

Goddards Green

Addendum to air quality assessment

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This technical note is an addendum to an air quality assessment¹ supporting an environmental permit application for Goddards Green Wastewater Treatment Works (WwTW) ('the Site').

The air quality assessment dated 17/08/2022 stated that the Site's combustion plant includes:

- A 1.79MWth CHP plant (MWM TCG 2016 V16 gas engine), which combusts the biogas produced by the digesters during anaerobic digestion to generate heat and electricity. Any excess electrical power is exported to the National Grid.
- Two backup boilers with an aggregated thermal input of 1.76MWth, which operate as duty and standby. The boilers operate on biogas and are used to maintain the digester temperature when the CHP plant is not operating.
- A flare, which is used during emergencies and maintenance of the CHP engines.
- A 1.73MWth diesel generator, which is for emergency use and testing.
- A 0.43MWth diesel backup generator, which is for emergency use and testing.
- A 1.11MWth Thermal Hydrolysis Plant (THP) boiler operating on biogas

The dispersion modelling for the air quality assessment included the 1.1MWth THP boiler, 1.79MWth CHP plant and 1.73MWth diesel generator. The backup boilers, backup diesel generator and flare were excluded for the following reasons: the backup boilers only operate when the CHP is not operating and the CHP was assumed to operate 100% of the time; the backup diesel generator is only used for up to 50 hours per year for emergencies and testing; and the flare is only used during emergencies and maintenance of the CHP engines which are likely to be infrequent occurrences.

Since the air quality assessment was submitted, the 0.43 MWth diesel back-up generator has been replaced with a 0.64MWth diesel back-up generator (still used for up to 50 hours per year for emergencies and testing) and the back-up boilers have been removed with all heating requirements provided by the THP's steam boiler.

The modelled scenario in the air quality assessment, which concluded that no exceedances of the Environmental Quality Standards at locations of relevant exposure are predicted due to operation of the Site, remains valid as the diesel backup generator and backup boilers were not included in the modelling due to the reasons outlined above. On this basis, there is no requirement to update the dispersion modelling or air quality assessment submitted in August 2022 despite the change in combustion plant at the Site.

¹ Mott MacDonald, 17th August 2022. Goddards Green – Air quality assessment to accompany environmental permit application.

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