

Report for:

Madlins

Brunel Walk redevelopment and Turner
Avenue Estate improvements

Air Quality Neutral Assessment

Status: Final

Date: 07.09.2022

Author	 Christine Park Senior Environmental Consultant
Reviewed & Approved By	 Graham Parry Managing Director
Report For	Madlins 60 Gray's Inn Road London WC1X 8AQ
Date	07/09/2022
Version Number	A4138/AQN/04
Status	Final

This report has been prepared by ACCON UK Limited with all reasonable care and diligence within the terms of the contract with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. We accept no responsibility to third parties to whom this report, or any part, thereof is made available. Any such party relies upon the report at their own risk.

Contents

1. Introduction.....	4
2. Methodology	5
2.1. Calculation of Transport Emissions	5
2.2. Calculation of Building Emissions	6
3. Results	7
3.1. Calculated Transport Emissions.....	7
3.2. Calculated Buildings Emissions.....	7
4. Conclusions.....	8
Appendix 1 Site Location	9

1. INTRODUCTION

ACCON UK Limited (ACCON) has been commissioned by Madlins to undertake an Air Quality Neutral Assessment (AQN) for the proposed redevelopment at Brunel Walk, Haringey, London, N155HQ and Turner Avenue Estate, Haringey, N155DG.

The proposed scheme is for four the Redevelopment of Brunel Walk to provide 45 new Council rent homes in four buildings ranging from three to four storeys high including 39 apartments and 6 maisonettes. Provision of associated amenity and play space, cycle and refuse/recycling stores and 4 wheelchair parking spaces. Reconfiguration and enhancement of existing parking areas and outdoor communal areas and play spaces on the Turner Avenue Estate.

The western block will be accessed from Elmar Road, the central two blocks through Turner Avenue via a reconfigured landscape, and the eastern block from Kirkton Road.

The proposed development is located within the administrative boundary of the London Borough of Haringey (LBH).

The site location plan is provided in **Appendix 1**.

This AQN assessment has been undertaken in accordance with the London Plan¹, the Mayor's Air Quality Strategy,² the Sustainable Design and Construction Supplementary Planning Guidance (SPG)³ and relevant local planning policy.

¹ Greater London Authority, (2021). The London Plan: Spatial Development Strategy for Greater London.

² Greater London Authority, (2010). Clearing the air: The Mayor's Air Quality Strategy.

³ Greater London Authority, (2013). The London Plan: Spatial Development Strategy for Greater London.

2. METHODOLOGY

The National Planning Policy Framework⁴ requires that planning policies should contribute towards meeting EU limit values or national objectives for pollutants, accounting for cumulative impacts on air quality from individual sites. In order to prevent cumulative impacts arising due to a small volume of pollutants being emitted from a large number of sources, the London Plan and the Mayor's Air Quality Strategy also require that developments are at least 'Air Quality Neutral.'

The Sustainable Design and Construction SPG indicates that only where the emissions from 'major' developments fall below Transport and Building Emissions Benchmarks, defined in the Air Quality Neutral Planning Support Update (PSU)⁵, can they be considered Air Quality Neutral. Where developers do not meet these benchmarks, developers must mitigate their impacts on-site and if further action is required, emissions must be offset off-site.

As the proposed development comprises more than 10 residential units, this development is classed as a 'major' development and therefore this assessment has been produced in accordance with the requirements of the Sustainable Design and Construction SPG and associated PSU. The methods used to determine the transport and building emissions associated with this development are shown in **Section 2.1** and **Section 2.2** below.

2.1. Calculation of Transport Emissions

2.1.1. Transport Emissions Benchmark (TEB)

The parameters utilised in the calculations for the Transport Emissions Benchmark are identified in **Table 2.1**.

