

## Installation of two permanent and a temporary flue solution at West End Gate



### AT A GLANCE

**Industry Sector:** Residential

**The Challenge:** To design, construct and install two new permanent flue solutions and a temporary flue system solution that would be adaptable throughout the project development.

**Solutions and Services:**

- Surveying
- Design, manufacture and installation of two new permanent flue system solutions

- Design, manufacture and installation of a temporary flue solution
- 3D CAD drawings.

**The Benefits:**

- Flue systems that meet legislative requirements.
- A temporary flue solution that would adapt throughout each stage of the project development, in line with the builders evolving requirements.
- Strategic sequence of works ensuring minimal cost implications to the client.

West End Gate is a mixed-use development in London. Situated moments from the prestigious neighbourhoods of Marylebone and Little Venice, a real prime location for its residents.

The development comprises of 844 apartments, including 175 affordable properties, 8 shops and a restaurant along with a new public plaza.

Midtherm began working alongside the contractor in 2018, helping to develop a solution that would allow them safely to run 25% of the new boiler plant whilst the development was still under construction. With completion of the project due in early 2020's, this would be a complex logistical challenge, as consideration would need to be made for the ever changing development, a task Midtherm are well suited to!

After multiple discussions with the client the temporary flue solution would be to install a 850mm diameter flue dilution system that would be cleverly designed incorporating flanges and gaskets to enable it to be easily disassembled and reassembled, as well as being robust enough to retain the abundance of condensates and static pressure often associated with flue dilution systems serving condensing appliances.

The flue dilution system itself would connect onto 1No Ideal 1.5MW gas fired condensing boiler; to ensure minimal cost implications to our client, the temporary flue proposal incorporated as many elements of the future permanent flue as possible as the installation rose through the building structure.

## Our temporary flue dilution system installed on site





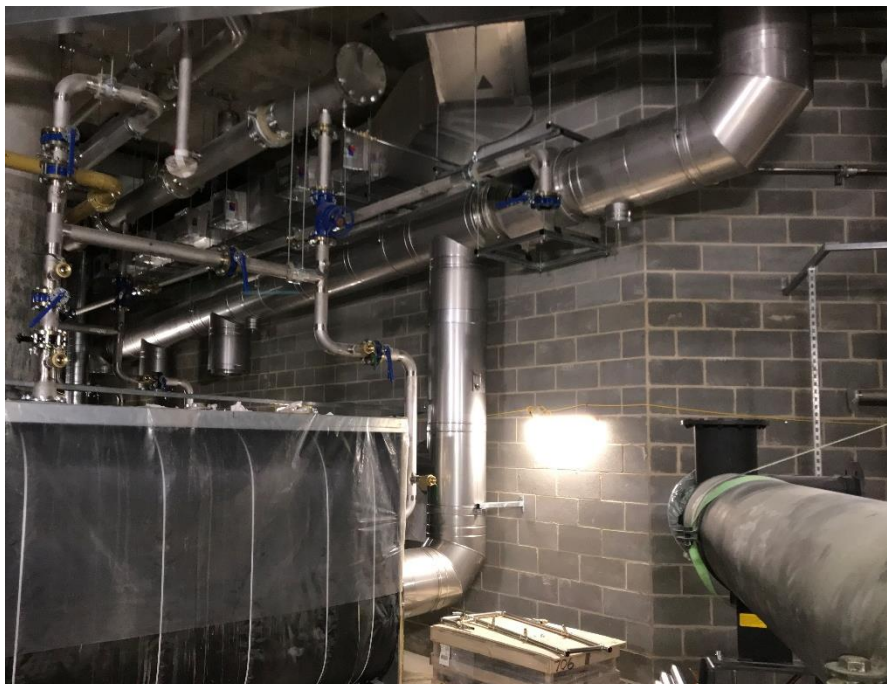
# CASE STUDY

How did we do this you ask? Our proposal for the temporary flue would be to install the permanent flue system solution within the plantroom connecting to 1No Ideal 1.5MW gas fired boiler, with the remaining 3No future Ideal 1.5MW gas fired boiler primary flue spigots capped off ready for connection onto the new appliances in the future. Alongside this we would install the CHP horizontal flue sections which would run adjacent to the main flue header, and install both the boiler and CHP flue risers up to the level at which the temporary flue dilution system would be installed.

The 500mm diameter boiler flue system would be utilised as the primary flue running into the dilution header and each flue system would be extended within the flue riser as the flue dilution system disassembled and then progressively moved upwards in the building throughout the duration of the development. Upon completion of all floor levels the flue dilution system was removed and the remaining permanent flue sections already installed, including the riser sections and primary flue connections onto the final 3No Ideal 1.5MW gas fired boilers. The connection onto the 1No Ener-G E425 gas fired CHP Unit, was completed once all appliances were in their final positions on site.



Our Boiler and CHP flue systems installed above roof level.



Sections of our boiler flue system installed within the plantroom

Although much smaller in diameter compared to the boiler flue system, the 250mm diameter CHP flue brought along it's own challenges including installation of the 3.5m tall, 945mm diameter silencer, weighing in at around 600kg!

This project showcases how Midtherm's depth of knowledge and four decades of experience enables us to overcome challenges and provide our clients with innovative solutions, making obstacles that may first appear impossible to overcome possible.

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# CONTACT

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