



Department  
of Energy &  
Climate Change



# CHP Outreach Workshops

*Programme: Reducing Energy Costs with Combined Heat & Power*

Manchester 12<sup>th</sup> March 2015



## Manchester Town Hall Extension 2 x ENER-G 230 CHP Units



- Over 30 years of Cogeneration experience with our origins stemming from UMIST
- We use local suppliers: We have a core belief in investing in the local area and keeping our carbon footprint to a minimum
- Involvement in a number of local project, including: Radisson Edwardian Manchester , Hilton Manchester and the University of Manchester
- Manchester based on-site production/test facilities:
  - Maintain over 800 operational units in the UK
  - Largest UK CHP service team
  - Research and development
- We operate over 2500 units worldwide





- Listed landmarks of international significance known for exceptional craftsmanship and architectural quality
- Strategically a very important project for ENER-G to secure as a local business
- ENER-G worked with design team from an early stage to help integrate a CCHP system and add towards achieving a BREEAM Excellent rating
- One of a number of flagship projects within Manchester.





# Working together in Manchester



- **Manchester City Council:**  
Client/End User
- **Laing O'Rourke:**  
The main contractor
- **NG Bailey:**  
M&E subcontractor
- **BDP Manchester:**  
Appointed as consultants to design the energy centre
- **ENER-G Combined Power Ltd:**  
Appointed as a local CHP supplier



