



Condition 35

Generator Operating Regime

Colt Hayes, London

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1 Introduction

The purpose of this Technical Note is to partially discharge Planning Condition 35 of the Original Permission (ref. 38421/APP/2021/4045) as quoted below.

This technical note pertains to the partial discharge of Buildings 1 & 2 generators only. Separate submissions will be submitted for each development phase (as applicable).

Planning Condition 35 wording:

Prior to operation of the development, or each development phase, a formal declaration by the operator, supported by a manufacturer report describing the testing regime and annual hours required for the development, or each development phase, is to be submitted to and approved in writing by the Local Planning Authority. The number of testing hours is to not exceed 15 hours per year. The operating times should not be during school hours. Thereafter the development shall be implemented and operated in accordance with these details.

2 Generator testing regime

2.1 Generator operation

The Emergency Standby Generators (ESGs) are to be used purely as standby plant to provide emergency standby power in the event of grid failure. There is no capacity agreement in place or elective operation of the plant for generating revenue (e.g., STOR, Triad avoidance, Demand Side Response, Peak Demand, etc.). As such, operation of the generators is likely to be limited to monthly maintenance and testing only as outages are rare events.

2.2 Maintenance & Testing regime

The maintenance schedule for the generators is based on manufacturer guidelines. These guidelines help to prolong the life of the equipment, reduce the use of raw materials (e.g., replacement parts, oil changes) and to ensure the engines perform efficiently to prevent increases in pollutant levels or black smoke.

The proposed testing regime is presented in the table below. This is still subject to change as the site is not yet operational, and thus a confirmed schedule is not currently available. The final testing regime for this site is likely to be similar to other operational Colt sites.

During the application for the Environmental Permit from the Environment Agency (EA), an Air Quality dispersion model was completed assessing impacts from operation of the generators during maintenance and testing. This model did not predict any significant impacts local Air Quality from the proposed test regime. Additionally, there were no significant impacts predicted during the mains failure scenario with all ESGs simultaneously operating for 72 hours.

Where possible and practicable, the intention will be to avoid testing during peak traffic periods when background NOx has the potential to be elevated and to avoid testing during school hours. There may be instances where operational requirements dictate the timing and duration of generator maintenance.

Table 1 – Annual operational hours per generator

Generator Test Frequency	Description	Load Profile	Duration (per generator)	Total hours per year (per generator)
Monthly Black Building function test	The simulation of a mains failure (parallel operation)"to test the functionality, performance and protection of the standby generation system. All standby generators on a common bus may be operated for a maximum of 1 hour per month (maximum 12 hours per calendar year) to test its operational readiness in the "black building test".	Site load (approx. 30-50%)	1 hour	11
Annual external load bank test	To test each standby generators operational readiness.	25/50/75/100% load	2 hours	2
Total hours of operation per generator			13	13