

Report on Boiler Flue systems

Site	Client	Date	24/06/20
Regents Park Estate Mardale (was Rydal) St Beads Hampstead Rd NW1 2PS	Bates Group Walker House School Road Rayne Essex, CM77 6ST		

Mardale Flue Velocity Test

Boilers - 3 x Broag 210-160

Combustion analysis 3 boilers all Full Load

Measured at terminal outlet

Log No	Log Time	CO (ppm)	CO2 %	NO (ppm)	O2 (%)	T1 (°C)	T2 (°C)	Tamb (°C)	Pressure (mbar)	CO/CO2 Ratio
106	13:01:33	52	9.9	17	3.4	59.9	-	37.3		0.0005

Calculated based on combustion analysis and boiler Rating

Mardale (Rydal) – 3 @ 193kW gross input boilers, and therefore 579kW total

Mardale (Rydal) – 588kW gross = 3.3m/sec at 300mm dia including Mesh

These calculations are to the original design

Volume flow (212) 809.1 m³/h

Flow velocity (212) 3.40 m/s

Air temperature (308) 53.5 °C

Air type (212) Supply air

Flue outlet diameter 290mm