MANCHESTER  
CITY COUNCIL



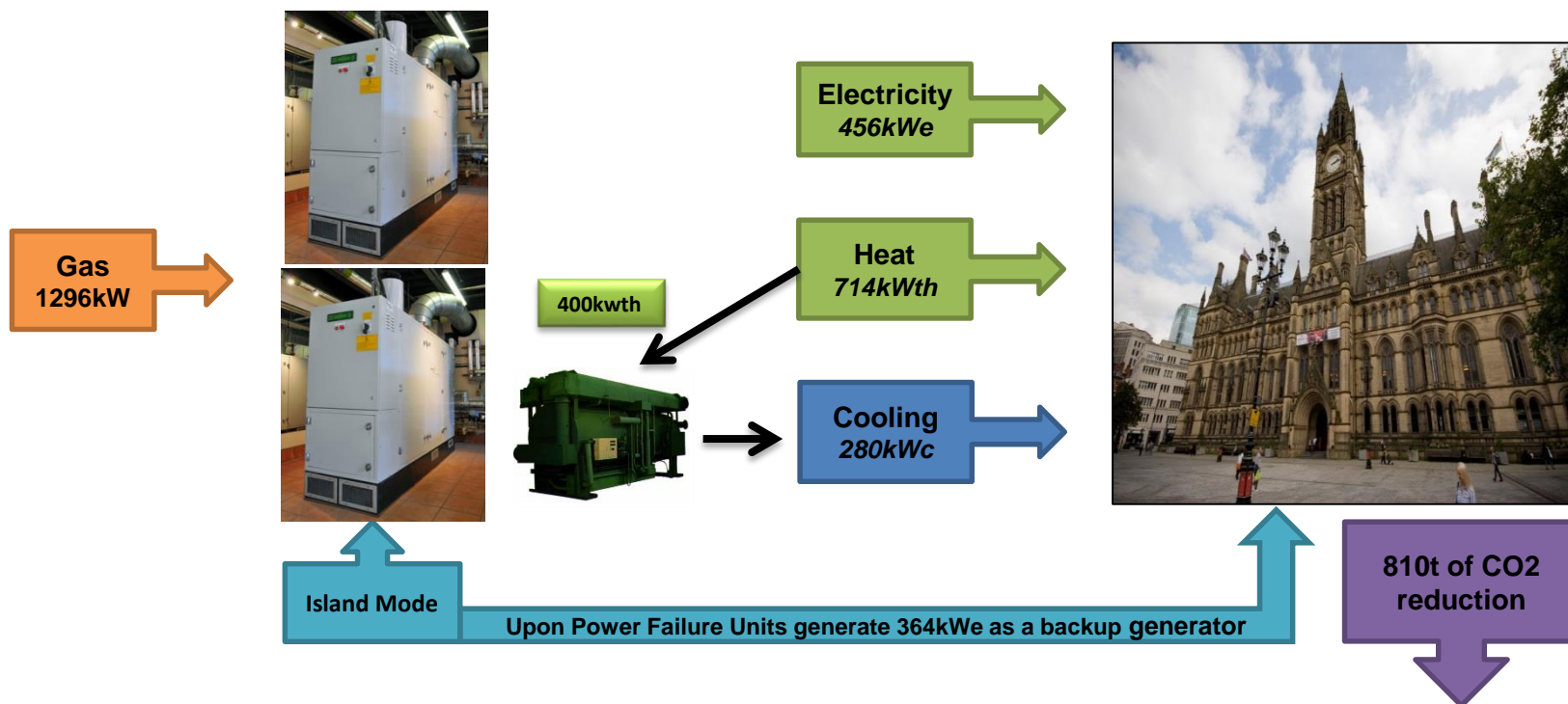
NG Bailey

**BDP.**



# What is powering the Town Hall Extension

## System Outputs

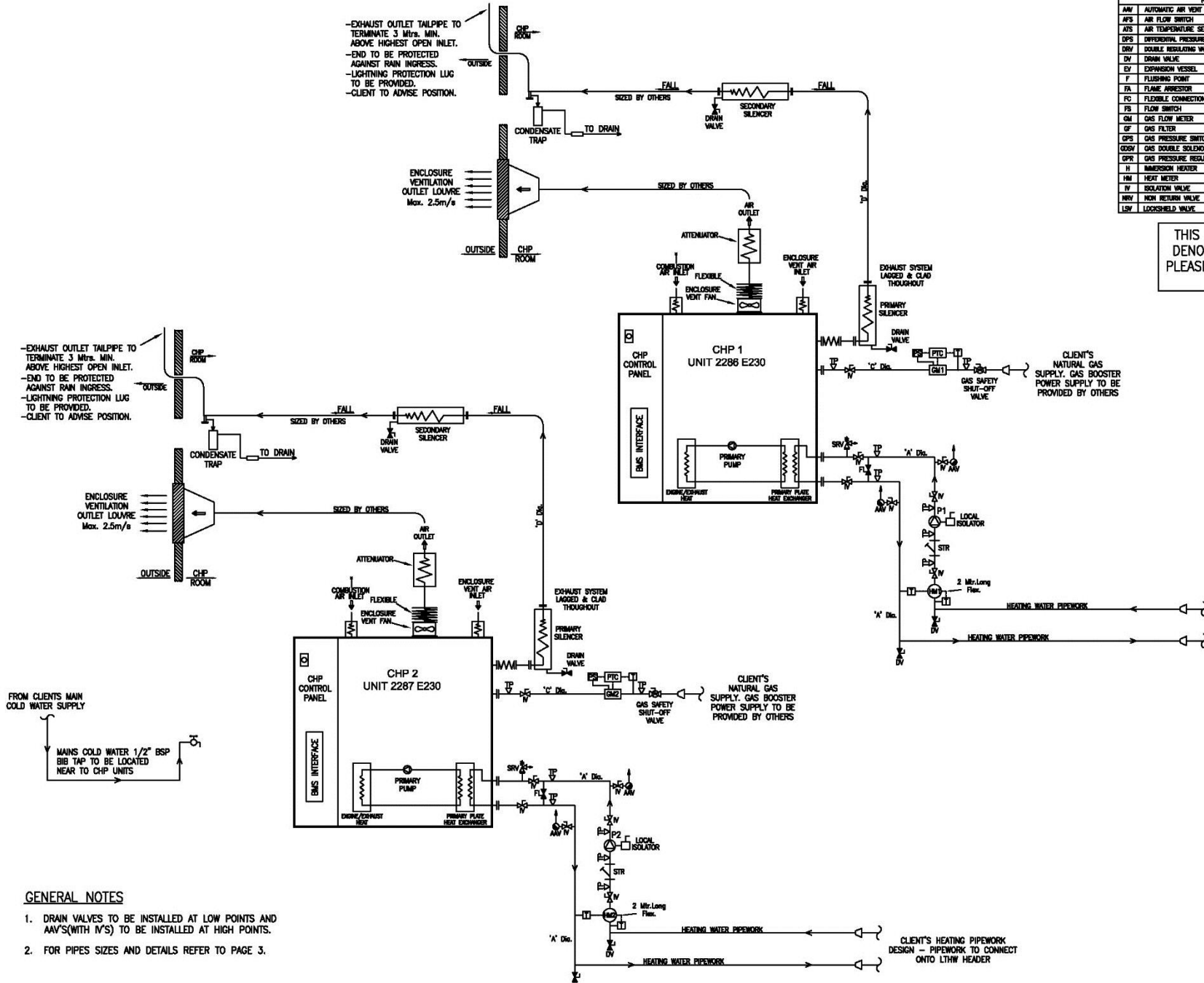


The Town Hall Extension facility has been set up with Island mode capabilities:

- Island mode also known as backup electricity generation
- Both units have the capability to detect a power failure and switch on as a back up generator
- Upon grid failure, G59 would trip and units would switch off
- Island mode operation initiates unit 1 and 2 to run up to load and synchronise
- Both units generate approx. 364kWe in island mode to be utilised for general electricity usage in an even of power failure

KEY NOTATION			
AAV	AUTOMATIC AIR VENT	LPS	LOW PRESSURE SENSOR
AFS	AIR FLOW SWITCH	MV	MIXING VALVE
ATS	AIR TEMPERATURE SENSOR	OP	OFFICE PLY (METERING STATION)
DPS	DIFFERENTIAL PRESSURE SWITCH	P	PUMP
DW	DOUBLE REGULATING VALVE	PG	PRESSURE GAUGE
DV	DRAIN VALVE	PI	PRESSURE INSTRUMENT
EV	EXPANSION VESSEL	PS	PRESSURE SENSOR
F	FLUSHING POINT	PT	PRESSURE TRANSMITTER
FA	FLAME ARRESTOR	PU	PURGE/VENT UNIT
