

1 NON-TECHNICAL SUMMARY

This Supporting Information Document has been prepared for the purpose of supporting E.ON Energy Solutions Ltd in the application for a Medium Combustion Plant Environmental Permit for an energy centre supplying a district heating network (DHN) consisting of seven boilers and two Combined Heat and Power (CHP) engines.

An Environmental Permit is required for the above plant as per the Environmental Permitting (England and Wales) Regulations 2016, amended by the Environmental Permitting (England and Wales) Regulations 2018.

The DHN consists of a total of seven modular construction boilers; and a specified generator consisting of two CHP engines. Together these plant form a district heating centre for a new housing development in Walthamstow, London. The total thermal input to the boilers is 5.78 megawatt (MW) and 1.30 MW to the CHP engines.

The products of combustion from these plants are discharged vertically via four stacks, at a height of 32.68 m above ground level.

A scoping process undertaken with the Environment Agency (reference MCPD/9540, MCPD/9680 and MCPD/9692) identified that the seven modular boilers, each of 0.825MWth input, given they are less than 1 MWth input each, are all out of scope.

Hence this application is for a Specified Generator in the form of two CHP engines.

The specified generator screening tool was used however, due to the proximity of statutory designated areas to the west of the site, at less than 300m distance, comprising the Walthamstow Reservoirs SSSI which is part of the Lee Valley SPA and Ramsar Site, atmospheric dispersion modelling was undertaken. In addition, human receptor impacts were modelled due to the complexity of the surrounding building structures and distance to nearest dwellings. The modelling showed that operation of the Energy Centre is not considered to have any significant local air quality effects within the context of relevant air quality standards and national guidance. Maximum worst case scenario modelling identified the maximum annual mean process contribution (from all plant including the boilers to represent cumulative impacts) to be $0.73\mu\text{g}/\text{m}^3$ and the maximum percentile (99.79th percentile of hourly means) to be $2.4\mu\text{g}/\text{m}^3$. The typical scenario modelling reduced these values to $0.24\mu\text{g}/\text{m}^3$ and $0.78\mu\text{g}/\text{m}^3$ respectively. The predicted level of N deposition remains below the critical load range for the health of the ecosystems for the typical operating scenario. The acid load on the ecosystems also remains below the critical load limit. The results are therefore considered to be not significant.

The site will operate under the E.ON Energy Solutions Ltd (using the trade name E.ON Community Energy) environmental management and operating systems, with remote observation of parameters and routine preventative maintenance and servicing providing appropriate management and control of emissions.