The Diorama Regents Park

Air Quality Neutral Assessment

The Diorama Estates Ltd

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Signed by: Hodgkiss, Glyn	Signed by: Chapman, Mark	Signed by: Chapman, Mark

Executive Summary

Cundall has been commissioned by Diorama Estates Limited to carry out an Air Quality Neutral Assessment to support a planning application for the refurbishment of a four to five storey building for office use. The site is located at 18 Park Square East NW1 4LH in the London Borough of Camden (LBC), and lies within Camden's Air Quality Management Area.

The Air Quality Neutral Assessment was undertaken to determine compliance with the London Plan's policy relating to "Air Quality Neutral Development". The Air Quality Neutral Planning Support document was published in March 2013 and updated in April 2014 to accompany the 2014 publication of the Greater London Authority's (GLA's) Sustainable Design and Construction SPG. It provides specialist consultants with a methodology to undertake an 'Air Quality Neutral' assessment, as well as emission benchmarks for buildings and transport, against which the predicted values for the Proposed Development can be compared.

The guidance relating to Air Quality Neutral follows a tiered approach, such that all developments are expected to comply with minimum standards for emissions associated with land-use. Compliance with "Air Quality Neutral" is then founded on emissions benchmarks that have been derived for both building (energy) use and road transport in different areas of London. Developments that exceed the benchmarks are required to implement on-site or off-site mitigation to offset the excess emissions.

The adopted approach has involved the calculation of emissions from the Proposed Development, and to compare this figure with the calculated building emissions benchmark.

It has been demonstrated that the development's NO_x building emissions meet the Air Quality Neutral benchmark by 55.5 kg NO_2 kg/annum, based on an assumed continuous operation scenario.

The Proposed Development is nominally 'car-free', lying in close proximity to a comprehensive public transport network. The number of trips generated by the development would need to exceed 33 trips per day before the Transport Benchmark was exceeded.

As such, the development is considered to comply with the Air Quality Neutral building emissions and transport benchmarks, and therefore meets the requirements of the relevant Supplementary Planning Guidance and new draft London Plan.

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1.0

Introduction

1.0 Introduction

Cundall has been commissioned by Diorama Estates Limited to carry out an Air Quality Neutral Assessment to support a planning application for the refurbishment of a part 4 , part 5- storey property, arranged over basement, lower ground and upper ground to third floor level along Park Square East and lower ground to second floor level to the rear along Peto Place. The site is located at 18 Park Square East NW1 4LH in the London Borough of Camden and lies within Camden's Air Quality Management Area.

Preliminary outline layout plans for the basement, ground and third floors are provided in Figure 1 to Figure 3.

