Emissions Reduction and Monitoring Plan

Virtus London 14

Virtus London 14 Ltd

Project Reference: 18399/APP/2022/411
Project number: 60731594

July 20255

Delivering a better world

Quality information

Prepared by	Checked by	Verified by	Approved by
Flo Kirk-Lloyd Principal Air Quality Consultant	Danny Duce Associate Director – Air Quality and Permitting	Angela Graham Technical Director – EHS Permitting	Danny Duce Project Manager

Revision History

Revision	Revision date	Details	Authorized	Name	Position

Distribution List

# Hard Copies	PDF Required	Association / Company Name

Prepared for:

Virtus London 14 Ltd

Prepared by:

Flo Kirk-Lloyd
Principal Air Quality Consultant

AECOM Limited

Table of Contents

1. Introduction 1
2. Plan 1
Annual Emissions Data 1
Viability Study 1
Proposed Improvements 2
3. Review 3
Appendix A - Air Quality Conditions Memo ..... **Error! Bookmark not defined.**

Tables

Table 1. ERMP Timetable 2

1. Introduction

1.1 Planning permission reference 18399/APP/2022/411 was issued by the London Borough of Hillingdon (LBH) subject to a number of conditions, including Condition 14 which relates to preparation of an Emission Monitoring Plan (which has been developed and provided to LBH and is awaiting a response) and Condition 13 which requires the preparation of an Emissions Reduction and Management Plan (ERMP). Condition 13 states:

"Prior to the first use of the site as a data centre, an Emission Reduction and Management Plan (ERMP), shall be submitted to and approved in writing by the Local Planning Authority. This shall outline and commit to a programme for replacing the diesel backup units with cleaner/less polluting units, within clear time scales.. This shall include (but not necessarily be limited to) the following:

(i) A review of options for reducing NOx and PM2.5 emissions impacts for the National Grid power failures;

(ii) A feasibility study including benefit analysis for potential upgrades of the backup generators or other changes to infrastructure (e.g. SCR), type of fuel, generator type and operational regimes on site that could reduce emissions over time. The cost benefit analysis shall include all impacts (monetised and non-monetised) on environment (built and natural) and human health.

(iii) Use of the above information to propose appropriate changes in the generators type, selection of generators or other potential options for decreasing emissions over time; and

(iv) Proposal of an appropriate timescale for improvements.

Thereafter the development shall be implemented and operated in accordance with these details.

1.2 This document has been prepared in order to meet the requirements of Condition 13 and follows a methodology used for another Virtus data centre which has been approved by LBH.

2. Plan

2.1 The aim of this ERMP is to minimise the emissions associated with the back-up generators to be installed at the site over the longer term by maximising the use of any new or improved relevant technology. The development has been approved (subject to conditions) for a period of 30 years and it is hoped that actions set out within this ERMP will ensure that the associated emissions will be temporary.

2.2 Details of the plan are set out below, with a timetable set out in Table 1.

Annual Emissions Data

2.3 Emissions data will be calculated and submitted on an annual basis following the methodology set out within the EMP. This data will also be evaluated by Virtus on a 5 yearly basis (as a minimum) in order to ensure that appropriate actions are taken to minimise any exceedance of the agreed emissions limits as set out within the EMP. This requirement is part of the Emissions Monitoring Plan, however, it is repeated here for information as the resulting data will inform the viability study.

Viability Study

2.4 The Viability Study will be conducted in order to evaluate the viability of any alternative technology and/or processes in order to reduce the emissions of NO_X and/or $PM_{2.5}$. The Viability Study will review emissions performance and available technology based on BAT (Best Available Technology). This will aim to identify how advancements in technology or processes could be used to:

- Reduce the emissions associated with national grid failures;

- Reduce the emissions associated with testing and maintenance regimes;
- Improve SCR and/or alternative retrofitting emissions reduction systems; and
- Reduce emissions by the use of alternative fuels/technologies.

2.5 Benefit analysis will be carried out relating to the potential for upgrades and/or replacement of the backup generators or other changes to infrastructure, fuel type, generator type, and operational regimes to reduce emissions from the site. Alternative backup solutions will also be evaluated, such as battery backup, fuel cells and secondary power supply.

2.6 Should the Viability Study not recommend replacement of the backup generators, it will identify a suitable timescale for a further review in order to identify where replacement will become viable.

Proposed Improvements

2.7 Proposed upgrades and/or replacement of the backup generators or other changes to infrastructure, fuel type, generator type, and operational regimes to reduce emissions from the site or any other changes identified as a result of the Viability Study will be issued to LBH no later than the end of year 21. This will include a details of how the proposal will reduce emissions as well as a timetable for the improvements. Following agreement, the proposals will be implemented in accordance with the agreed details, or in accordance with any revised planning or other agreement developed as part of the improvements.

2.8 Whilst some improvement may be viable within the span of the development (30 years), it is also expected that identified improvements or revisions will be utilised to provide the basis for any new emergency energy strategy to replace the permitted development following the approved 30 year period.

Table 1. ERMP Timetable

Year	Action
1	No action required
2	No action required
3	Emissions monitoring commences following EMP
4	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
5	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
	Evaluate emissions monitoring data against agreed limits.
6	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
7	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
8	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
9	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
10	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
	Evaluate emissions monitoring data against agreed limits
11	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
12	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
13	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
14	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations

Year	Action
15	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
	Evaluate emissions monitoring data against agreed limits
16	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
17	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
18	Submit emissions monitoring data for previous year including comparison against amount accounted for within damage cost calculations
19	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
20	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
	Evaluate emissions monitoring data against agreed limits
	Commence Viability Study
21	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
	Submit outcomes of viability study
22	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
23	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
24	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
25	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
	Evaluate emissions monitoring data against agreed limits
26	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
27	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
28	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
29	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations
30	Submit emissions monitoring data for previous year, including comparison against amount accounted for within damage cost calculations

2.9 No review of emissions monitoring data has been included for year 30 as no suggested improvements at this stage could impact emissions during the approved length of the development.

3. Review

3.1 The ERMP and its associated timetable will be reviewed to ensure it remains appropriate at the following intervals:

a. Prior to the commencement of each phase of development;

b. As a minimum, every 5 years following the review of emission levels against agreed limits;

c. Following the completion of the Viability Study; and

d. In the event that changes to Policy or regulations introduce new requirements.