Table 2.1: Calculation Parameters for Transport Emission Benchmark (TEB)

Calculation Parameter	Data	Source
Gross internal floor area of C3 (m ²)	3,583	Proposed development plans
Number of Units	45	Accommodation Schedule
Average Number of Trips per Annum (trips/dwelling/annum) (C3 - Inner London)	407	GLA 80371 Air Quality Neutral Planning Support
Average Distance Travelled by Car per Trip C3 (km) Inner London	3.7	GLA 80371 Air Quality Neutral Planning Support
Emission Factors NO _x (g/vehicle-km) Inner London	0.370	GLA 80371 Air Quality Neutral Planning Support
Emission Factors PM ₁₀ (g/vehicle-km) Inner London	0.0665	GLA 80371 Air Quality Neutral Planning Support
Transport Emission Benchmark (TEB) NO_x	-24.6	
Transport Emission Benchmark (TEB) PM₁₀	-4.4	

⁴ Department of Communities and Local Government, (2012) National Planning Policy Framework. UK Government.

⁵ Air Quality Consultants and Environ, (2014). Air Quality Neutral Planning Support Update: GLA 80371.

2.1.2. Calculated Transport Related Emissions (TRE)

According to the traffic consultants, RGP, the proposed development will not provide any additional parking bays on-site.

Therefore, there is unlikely to be any additional vehicle movements as a result of the development.

2.2. Calculation of Building Emissions

2.2.1. Building Emissions Benchmark

The Building Emissions Benchmark (BEB) value derived from the PSU for the development is 26.2gNO_x/m²/annum for Class C3 (residential). These benchmark values are multiplied by the gross internal floor area for the specific land use classes to derive the BEB for the development as identified in **Table 2.2**.

Table 2.2: Building Emission Benchmark Calculations

Land Use	Use Class	Total Area (m ²)	BEB (gNO _x /m ² /annum)	BEB (kgNO _x /annum)
Gross internal floor area of C3 (m ²)	C3	3,583	26.2	93.9

2.2.2. Building Emissions - Development Baseline

There will be 2 No. external Air Source Heat Pump (ASHP) units on the roof of each block.

The external units serve an ambient loop which is used by the localised Water Source Heat Pump (WSHP) within the utility cupboards. These units will supply the heating and hot water to each dwelling.

As the ASHP are an electric based renewable heat pump, there will be NO_x or particulate emissions.

3. RESULTS

3.1. Calculated Transport Emissions

As outlined in **Section 2.1**, the information from the transport consultant indicates that there will not be any additional parking provided on-site, therefore it is highly unlikely that there would be any increase in vehicle movements as a result of the development.

The results of the assessment, which are shown in **Table 3.1**, identifies that the Transport Related Emissions (TRE) for the development is less than the Transport Emissions Benchmark (TEB) by **24.6kg** per year for NO_x and **4.4kg** per year for PM₁₀.

Table 3.1: Calculation Results for development Transport Emissions

Calculation Descriptor	NO _x emissions (kg/year)	PM ₁₀ emissions (kg/year)
Calculated Transport Related Emissions (TRE)	0.0	0.0
Transport Emissions Benchmark (TEB)	24.6	4.4
Difference	-24.6	-4.4

3.2. Calculated Buildings Emissions

The results, which are shown in **Table 3.2**, identifies that the DBE is less than the BEB by **93.9kg** per year.

Table 3.2: Calculation Parameters for development Building Emissions

Calculation Descriptor	NO _x emissions (kg/year)
Calculated Development Building Emissions (DBE)	0.0
Building Emissions Benchmark (BEB)	93.9
Difference	-93.9

4. CONCLUSIONS

In order to determine whether the development is 'Air Quality Neutral' the building and transport emissions associated with the development were compared to Building and Transport Emissions Benchmarks outlined in accordance with the requirements of the Sustainable Design and Construction Supplementary Planning Guidance (SPG) accompanying the London Plan, and an associated Planning Guidance Update.

As there will be no predicted increases in vehicle movements, and the heating and power will come from ASHP and WSHP there will be a predicted total difference of **-118.5kg** per year for NO_x and **-4.4kg** per year for PM₁₀.

Accordingly, the development is classified as Air Quality Neutral.

APPENDIX 1

SITE LOCATION

Appendix 1: Site Location Plan





Email: enquiry@accon-uk.com

Reading Office:

Unit B, Fronds Park,
Frouds Lane, Aldermaston,
Reading, RG7 4LH
Tel: 0118 971 0000 Fax: 0118 971 2272

Brighton Office:

Citibase, 95 Ditchling Road,
Brighton, East Sussex, BN1 4ST
Tel: 01273 573 814

www.accon-uk.com