Figure 1 Proposed Basement Plan

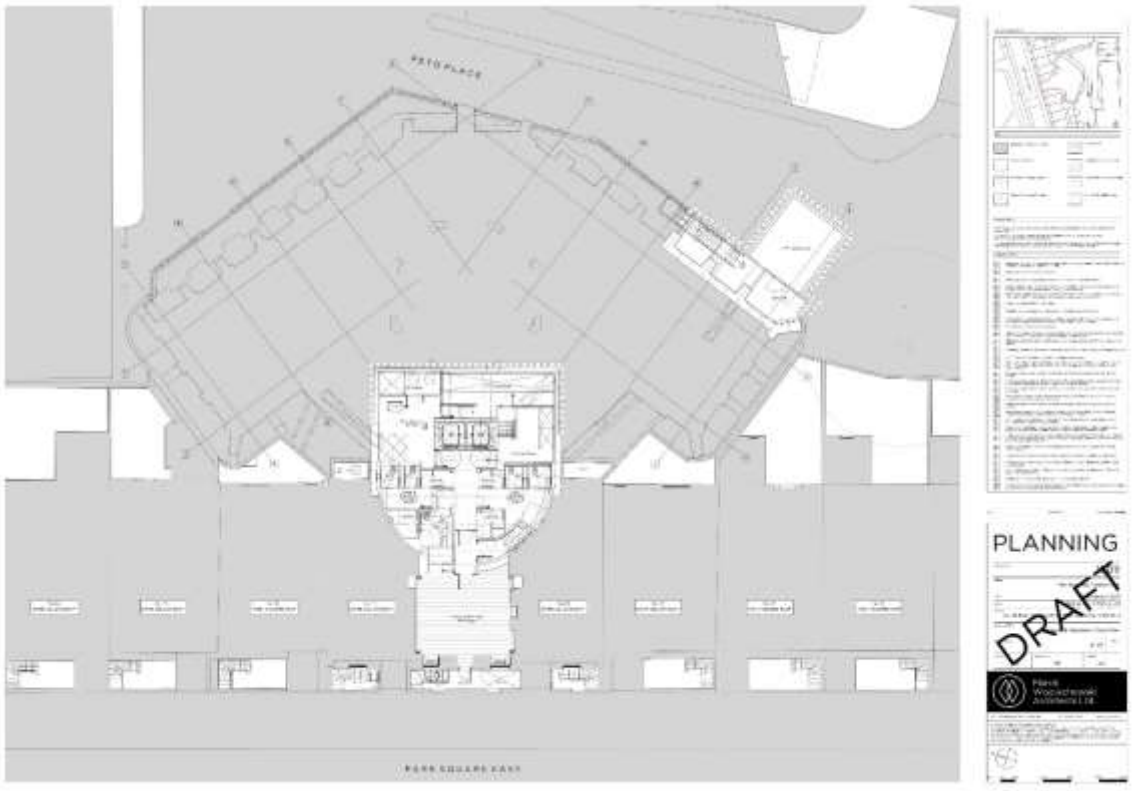


Figure 2 Proposed Ground Floor Plan

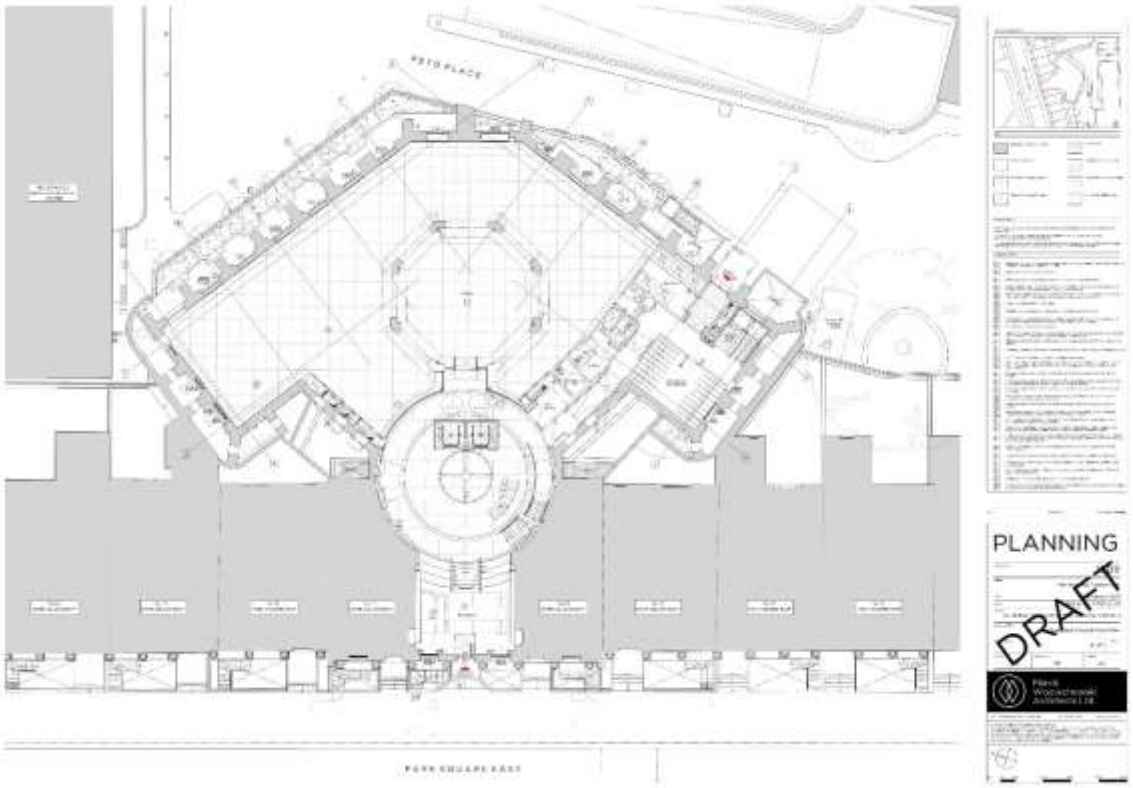
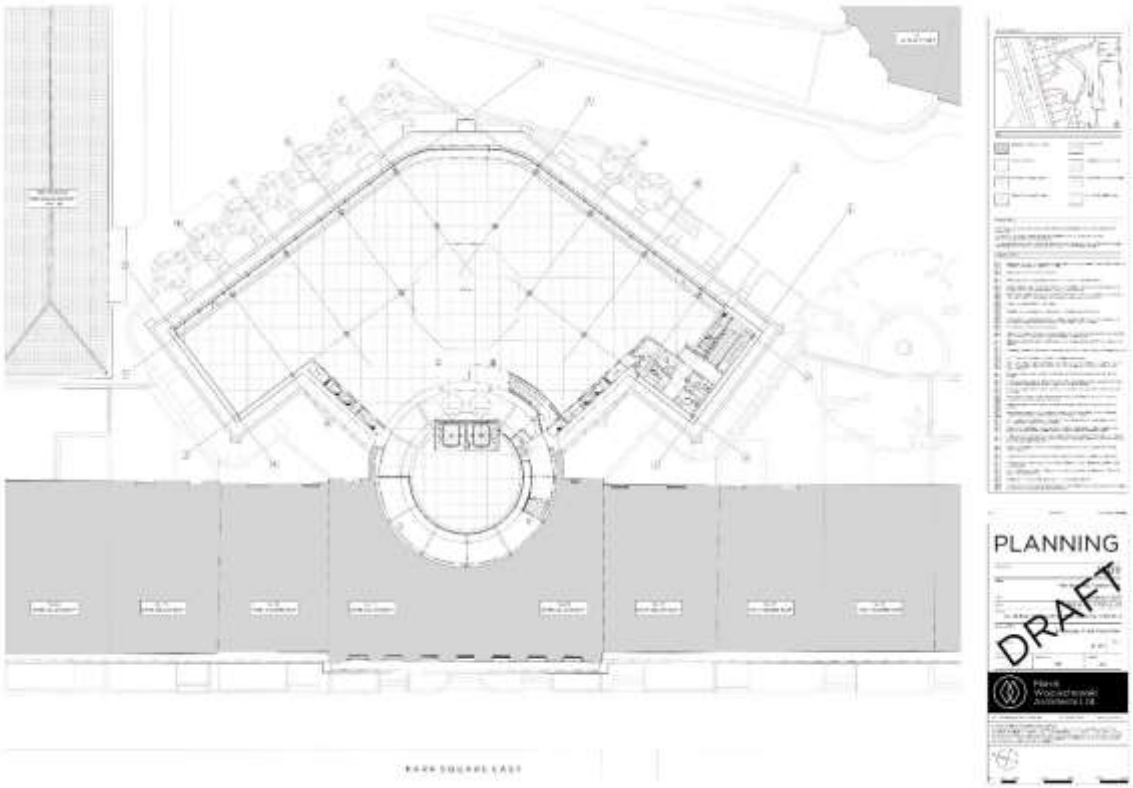