FC	FLEXIBLE CONNECTION	QF	QUICK FALL CONNECTION
FS	FLOW SWITCH	SV	SOLENOID VALVE
GM	GAS FLOW METER	STR	STRAINER
GF	GAS FILTER	SRV	SAFETY RELIEF VALVE
GPS	GAS PRESSURE SWITCH	PRV	PRESSURE REGULATING VALVE
GSV	GAS DOUBLE SOLENOID VALVE	PTC	PRESSURE & TEMPERATURE COMPENSATOR
GPR	GAS PRESSURE REGULATOR	T	TEMPERATURE SENSOR
H	IMMERSION HEATER	TS	TEMPERATURE SENSOR
HM	HEAT METER	TP	TEST POINT
IV	ISOLATION VALVE	TP	TEMPERATURE GAUGE
NRV	NON RETURN VALVE	YS	YIELDING VALVE
LSV	LOCKSHIELD VALVE	YSD	YIELDING SPEED DRIVE

THIS SCHEMATIC DOES NOT DENOTE SCOPE OF SUPPLY. PLEASE REFER TO EQUIPMENT REFERENCE LIST.



REV	DATE	DESCRIPTION	DRN	CHK	APP
1		NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING			
2		THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE			
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<b>DRAWING TITLE</b> UNIT 2286-87 E 230 MANCHESTER TOWN HALL EXTENSION MECHANICAL SCHEMATIC					
<b>SHEET 1 OF 3</b>					
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<b>SHEET NO.</b> A3					

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