts  
(continued)

The overall sensitivity of the surrounding area to dust soiling, human health impacts and ecological effects has been determined by reviewing the sensitivity of the receptors and distance from the source. A summary of the predominant sensitivity of nearby receptors to dust impacts is given in Table 11.

**Table 11:** Predominant sensitivity of nearby receptors to dust impacts.

Sensitivity of people to dust soiling	Sensitivity of people to PM health impacts	Sensitivity to ecological effects
Medium	Medium	Low
There are no hospital buildings within an approximate 350m radius of the site. However, there are several schools within an approximate 350m radius. There are many residential properties near to the site location. The sensitivity of the residential properties to dust soiling is deemed to be high i.e. they may be adversely affected with regards to appearance, aesthetics or value by dust soiling and the sensitivity of the school buildings is deemed to be low.	There are residential properties with approximately 50m of the development site, and several schools within approximately 350m. In accordance with the IAQM guidance, each receptor is of a high sensitivity. The annual mean PM <sub>10</sub> concentration (using the LAIE 2016 modelled concentrations, as a worst-case) are likely to be below the threshold of 24 µg/m <sup>3</sup> . As a result, the overall sensitivity of people to PM health impacts is medium.	There are no sites designated or non-designated sites (nor sites identified as Special Conservation Areas (SAC) or Sites of Special Scientific Interest (SSSI)) within a 50m distance of the site or trackout route from site. Receptors are deemed to be low sensitivity.

The dust emission magnitude determined on the previous page has been combined with the sensitivity assessment in the above table to define the risk of impacts for each phase of development in the absence of mitigation. The sensitivity of the surrounding area has been defined in accordance with IAQM guidance and the results are given in Table 12.

**Table 12:** Outcome of defining sensitivity of the surrounding area from each respective construction activity.

Potential impact	Sensitivity of the surrounding area		Dust emissions magnitude from each activity			
			Demolition	Earthworks	Construction	Trackout
			Small	Small	Small	Small
Dust soiling	Medium	Low	Low	Low	Low	
Human health	Medium	Low	Low	Low	Low	
Ecological effects	Low	Low	Low	Low	Low	

# Construction Phase Impacts

## Air Quality Assessment 197 Kentish Town Road

### Assessment of construction impacts (continued)

The overall risk of dust impacts from the construction phase without mitigation measures proposed has been assessed as being low risk. The risk across the four construction activities has been determined to be low risk, aside from the risk for ecological effects, which is negligible risk (Table 13).

**Table 13:** Risk to local sensitive receptors from construction dust impacts.

	Risk without mitigation	Activity			
		Demolition	Earthworks	Construction	Trackout
Potential impact	Dust soiling	Low	Low	Low	Low
	Human health	Low	Low	Low	Low
	Ecological effects	Negligible	Negligible	Negligible	Low
Overall risk of dust impacts with no mitigation		Low Risk			

### Effects of mitigation measures

A schedule of mitigation measures has been developed for the construction phase. These measures are outlined in the Air Quality & Dust Management Plan (AQDMP) (Appendix A). These measures will be incorporated in the appointed contractor's Construction Environmental Management Plan.

The recommended AQDMP measures address the key construction activities identified and a summary of the proposed measures and their risk mitigation impact is given in Table 14. The implementation of the proposed measures is deemed to mitigate the risk for each activity and reduce to a negligible risk overall.

**Table 14:** Summary of proposed AQDMP mitigation measures for construction phase.

Activity	Relevant mitigation measures	Mitigated risk
General (all activities)	<ul style="list-style-type: none"> <li>Site management measures 1–10.</li> <li>Preparing and maintaining the site measures 11–23.</li> <li>Operating vehicle/machinery and sustainable travel measures 24–30.</li> <li>Operations measures 31–35.</li> <li>Waste management measures 36–37.</li> </ul>	–
Demolition	Measures 38–41.	Negligible risk
Earthworks	Measures 42–44.	Negligible risk
Construction	Measures 45–48.	Negligible risk
Trackout	Measures 49–58.	Negligible risk
Overall risk of dust impacts with mitigation.		Negligible risk

# Operational Impacts: Mitigation Measures

## Air Quality Assessment

### 197 Kentish Town Road

#### Pollution mitigation hierarchy

The development proposal will introduce new residential and retail uses to an area that is likely to have acceptable existing air quality. The development of the site will have a negligible effect on the NAQOs for NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> are still likely to be achieved.

The principles of the pollution mitigation hierarchy, outlined in the Institute of Air Quality Management (IAQM) 'Mitigation of Development Air Quality: Position Statement', have been applied to the proposed development.

