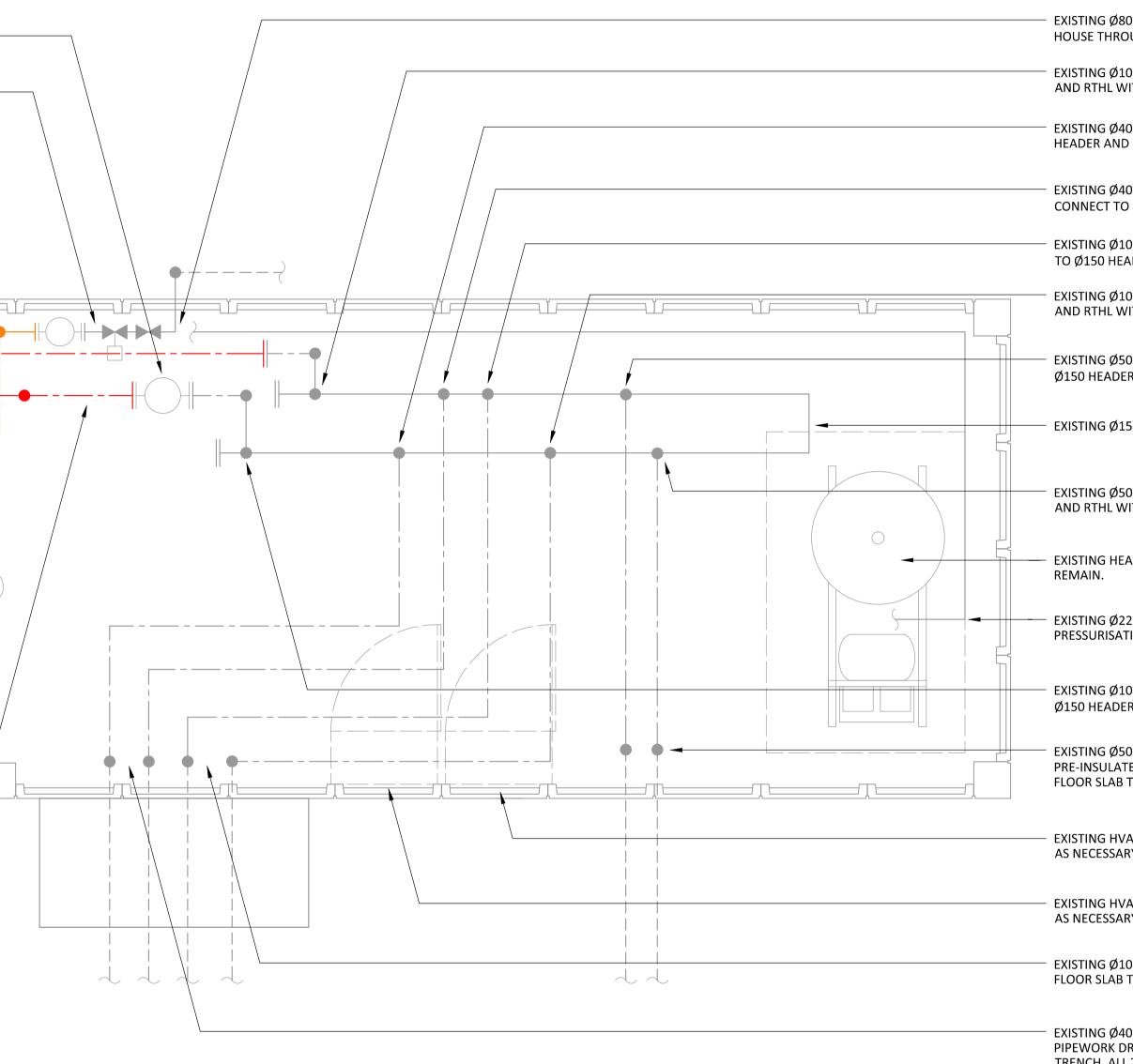
EXISTING Ø80 GAS AT L/L WITH EMERGENCY SOLENOID SHUT-OFF VALVE AND SUB-METER. ALL TO REMAIN.	
NEW Ø80 GAS RTHL.	
NEW Ø100 BOILER SHUNT RETURN ROUTED AT H/L.	
NEW Ø100 BOILER SHUNT RETURN DTLL TO CONNECT TO BOILER MANUFACTURER'S RETURN HEADER ASSEMBLY. REFER TO SCHEMATIC FOR EXACT PIPEWORK ARRANGEMENT.	
EXISTING INCOMING MCWS ENTERS BOILER HOUSE THROUGH FLOOR SLAB AND TRANSFORMS TO Ø22 COPPER WITH SC AND DC. PIPE RUNS AT L/L TO SERVE PRESSURISATION UNIT. ALL TO REMAIN.	
EXISTING INCOMING MCWS TO BOILER HOUSE ROUTED BELOW GROUND.)
NEW Ø80 GAS HEADER ROUTED AT H/L. Ø50 CONN. TO EACH BOILER WITH IV. REFER TO SCHEMATIC FOR FURTHER DETAILS.	\sim
3 NO. NEW Ø180 COMBUSTION EXHAUST FLUES CONNECT TO BOILERS AND RISES TO DISCHARGE ABOVE FLAT ROOF OF BOILER HOUSE. FLUES TO SET ACROOS AS NECESSARY TO USE EXISTING ROOF PENETRATIONS. ALL TO BE DESIGNED AND