Figure 3 Proposed Third Floor Plan



The Proposed Development comprises the following activities:

- Insertion of new floor to no.18 at first floor level;
- Change of use of the Diorama building from B1(a) use to B1 Office use, removing the planning condition restricting the use to charities and institutions only;
- Proposed roof extension to the Diorama building on Peto Place to provide additional office floor space at third floor level;
- Sensitive internal modifications to the Diorama building, including insertion of 2 no. passenger lifts to provide step-free access to the proposed office, along with increased provision for male and female WCs and modifications to fire escapes.
- Change of use of No. 17 & No. 19 Park Square East, from B1(a) use, back to their original C3 Residential use, to create 2 no. single- family dwellings and subdivision of proposed residential floorspace. Note that this element will be covered as part of a separate planning application

The proposed land use allocation for the development is summarised in Table 1.

Table 1 Proposed Land Uses (Schedule revision 22/11/2019)

Location	Gross Internal Area (GIA) (m^2)	
	Existing	**Proposed**
Basement	105.2	226.1
Ground	688.5	742.7
First	664.3	687.4
Second	581.2	639.4
Third	102.9	593.0
Sub Totals	**2,142.1**	**2,888.6**

1.1 Scope of Assessment

In setting the scope of assessment, consideration has been made of the potential for effects to occur only during the operation phase of the development.

1.1.1 Air Quality Neutral Assessment

An air quality neutral assessment was undertaken to determine compliance with the London Plan's policy relating to "Air Quality Neutral Development". The Air Quality Neutral Planning Support document was published in March 2013 and updated in April 2014 to accompany the 2014 publication of the Greater London Authority's (GLA's) Sustainable Design and Construction SPG. It provides specialist consultants with a methodology to undertake an 'Air Quality Neutral' assessment, as well as emission benchmarks for buildings and transport, against which the predicted values for the Proposed Development can be compared.

1.1.2 Consultation with LBC

Following an initial screening and scoping exercise, consultation with Tom Parks, Senior Air Quality Officer, was undertaken on 21st November 2019 to discuss and agree the scope of the assessment. General advice was provided which was read in conjunction with Camden's planning guidance (CPG Air Quality) and Local Plan (Section CC4- Air Quality). Further details are provided in Appendix A.