#### 1. Prevention and avoidance

*Preference should be given to preventing or avoiding exposure/impacts to the pollutant in the first place by eliminating or isolating potential sources or by replacing sources or activities with alternatives.*

##### Transport emissions

A transport statement is not required by the London Borough of Camden for the planning application and therefore no modal trip rates have been estimated for the development. The development site is located in a highly accessible location for public transport, with a Public Transport Accessibility Level (PTAL) rating of 6a, indicating that public transport is likely to comprise the greatest proportion of modal trips. There are no car parking spaces provided for the development, so it is highly unlikely that there would be a significant proportion of modal trips by car, thereby significantly reducing emissions from operational transport use. Furthermore, zero emissions transport will be promoted by the inclusion of 8 cycle storage spaces.

##### Building emissions

The energy strategy for the development proposes that individual gas-fired combi-boilers will serve the new residential units, to meet space and water heating demand. The boilers will be ultra-low NO<sub>x</sub>-emitting boilers (NO<sub>x</sub> Class 5) with rated emissions of ≤39 mgNO<sub>x</sub>/kWh, in compliance with the GLA requirements for boilers with NO<sub>x</sub> emissions of <40 mgNO<sub>x</sub>/kWh.

#### 2.a Reduction and minimisation: Mitigation measures that act on the source

*Reduction and minimisation of exposure/impacts should next be considered, once all options for prevention/avoidance have been implemented so far as is reasonably practicable (both technically and economically). To achieve this reduction/minimisation, preference should be given, in order, to:*

#### 2.b. Reduction and minimisation: Mitigation measures that act on the pathway

##### Ventilation and filtration

Mechanical ventilation with heat recovery is proposed to provide guaranteed fresh air throughout the year, with minimum energy consumption.

#### 2.c. Reduction and minimisation: Mitigation measures at or close to the point of receptor exposure

A typical arrangement would be fresh air is supplied to living areas and bedrooms, and is extract from bathrooms, WCs and the kitchen. A heat exchanger removes heat from the exhaust air and uses it to pre-heat the incoming air. This reduces the energy required to heat the air by around 80%.

All mechanical ventilation systems should be designed in accordance with BS EN 16798:2017 'Energy Performance of Buildings – Ventilation for Buildings' and BS EN ISO 16890:2016 'Air Filters for General Ventilation'. In accordance with these standards, consideration must be given to the quality of the outdoor air at the proposed location of the building and the design should incorporate the following mitigation measures:

*(Continued overleaf...)*

# Operational Impacts: Mitigation Measures

## Air Quality Assessment

### 197 Kentish Town Road

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#### 2.a Reduction and minimisation: Mitigation measures that act on the source

#### 2.b. Reduction and minimisation: Mitigation measures that act on the pathway

#### 2.c. Reduction and minimisation: Mitigation measures at or close to the point of receptor exposure (continued)

- Air intakes should be located where the outdoor air is least polluted, where outdoor air pollution concentrations are not uniform around the building;
- Some form of filtration and/or air cleaning should be applied, where outdoor air pollution concentrations are significant. Tables 16 and 17 of BS EN 16798:2017 (Part 3) should be followed to determine the appropriate required level of filtration efficiency for particulate and gaseous filtration systems.

To verify that the filtration system continues to operate as designed, the facilities team will provide records of air filtration maintenance, including evidence that filters have been properly maintained as per the manufacturer's recommendations.

- Additionally, activated carbon filters or combination particulate/carbon filters may be considered for installation in the main air ducts to filter recirculated air.

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#### 3. Off-setting

*Off-setting a new development's air quality impact by proportionately contributing to air quality improvements elsewhere (including those identified in Air Quality Action Plans and low emission strategies) should only be considered once the solutions for preventing/avoiding, and then for reducing/minimising, the development-specific impacts have been exhausted. Even then, offsetting should be limited to measures that are likely to have a beneficial impact on air quality in the vicinity of the development site. It is not appropriate to attempt to offset local air quality impacts by measures that may have some effect remote from the vicinity of the development site.*

Mitigation measures have been proposed for the development, appropriate to the scale and nature of the development (see sections 1. to 2.c. above). No additional off-setting measures are proposed.

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# Conclusions

## Air Quality Assessment

### 197 Kentish Town Road

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#### Conclusions

The development site is located in an Air Quality Management Area (AQMA), which has been declared due to continued exceedances of National Air Quality Objectives (NAQOs) for NO<sub>2</sub> and PM<sub>10</sub>.