INSTALLED BY A SPECIALIST SUB-CONTRACTOR. BOILER MANUFACTURER TO BE CONSULTED TO ENSURE FULL COMPLIANCE WITH THEIR INSTALLATION INSTRUCTIONS.	
NEW BOILER PLANT MOUNTED ON EXISTING CONCRETE PLINTH. 3 NO. 191KW NATURAL GAS-FIRED CONDENSING BOILERS WITH MATCHING PIPEWORK HEADERS. REFER TO SCHEMATIC FOR FURTHER DETAILS.	
EXISTING CONCRETE PLINTH TO BE EXTENDED TO SUIT THE NEW BOILERS.	1
EXISTING ELECTRO-THERMAL LINKS TO BE REPOSITIONED DIRECTLY ABOVE	/
EXISTING ELECTRICAL DISTRIBUTION BOARD TO REMAIN.	A
EXISTING DOSING POT MOUNTED AT L/L. TO BE TAKEN DOWN AND RE-FIXED TO ENABLE INSTALLATION OF NEW BOILER PLANT. Ø25 INTERCONNECTING F&R PIPEWORK TO BE MODIFIED AS NECESSARY TO CONNEC TO TO NEW BOILER SHUNT HEADERS. REFER TO SCHEMATIC FOR FURTHER DETAILS.	/)
NEW Ø100 BOILER SHUNT FLOW PIPE CONNECTS TO BOILER PLANT FLOW HEADER AT L/L AND SETS UP TO CONNECT TO INLET OF EXISTING AIR/DIRT SEPARATOR.	