It was concluded that the submissions required in support of the current planning application should include an air quality neutral assessment and a construction dust risk assessment; the latter is included within a separate report submitted in support of the same planning application.

1.2 Study Area

The site is located at 18 Park Square East NW1 4LH.

The building fronts Park Square to the east of Park Square Gardens and lies 70m to the south-east of Regents Park. The existing site comprises a part 4, part 5- storey property, arranged over basement, lower ground and upper ground to third floor level along Park Square East and lower ground to second floor level to the rear along Peto Place.

It is bounded to the north by St Andrew's Place, to the east by Peto Place, to the south by Marylebone Road (A501) and to the west by Park Square East. The land use in the area is mixed, comprising residential, retail, commercial and leisure uses within the immediate vicinity, as well as Portland Street underground station located 100m to the south of the Proposed Development on Marylebone Road.

The location of the development site is illustrated in Figure 4.

Figure 4 Location of the Proposed Development Site (Courtesy of Google Maps)

2.0

Legislation, Policy and Guidance

2.0 Legislation, Policy and Guidance

2.1 Key Legislation and Policy

This assessment considers key air quality legislation, which is summarised in Table 2.

Table 2 Key Legislation

Legislation	Description
EU Ambient Air Quality Directive 2008/50/EC	Establishes the requirements of Member States in terms of improvements required to air quality. Sets standards for a variety of pollutants for human-health and the environment.
The Air Quality Standards Regulations 2010	Transposes formalised EU Limit Values set out in directive 2008/50/EC to UK law.
The Clean Air Quality Strategy 2019	The Clean Air Strategy sets out the case for action and demonstrates the government's determination to improve air quality. In some cases, the goals are even more ambitious than EU requirements to reduce people's exposure to toxic pollutants like nitrogen oxides, ammonia, particulate matter, non-methane volatile organic compounds and sulphur dioxide.
Environment Act 1995, Part IV	Defines the requirements for Local Air Quality Management (LAQM).
Environment Protection Act 1990, Amended by the Pollution Prevention and Control Act 1999	Part III provides statutory nuisance provisions for nuisance dust.

Relevant planning policy and guidance is also considered at the National, Regional, and Local levels as summarised in Table 3.

Table 3 Key Policy and Guidance

Policy / Guidance	Description
Ministry of Housing, Communities & Local Government - National Planning Policy Framework (NPPF) 2019	Paragraph 181 of the NPPF 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 AQMAs 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 AQMAs and Clean Air Zones is consistent with the local air quality action plan".
London Plan (2016)	Policy 7.14 Improving air quality on planning decision: 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

Policy / Guidance	Description
	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 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.
Draft London Plan- Consolidated Suggested Changes Version 2019	The current 2016 London Plan is still the adopted Development Plan, but the Draft London Plan is a material consideration in planning decisions. Policy SI1 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: 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 exceedance of legal limits c) create unacceptable risk of high levels of exposure to poor air quality. 2 In order to meet the requirements in 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, which do not demonstrate that design measures have been used to minimise exposure should be refused. 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

Policy / Guidance	Description
	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 guidance115. 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.
Mayor of London's Supplementary Planning Guidance (SPG) The Control of Dust and Emissions during Construction and Demolition (2014)	The SPG seeks to reduce emissions of dust, PM_{10} and $PM_{2.5}$ from construction and demolition activities in London. It also aims to manage emissions of NOx from construction and demolition machinery by means of a new non-road mobile machinery ultra-low emissions zone (ULEZ). The SPG provides guidance on the implementation of all relevant polices in the London Plan and the Mayor's Air Quality Strategy to neighbourhoods, borough, developers, architects, consultants and any other parties involved in the construction phase; sets out methodology for air quality impact of construction in London; identifies good practice for mitigating and managing air quality impacts for construction phase.
Camden Local Plan (July 2017)	Camden's Local Plan was adopted in July 2017 and includes an air quality chapter. Within this, Policy CC4 states that: ▪ 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 consider 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. ▪ In order to help reduce air pollution and adhere to London planning policy, developments must demonstrate that they comply with Policy 7.14 of the London Plan (to be at least air quality neutral).
Camden Planning Guidance (CPG) - Air Quality (March 2019)	The CPG document support the policies in the Local Plan 2017. This guidance is therefore consistent with the Local Plan and forms a Supplementary Planning Document (SPD) which is an additional "material consideration" in planning decisions.

