RAMBOLL ENVIRON

TECHNICAL NOTE

To:	Stanley Haines				
Cc:					
From:	Lesley Vining				
Date	10/02/2016	**File Ref:**	TNUK18-22493	**Issue:**	1
Subject:	**16-18 CHENIES STREET, LONDON, WC1E 7EX** **AIR QUALITY NEUTRAL ASSESSMENT**				

1. Introduction

At the request of the Sustainability Officer, additional information has been provided in relation to the air quality neutral assessment required to demonstrate whether the proposed development at 16-18 Chenies Street would meet the relevant emission benchmarks set out in the Mayor of London's Sustainable Design and Construction Supplementary Planning Guidance.

As the proposed development would be car free, the assessment has been limited to the emissions arising from the buildings, as those from transport would be negligible.

Information on the existing and proposed boilers were supplied by the Applicant's Mechanical and Electrical Engineers, and are detailed in Table 1. It should be noted that the choice of plant is yet to be finalised and the consumption figures are still provisional at this stage in the project. As such the assessment completed should be considered as indicative.

The expected annual building emissions of NO_x is provided in Table 1. The calculated emission benchmark is provided in Table 2, together with a comparison with the actual expected emissions.

Table 1: Annual Building Emission

Plant	**NO_x Emission (mg/kWh)**	**Assumed average daily operating hours**	**Annual NO_x Emission (kg/annum)**
2 x 60 kw boilers	28[1]	12	14.7
2 x 80 kw boilers	33[2]	12	23.1
1 x 20 kw boiler	22[3]	12	3.9
Total predicted development building emission (kg/annum)			41.7
Notes [1]Assumed Hot Water Boiler model Buderus/Worcester GB 162 [2]Assumed Hot Water Boiler model Remeha EcoPro 80 [3] Assumed Central Heating Boiler model Potterton Gold Combi Boiler			

Table 2: Air Quality Neutral Assessment – Building Emission Benchmark

Class	Description	Gross Floor (Internal) Area (m^2)	NO_x Benchmark (g/m^2)	Estimated Development NO_x Emission (kg/annum)
Class C1	Hotels	907	70.9	64
Class D1 (c-h)	Schools, Libraries etc.	2,858	31.0	89
Class D2 (a-d)	Cinemas, Concert Halls etc.	482	90.3	44
Total Building Emission Benchmark				197
Total predicted development building emission (kg/annum)				42
Difference between predicted development building emission and Building Emission Benchmark				**-155**

2. Conclusions

The assessment indicates that the emissions from the existing and proposed boilers would comfortably meet the building emission benchmarks. It is therefore concluded that the proposed development can be considered to be air quality neutral.

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