A number of diffusion tubes have been identified in the area surrounding the development site. The NAQO for mean annual NO<sub>2</sub> concentration has been achieved at one of the six closest diffusion tubes (CA24) for the latest reporting year (2018). The NAQO was not achieved at the closest automatic monitoring station, CD9, during 2015 to 2018. Mean annual PM<sub>10</sub> concentrations are monitored at the CD9 station and the respective NAQO has been achieved for all reporting years (2015 to 2018). It is noted that all nearby diffusion tubes and automatic monitoring stations are situated at roadside locations, close to roadside emission sources, so are likely to record higher concentrations than locations situated further away from roads.

The LAIE modelled concentrations indicate that the mean annual NO<sub>2</sub> concentrations at the site for 2016 were approximately 46 µg/m<sup>3</sup>, PM<sub>10</sub> concentrations were approximately 24 µg/m<sup>3</sup> and PM<sub>2.5</sub> concentrations were approximately 14 µg/m<sup>3</sup>. In 2016, the mean annual NAQOs for PM<sub>10</sub> and PM<sub>2.5</sub> were achieved but the NAQO for NO<sub>2</sub> was exceeded. The WHO guidelines for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> were also exceeded. Based on local trends in monitored pollutant concentrations, it is likely that concentrations of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> will have decreased at the site since 2016.

The DEFRA modelled background concentrations show that the background concentrations for the local area will likely decrease between 2017 and 2022. The mean NAQOs for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are achieved for background concentrations, along with the WHO guidelines for NO<sub>2</sub> and PM<sub>10</sub>, but the WHO guideline for PM<sub>2.5</sub> (mean annual concentration below 10 µg/m<sup>3</sup>) is likely to still be exceeded by 2022. It cannot be determined whether concentrations at the site will decrease at a comparable rate to the modelled background concentrations, but it is considered likely that concentrations will decrease from the existing concentrations at the site to the handover and occupancy date of the development.

The unmitigated risk to local sensitive receptors from emissions of dust and pollution from construction is deemed to be *low*. The risk will be mitigated further to *negligible* through the measures set out in the Air Quality & Dust Management Plan (AQDMP), which will be implemented through the principal contractor's Construction Environmental Management Plan.

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# Appendix A: Air Quality & Dust Management Plan

## Air Quality Assessment

### 197 Kentish Town Road

#### Roles and responsibilities

The Site Manager will have overall responsibility for dust management during construction and will ensure that all site personnel are effectively briefed and given adequate resources to undertake the air quality and dust management requirements, as set out in this Air Quality & Dust Management Plan (AQDMP).

Key roles and responsibilities for the Site Manager and site personnel are outlined in Table A-1:

Table A1: Schedule of AQDMP responsibilities.

Role	Responsibilities
Site Manager	Ensure that the mitigation and monitoring requirements outlined in the AQDMP are carried out during works on site.
	Ensure that staff are aware of the requirements of the AQDMP and have access to the document. Regular training of staff should be implemented.
	Undertake and record dust inspections of the site as required by the AQDMP.
	Ensure that site documentation (including method statements and risk assessments) include adequate dust mitigation.
	Act on complaints and dust alerts as detailed in the AQDMP.
	Maintain up-to-date site log of air quality events and complaints.
	Investigate the cause of air quality events and apply additional mitigation are required.
	Act as the key point of contact for queries and complaints regarding air quality emissions from site.
Site personnel	Carry out the works in accordance with the AQDMP requirements.
	Report observations of dust events or deviations from the AQDMP procedures.
	Attend environmental management training.

#### Hours of work

Normal working hours for the 197 Kentish Town Road construction site will be as follows:

- Monday – Friday: 08:00 – 18:00 hrs.
- Saturday: 08:00 – 13:00 hrs.

There will not typically be any construction activities undertaken outside of the stated working hours, including on Sundays, Public Holidays or Bank Holidays. In the event that construction activities are sought to be undertaken outside of the normal working hours, these will be agreed with the local planning authority in advance.

# Appendix A: Air Quality & Dust Management Plan

## Air Quality Assessment

### 197 Kentish Town Road

Measures relevant for demolition, earthworks, construction and trackout

Robust site management will be required to control the dust emissions from construction activities. Mitigation methods, in accordance with 'The Control of Dust and Emissions during Construction and Demolition' SPG (Mayor of London, 2014) have been proposed for the site.

All 'required' mitigation measures must be implemented. We would strongly recommend that all 'recommended' measures are implemented, along with those that are 'not required' (where technically feasible).

It is recommended that these measures be set out in the site-specific Construction Environmental Management Plan, which will form part of the proposed development's overall Construction Management Plan.

Table A-2: Schedule of construction phase mitigation measure requirements.