Policy / Guidance	Description
	▪ All developments in areas of poor air quality are to protect future occupants from exposure to poor air quality. ▪ All developments are to limit their impact on local air quality and be at least air quality neutral. ▪ Air quality neutral assessments are required for all major developments. Major developments are schemes of 10 or more dwellings or buildings where the floorspace created is 1,000 square metres or more.
LBC Air Quality Action Plan 2019-2022	Camden Council has declared an AQMA for NO_2 and PM_{10} that covers the whole Borough and has developed an Air Quality Action Plan (AQAP). Camden's Clean AQAP outlines the Councils commitment to improving air quality between 2019 and 2022. The key objectives of the plan are to reduce particulate and NO_2 concentrations by: 1. Reducing building emissions 2. Reducing construction emissions 3. Tackling transport emissions 4. Reducing exposure in communities and schools 5. Reducing service vehicle and freight emissions 6. Public Health and awareness raising 7. Lobbying wider organisation The plan contains several air quality 'focus' locations, however, the Proposed Development does not lie within any of these areas.
Defra LAQM Technical Guidance (LAQM.TG16) (2018) and London LAQM (LLAQM) Technical Guidance 2016.	The guidance issued under Part IV of the Environment Act 1995 is designed to help local authorities with their LAQM duties. The guidance sets out the general approach to use and detailed technical guidance to guide local authorities through the Review and Assessment process.
Environmental Protection UK (EPUK) / IAQM Land Use Planning & Development Control (2017)	This guidance has been produced to ensure that air quality is adequately considered in the land use planning and development control processes by relevant officers within local authorities, developers, and consultants involved in the preparation of development proposals and planning applications. This document is best practice guidance and has no formal or legal status.
GLA 80371 Air Quality Neutral Planning Support (2014)	The document provides guidance on the application of the "air quality neutral" policy of Mayor of London's SPG, Sustainable Design and Construction (2014).

The air quality EU limit values and UK Air Quality Objectives (AQOs) which apply to the development are shown in Table 4 and these will be used as the basis of assessment.

Table 4 AQO and EU Limit Values

Pollutant	Averaging Period	Objective Threshold / EU Limit Value (µg/m^3)
Nitrogen Dioxide (NO_2)	Annual mean	40
	1-hour mean	200 Not to be exceeded more than 18 times per year (equivalent to the 99.79th percentile of 1-hour mean values)
Particulate Matter (PM_{10})	Annual mean	40
	24-hour mean	50 Not to be exceeded more than 35 times per year (equivalent to the 90.4th percentile of 24-hour mean values)
Particulate Matter ($PM_{2.5}$)	Annual mean	25

3.0

Approach and Methodology

3.0 Approach and Methodology

3.1 Air Quality Neutral

The guidance relating to Air Quality Neutral follows a tiered approach, such that all developments are expected to comply with minimum standards for emissions associated with land-use. Compliance with "Air Quality Neutral" is then founded on emissions benchmarks that have been derived for both building (energy) use and road transport in different areas of London. Developments that exceed the benchmarks are required to implement on-site or off-site mitigation to offset the excess emissions.

The adopted approach has involved the calculation of emissions from the Proposed Development, and to compare this figure with the calculated building emissions benchmark.

4.0

Impact Evaluation

4.0 Impact Evaluation

4.1 Air Quality Neutral Assessment

4.1.1 Building Emissions

An estimate of the Total Building Emission Benchmark has been calculated and is presented in Table 5 and . These data are based upon the most recent area schedule published on 22nd November 2019 (Table 1).

Table 5 Building Emissions Benchmark – NO_2

Land Use	Gross Internal Area (GIA) (m^2)	Pollutant	Emissions Benchmark (g/m^2/annum)	Benchmarked Emissions (kg/annum)
B1 Office	2888.6	NO_X	30.8	89.0

The Total Building Emission has been estimated from the anticipated natural gas consumption of the two boiler units used to supply domestic hot water as presented in Appendices B and C.

Table 6 presents the calculation of the Total Building Emissions for the development.

Table 6 Development Total Building Emission

Boiler	Units	NO_x emission rate per unit mg/kWh	Operation Hours (hours/annum)	Annual Gas Consumption per unit kWh	NO_x emission (kg/annum)
Lochinvar Ecocharger ECH52-370GCE	2	36	8760	465156	33.5

The Total Building Emission is anticipated to be less than the Total Building Emissions Benchmark (BEB) for this development and therefore meets Air Quality Neutral requirements.