A1

EXISTING DIRT/AIR SEPARATOR MOUNTED IN Ø100 BOILER SHUNT FLOW

PIPE AT H/L. ALL TO REMAIN.



These lines measure 100mm in length when plotted correctly.

All scaled dimensions taken from this drawing shall be verified on site. This drawing is the property of KINGSWOOD Building Services Engineers Ltd. and no information contained hereon shall be copied, in whole or in part, or passed to any other party without written consent. Copyright 2016.

- 1. This drawing shall be read in conjunction with the relevant Kingswood specification(s) and all relevant Architect's and other Engineer's drawing(s). 2. Details are for tender purposes only and shall be verified on site by the Engineering
- Contractor where accuracy is critical. The exact location of all plant items/equipment and the route of all services shall be determined on site. 3. All plant, equipment, distribution system components and ancillaries shall be installed
- in strict accordance with the manufacturer's guidelines. 4. The installation personnel shall allow for changes in distribution system(s) invert levels (including any sets up and down etc.) as necessary to coordinate fully with the building
- structure and other M&E Services. 5. All LTHW Heating and Natural Gas pipework shall be black heavyweight mild steel tube to EN10255 (red primered finish). All fittings Ø50 and below shall be screwed to BS
- EN10241 and BS143. All fittings Ø65 and above shall be welded. 6. All Domestic Services pipework shall be copper tube to EN1057-R250 Table X with
- Geberit Mapress copper fittings (standard black CIIR Butyl Rubber seal rings). 7. All low points shall be fitted with a lockshield draincock. All high points shall be fitted with an automatic air vent.
- 8. All items of plant shall be fitted with isolating valves, and effective means of commissioning, draining and air venting, to enable inspection and/or maintenance works to be carried out without draining the entire system.
- 9. All pipework passing through walls and floor slabs shall be sleeved. All pipes passing through fire compartment walls and floor slabs shall also be fire stopped.
- 10. All LTHW Heating pipework shall be thermally insulated in accordance with the specification, Building Regulations Part L2: 2013, TIMSA Guide 2006 and BS 5422: 2001. All insulated pipework shall be identified with colour bands to BS 1710. All valves and flanges shall be provided with flexible removable insulation bags.
- 11. All Domestic Services plant, equipment, distribution system components and ancillaries shall be suitable for conveying wholesome (potable) water, shall be WRC / WRAS approved and shall comply with the Water Supply (Water Fittings) Regulations 1999. 12. All gas works shall be carried out by a Gas Safe registered Person in full accordance
- with the Gas Safety (Installation and Use) Regulations, BS6798, BS5449, BS5546-1, BS5440-2 and BS6891. All components shall be certified for use with natural gas. 13. Isolating valves, purge points and test points shall be fitted as necessary to the Natural
- Gas Service to comply with current guidelines and legislation. 14. All new Natural Gas Service pipework shall be fully identified in strict accordance with current statutory requirements and guidelines, in particular IGE/UP/2 Edition2 Clause
- 7.8.4. 15. All LTHW Heating flow rates to be measured on site prior to decommissioning works taking place.
- EXISTING Ø100 1970S BUILDING VT RETURN AT H/L DTLL TO CONNECT
- EXISTING Ø100 1970S BUILDING VT FLOW CONNECTS TO Ø150 HEADER AND RTHL WITH TWIN-HEAD PUMPSET. ALL TO REMAIN.
- EXISTING Ø50 GLASS HOUSES CT RETURN AT H/L DTLL TO CONNECT TO Ø150 HEADER. ALL TO REMAIN.
- EXISTING Ø150 HTG HEADER AT L/L. ALL TO REMAIN.
- EXISTING Ø50 GLASS HOUSES CT FLOW CONNECTS TO Ø150 HEADER AND RTHL WITH TWIN-HEAD PUMPSET. ALL TO REMAIN.
- EXISTING HEATING SYSTEM PACKAGED PRESSURISATION UNIT TO
- EXISTING Ø22 MCWS AT L/L TO SERVE HEATING SYSTEM
- EXISTING Ø100 BOILER SHUNT FLOW AT H/L DTLL TO CONNECT TO Ø150 HEADER. ALL TO REMAIN.
- EXISTING Ø50 GLASS HOUSES CT F&R DTLL AND TRANSFORM TO Ø63 PRE-INSULATED TWIN PIPE (UPONOR). PIPEWORK DROPS THROUGH FLOOR SLAB TO RUN IN BELOW GROUND TRENCH. ALL TO REMAIN.
- EXISTING HVAC CONTROL PANEL MOUNTED ON WALL. TO BE MODIFIED AS NECESSARY TO SUIT NEW BOILER PLANT.
- EXISTING HVAC CONTROL PANEL MOUNTED ON WALL. TO BE MODIFIED AS NECESSARY TO SUIT NEW BOILER PLANT.
- EXISTING Ø100 1970S BUILDING VT F&R DTLL AND DROPS THROUGH FLOOR SLAB TO RUN IN BELOW GROUND TRENCH. ALL TO REMAIN.
- EXISTING Ø40 CAIRNGORM WING VT F&R DTLL AND ENLARGE TO Ø65. PIPEWORK DROPS THROUGH FLOOR SLAB TO RUN IN BELOW GROUND TRENCH. ALL TO REMAIN.