Site management	
Mitigation measure	Compliance requirements
1) Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.	Not required
2) Develop a Dust Management Plan.	Recommended
3) Display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary.	Required
4) Display the head or regional office contact information.	Required
5) Record and respond to all dust and air quality pollutant emissions complaints.	Required
6) Make a complaint log available to the local authority when asked.	Required
7) Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to the local authority when asked.	Required
8) Increase the frequency of site inspections by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions and dust are being carried out, and during prolonged dry or windy conditions.	Required
9) Record any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and the action taken to resolve the situation is recorded in the log book	Required
10) Hold regular liaison meetings with other high-risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised.	Not required

# Appendix A: Air Quality & Dust Management Plan

## Air Quality Assessment

### 197 Kentish Town Road

Measures relevant for demolition, earthworks, construction and trackout

Preparing and maintaining the site	
Mitigation measure	Compliance requirements
11) Plan site layout: machinery and dust causing activities should be located away from receptors.	Required
12) Erect solid screens or barriers around dust activities or the site boundary that are, at least, as high as any stockpiles on site.	Required
13) Full enclosure of the site or specific operations where there is a high potential for dust production and the site is active for an extensive period.	Recommended
14) Install green walls, screens or other green infrastructure to minimise the impact of dust and pollution.	Recommended
15) Avoid site runoff of water and mud.	Required
16) Keep site fencing, barriers and scaffolding clean using wet methods.	Recommended
17) Remove materials from site as soon as possible.	Recommended
18) Cover, seed or fence stockpiles to prevent wind whipping.	Recommended
19) Carry out regular dust soiling checks of buildings within 100m of site boundary and cleaning to be provided if necessary.	Recommended
20) Provide showers and ensure a change of shoes and clothes are required before going off-site to reduce transport of dust.	Not required
21) Agree monitoring locations with the Local Authority.	Required
22) Where possible, commence baseline monitoring at least three months before phase begins.	Required
23) Put in place real-time dust and air quality pollutant monitors across the site and ensure they are checked regularly.	Required

Operating vehicles/machinery and sustainable travel	
Mitigation measure	Compliance requirements
24) Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone.	Required
25) Ensure all non-road mobile machinery (NRMM) comply with the standards set within this guidance.	Required
26) Ensure all vehicles switch off engines when stationary – no idling vehicles.	Required
27) Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where possible.	Required
28) Impose and signpost a maximum-speed-limit of 10mph on surfaced haul routes and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).	Recommended
29) Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.	Required
30) Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).	Required



# Appendix A: Air Quality & Dust Management Plan

## Air Quality Assessment

### 197 Kentish Town Road

Measures relevant for demolition, earthworks, construction and trackout (continued)

Operations	
Mitigation measure	Compliance requirements
31) Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.	Required
32) Ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible).	Required
33) Use enclosed chutes, conveyors and covered skips.	Required
34) Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.	Required
35) Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	Recommended

Waste management	
Mitigation measure	Compliance requirements
36) Reuse and recycle waste to reduce dust from waste materials.	Required
37) Avoid bonfires and burning of waste materials.	Required

Measures specific to demolition

Demolition	
Mitigation measure	Compliance requirements
38) Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).	Recommended
39) Ensure water suppression is used during demolition operations.	Required
40) Avoid explosive blasting, using appropriate manual or mechanical alternatives.	Required
41) Bag and remove any biological debris or damp down such material before demolition.	Required

Measures specific to earthworks

Earthworks	
Mitigation measure	Compliance requirements
42) Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces.	Not required
43) Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil.	Not required
44) Only remove secure covers in small areas during work and not all at once.	Not required

# Appendix A: Air Quality & Dust Management Plan

## Air Quality Assessment

### 197 Kentish Town Road

#### Measures specific to construction

Construction	
Mitigation measure	Compliance requirements
45) Avoid scabbling (roughening of concrete surfaces) if possible.	Recommended
46) Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.	Recommended
47) Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.	Not required
48) For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.	Not required

#### Measures specific to trackout

Trackout	
Mitigation measure	Compliance requirements
49) Regularly use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the site.	Recommended
50) Avoid dry sweeping of large areas.	Recommended
51) Ensure vehicles entering and leaving sites are securely covered to prevent escape of materials during transport.	Recommended
52) Record all inspections of haul routes and any subsequent action in a site logbook.	Recommended
53) Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems and regularly cleaned.	Not required
54) Inspect haul routes for integrity and instigate necessary repairs to the surface, as soon as reasonably practicable.	Not required
55) Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).	Recommended
56) Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.	Not required
57) Access gates to be located at least 10m from receptors, where possible.	Not required
58) Apply dust suppressants to locations where a large volume of vehicles enter and exit the construction site.	Not required