4.1.2 Transport Emissions

4.1.2.1 Introduction

The Proposed Development is nominally a “car-free” development and it is anticipated that there will be minimal trip generation. In order to demonstrate that the development meets the transport benchmarks, a reveres calculation has been undertaken to calculate the number of vehicle trips which would be required to exceed the threshold.

4.1.2.2 Benchmark Trip Rate

Benchmark trip rates provided in the GLA 80371 guidance are based on values in the Trip Rate Assessment Valid for London (TRAVL) database. TRAVL benchmark trip rates for B1 land use in Inner London are presented in These data are based upon the most recent area schedule published on 22nd November 2019 (Table 1).

Table 7.

These data are based upon the most recent area schedule published on 22nd November 2019 (Table 1).

Table 7 Back Calculation Table for B1 Use

A. Classification	B. Floor Area (m^2)	C. Emissions Benchmark (g/m^2/annum)	D. NOx Emission (kg/annum)	E. NOx Vehicle Emission Rate (g/veh/km)	F. Average distance travelled by car per trip (km)	G. Trips Required to Exceed Threshold (1000xD) / (ExF)
B1 Office	2888.6	11.4	32.9	0.37	7.7	11558

These calculations indicate that the development would need to generate a total of (11558)/365=33 trips per day to exceed the Air Quality Neutral Benchmark.

It is therefore concluded that the development is “air quality neutral” with respect to transport emissions.

5.0

Mitigation

5.0 Mitigation

5.1 Air Quality Neutral

It has been demonstrated that the development's NO_x building emissions meet the Air Quality Neutral benchmark by 55.5 kg NO_2 kg/annum, based on an assumed continuous operation scenario.

The Proposed Development is nominally 'car-free', lying in close proximity to a comprehensive public transport network. The number of trips generated by the development would need to exceed 33 trips per day before the Transport Benchmark was exceeded.

As such, the development is therefore considered to be compliant with the Air Quality Neutral building emissions and transport benchmarks, and no further mitigation measures or additional abatement will be required.

6.0

Conclusions

6.0 Conclusions

The Air Quality Neutral Assessment indicated that both transport and building related emissions for the Proposed Development are likely to be Air Quality Neutral, therefore no further mitigation measures are required.

The development proposals are therefore compliant with the requirements of the relevant Supplementary Planning Guidance and new draft London Plan.

7.0

References

7.0 References

Air Quality Consultants (2014). Air Quality Neutral Planning Support Update: GLA 80371.

Department for Environment, Food and Rural Affairs (Defra) (2016). Local Air Quality Management Policy Guidance (PG16).

Department for Environment, Food and Rural Affairs (Defra) (2016). Local Air Quality Management Technical Guidance (TG16).

Department for Environment, Food and Rural Affairs (Defra) (2019). The Clean Air Quality Strategy.

Greater London Authority (GLA) (2014). Sustainable Design and Construction Supplementary Planning Guidance.

Greater London Authority (GLA) (2016). The London Plan.

Greater London Authority (GLA) (2019). The draft New London Plan (https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/draft-london-plan-consolidated-suggested-changes-version-july-2019)

HMSO (1990). 'The Environmental Protection Act', London: HMSO.

HMSO (1995). 'The Environment Act', London: HMSO.

HMSO (2002). 'Statutory Instrument 2002 No. 3043, The Air Quality (England) (Amendment) Regulations 2002', London: HMSO.

HMSO (2010). Statutory Instrument 2010 No. 1001, The Air Quality Standards Regulations 2010, London: HMSO.

Institute of Air Quality Management (IAQM) (2016). Land-Use Planning and Development Control: Planning for Air Quality.

London Borough of Camden (2017). Air Quality Annual Status Report.

London Borough of Camden (2017). Local Plan.

London Borough of Camden (2019). Air Quality Planning Guidance.

Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework.