	LEGEND			
ITEM	DESCRIPTION			
	PIPEWORK BELOW GROUND / IN FLOOR DUCT			
	PIPEWORK AT LOW LEVEL			
	PIPEWORK AT HIGH LEVEL			
	PIPEWORK IN CEILING / ROOF VOID PIPEWORK RISER / DROPPER			
•				
	DIRECTION OF FLOW			
AFFL	ABOVE FINISHED FLOOR LEVEL			
L/L	LOW LEVEL HIGH LEVEL			
H/L				
DTLL	DROP TO LOW LEVEL			
DTB	DROP TO BELOW DROP FROM ABOVE			
DFA				
RFB	RISE FROM BELOW			
RTA	RISE TO ABOVE			
LTHW	LOW TEMPERATURE HOT WATER			
MCWS	MAINS COLD WATER SERVICE			
СТ	CONSTANT TEMPERATURE			
VT	VARIABLE TEMPERATURE			
F&R	FLOW AND RETURN			
IV	ISOLATING VALVE (WHEELHEAD)			
LSV	LOCKSHIELD VALVE			
BV	BALL VALVE			
SC	STOPCOCK			
DC	DRAIN COCK			
HUDC	HOSE UNION DRAIN COCK			
AAV	AUTOMATIC AIR VENT			
TP	TEST POINT (BINDER)			
AG	ALTITUDE GAUGE			
PG	PRESSURE GAUGE			
TG	TEMPERATURE GAUGE			
PTG	COMBINED TEMPERATURE / PRESSURE GAUGE			
ERV	EXPANSION RELIEF VALVE			
DRV	DOUBLE REGULATING VALVE			
CS	COMMISSIONING STATION (DRV+OP)			
NRV	NON-RETURN VALVE			
DCV	DOUBLE CHECK VALVE			
STR	STRAINER			
FC	FLEXIBLE CONNECTION			
MV	MOTORISED VALVE			
TS	TEMPERATURE SENSOR			
DPS	DIFFERENTIAL PRESSURE SENSOR / SWITCH			
ETL	ELECTRO-THERMAL LINK			
КОВ	KNOCK-OFF BUTTON			

Τ1	TENDER ISSUE.	12.08.16 SPW -
ISSUE	DESCRIPTION	DATE DRN CHD
	KINGSW	OOD
	BUILDING SERVICES EL Chartered Mechanical & Electrico	
	ENGINEERING HOUSE, ANCHOR COURT, COMM T: 01254 870 730 ~ F: 01254 870 740 ~ E:	, ,
STATU	TENDER	
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TITLE PROPOSED HEATING & GAS LAYOUT

DATE	12.08.16	SCALE	1:20			
DRAWN	SPW	JOB No.	DRG No.	REV		
CHECKED	-	0747	56-601	Т1		
APPROVED	-	0/4/	30-001	11		
EXTERNAL REF. PLANTROOM XREF						
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- EXISTING Ø80 INCOMING NATURAL GAS SERVICE ENTERS BOILER HOUSE THROUGH WALL AT L/L. ALL TO REMAIN.
- EXISTING Ø100 BOILER SHUNT RETURN CONNECTS TO Ø150 HEADER AND RTHL WITH TWIN-HEAD PUMPSET. ALL TO REMAIN.
- EXISTING Ø40 CAIRNGORM WING VT FLOW CONNECTS TO Ø150 HEADER AND RTHL WITH TWIN-HEAD PUMPSET. ALL TO REMAIN.
- EXISTING Ø40 CAIRNGORM WING VT RETURN AT H/L DTLL TO CONNECT TO Ø150 HEADER. ALL TO REMAIN.
- TO Ø150 HEADER. ALL TO REMAIN.
- PRESSURISATION UNIT AND QUICK FILL POINT. ALL TO REMAIN.