8.0

Glossary

8.0 Glossary

Term/Acronym	Details
µg/m^3	Micrograms (one-millionth of a gram) per cubic metre of air
AQAP	Air quality action plan
AQMA	Air quality management area. Areas where the air quality objectives are likely to be exceeded. Declared by way of an order issued under the Section 83(1) of the Environment Act 1995.
AQO	Air quality objective. Air quality targets to be achieved locally as set out in the Air Quality Regulations 2000 and subsequent Regulations. Objectives are expressed as pollution concentrations over certain exposure periods, which should be achieved by a specific target date. Some objectives are based on long term exposure (e.g. annual averages), with some based on short term objectives. Objectives only apply where a member of the public may be exposed to pollution over the relevant averaging time.
AQS	Air quality strategy
CPG	Camden Planning Guidance
Defra	Department for Environment, Food and Rural Affairs
ELV	Electric Vehicle
EPUK	Environmental Protection UK
EU	European union
Exceedance	Concentrations of a specified air pollutant greater than the appropriate Air Quality Objective.
GIA	Gross Internal Area
GLA	Greater London Authority
HDV	Heavy duty vehicle
HGV	Heavy Goods Vehicle
IAQM	Institute of Air Quality Management
LA	Local authority
LAQM	Local air quality management
LAQM, TG	Local air quality management technical guidance
LBC	London Borough of Camden
LDV	Light duty vehicle
LGV	Light Goods Vehicle
Limit Values / EU limit values	The maximum pollutant levels set out in the EU Daughter Directives on Air Quality. In some cases, the limit values are the same as the national air quality objective but may allow a longer period for achieving.
LLAQM	London Local Air Quality Planning Guidance
LT	Long-term averaging period (i.e. Annual mean)
NO_2	Nitrogen dioxide
NO_x	Oxides of nitrogen
NPPF	National planning policy framework
PM_{10}	The fraction of particulates in air of very small size (less than 10 micrometres).
$PM_{2.5}$	Fine particles in the (ambient) air 2.5 micrometres or less in size.
SPD	Supplementary Planning Document
SPG	Supplementary Planning Guidance
TA	Transport Assessment
TC	Transport Consultant
TRAVL	Trip Rate Assessment Valid for London

Appendices

Appendix A Scoping Correspondence

Hodgkiss, Glyn

From: Parkes, Tom <Tom.Parkes@camden.gov.uk>
Sent: 21 November 2019 09:14
To: Gubb, Curtis
Cc: Chapman, Mark; Queremel, Carlos
Subject: RE: Scoping and Screening Exercise – Diorama Development

Categories: Filed by Newforma

Hi Curtis,

Please refer to the page about 'Air quality assessments in planning applications' on our website: https://www.camden.gov.uk/air-quality-assessment

The information presented should be sufficient for applicants to determine whether/what type of air quality assessment is required.

You can also seek pre-planning application advice here: https://www.camden.gov.uk/pre-planning-application-advice

Regards,

Tom Parkes
Senior Air Quality Officer

Telephone: 020 7974 4887

From: Gubb, Curtis <c.gubb@cundall.com>
Sent: 20 November 2019 14:17
To: Queremel, Carlos <Carlos.Queremel@camden.gov.uk>
Cc: Parkes, Tom <Tom.Parkes@camden.gov.uk>; Chapman, Mark <m.chapman@cundall.com>
Subject: FW: Scoping and Screening Exercise – Diorama Development

Hi Both,

Could you advise if you have received this scope and screening assessment? Want to ensure the correct person has viewed it.

Many thanks,
Curtis

Curtis Gubb
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1

From: Gubb, Curtis
Sent: 19 November 2019 10:21
To: 'tom.parkes@camden.gov.uk' <tom.parkes@camden.gov.uk>
Cc: Chapman, Mark <m.chapman@cundall.com>
Subject: Scoping and Screening Exercise – Diorama Development

Hi,

On behalf of our client, we have been instructed to undertake a scoping and screening exercise to ascertain the potential need for an Air Quality Assessment to accompany an application for planning permission for the proposed development at Diorama located 17 – 19 Park Square East.

Site Location

We have reviewed the following phases of the development against guidance from the Institute of Air Quality Management (IAQM) and the GLA and identified the following:

- Construction Phase
  - Impacts
    - The development is considered unlikely to:
      - Have 'ecological receptors' within 50 m of the boundary of the site; or 50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s)
    - The development is considered likely to:
      - Have 'human receptors' within 350 m of the boundary of the site; or 50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s)
    - In accordance with GLA guidance, an air quality dust risk assessment may be required.
- Operation Phase
  - Exposure
  - Stage 1 Criteria
    - The development is considered unlikely to:
      - Have < 10 residential units and a site area of < 0.5 ha
    - The development is considered likely to:
      - Have more than 1,000 m2 of floor space for all non-residential uses
        - However, it is unlikely to have < 10 parking spaces or a centralised energy facility or combustion process(es)
    - In addition to these criteria, the following is considered:
      - Background and future baseline air quality is considered likely to approach or exceed national air quality objectives
      - There are heavily trafficked roads, with emissions that could give rise to sufficiently high concentrations of pollutants (in particular NO_2), that would cause unacceptably high exposure for users of the new development
      - There are no sources of odour and/or dust that may affect amenity for future occupants of the development
    - These criteria are more stringent where potential traffic impacts may arise on roads where concentrations are close to the objective.

        - The development does lie within an Air Quality Management Area (AQMA) - as an indicator of local hotspots where the air quality objectives may be exceeded.
        - While, the whole authority is an AQMA , it is anticipated that affected roads are likely to have concentrations above 90% of the objective

        - In accordance with IAQM guidance, as none of the Stage 1 criteria are met there should be no requirement to carry out an air quality assessment for the impacts of the local area's emissions on the proposed development itself, to assess the exposure that residents or users might experience.

    - Impacts
    - Stage 1 Criteria
        - In accordance with IAQM guidance, as none of the Stage 1 criteria are met there should be no requirement to carry out an air quality assessment for the impact of the proposed development on the local area, and the impacts can be considered to have insignificant effects.

- Air Quality Neutral
    - The development is considered unlikely to:
        - Have 10 or more residential dwellings (or an area of more than 0.5 ha)

    - The development is considered likely to:
        - Have a floor space of 1,000 sq. m or more (or the site area is 1 ha or more), for all non-residential uses

    - In accordance with the London Plan, air quality neutral policy would apply to this development.

We intend to progress on the basis that an Air Quality Assessment has not been requested by the Council, unless confirmation of a requirement to undertake one is received.

Many thanks,

Appendix B Boiler Technical Data - Lochinvar Eco Charger ECH52-370GCE

Water Heater Model		ECH32-220GCE	ECH33-370GCE	ECH52-370GCE	ECH63-370GCE	ECH87-480GCE	ECH106-480GCE	ECH129-480GCE
Nominal Input (Net)	kW	29.4	30.5	47.8	57.9	79.3	96.6	117.9
Nominal Input (Gross)	kW	32.7	33.9	53.1	64.4	88.1	107.3	131.0
Gas Flow Rate (Natural Gas)	m^3/hr	3.1	3.2	5.0	6.0	8.3	10.1	12.3
Nominal Output	kW	31.5	33.3	51.2	61.5	85.7	102.4	123.9
Efficiency and NOx Data								
Seasonal Efficiency (Building Regulations Gross CV)	%	96	98	96	95	97	95	95
Maintenance consumption value	MJ/M	459.9	515.1	515.1	515.1	733.2	733.2	733.2
Maintenance consumption value	kW/24Hr	4.2	4.7	4.7	4.7	6.7	6.7	6.7
Efficiency Data - ErP and Energy Label								
Ecodesign Energy Label rating		A	A	A	A	N/A	N/A	N/A
Water Heater efficiency	%	91	91	91	90	93	93	92
NOx Emmissions								
NOx emission (Weighted)@0% O2	mg/kWh	24	32	36	37	34	36	37
General Data								
Recovery Rate @ 44°C	l/hr	610	640	990	1200	1700	2000	2400
Recovery Rate @ 50°C	l/hr	540	570	870	1100	1500	1800	2100
Recovery Rate @ 56°C	l/hr	480	510	780	930	1300	1600	1900
Dimensions (Height)	mm	1390	1925	1925	1925	2060	2060	2060
Dimensions (Width)	mm	N/A	N/A	N/A	N/A	900	900	900
Dimensions (Diameter)	mm	705	705	705	705	850	850	850
Storage Capacity	litres	220	374	374	374	488	488	488
Weight (Empty)	kg	177	214	214	214	405	405	405
Weight (Full)	kg	397	588	588	588	968	968	968
Hot Outlet Connection (Inches)	BSP	R1 ½	R1 ½	R1 ½	R1 ½	R1 ½	R1 ½	R1 ½
Cold Feed Connection (Inches)	BSP	R1 ½	R1 ½	R1 ½	R1 ½	R1 ½	R1 ½	R1 ½
Gas Connection (Inches)	BSP	R ¾	R ¾	R ¾	R ¾	R ¾	R ¾	R ¾
Electrical Requirements		230V /1Ph/ 50hz						
Power Consumption (Peak)	W	45	45	75	115	95	145	240
Sound Power Level	LWA(db)	46	47	55	59	54	59	62
Nominal Flue Gas Temperature	°C	45	50	60	65	50	55	60
Max Outlet Temperature	°C	80	80	80	80	80	80	80
Maximum Working Pressure	bar	8	8	8	8	8	8	8

Appendix C Boiler Emission Calculations

Calculation

1. Total NO_x emissions per unit = 36 mg/kWh @ 0% O_2

3. Assuming that the unit is in continuous operation, annual natural gas consumption =53.1kW x 24 x 365 = 465156 kWh

4. On this basis, NO_x emission rate is 36 x 465156 = 14884992 mg/year per unit

= 29769984 mg/year per 2 units

Total emission from 2 units = 29.8 kg NOx /year.

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