

**Notes.**

- This drawing is for tendering purposes only and shall be read in conjunction with the accompanying technical specification and all associated project related drawings and documentation.
- All work shall comply with all relevant British & European Standards, BS Codes of Practices, Local Regulations and Byelaws applicable to the installation.
- It shall be the responsibility of the M&E Contractor to carry out a thorough survey of the building to acquaint himself with the full extent of the work and to prepare working drawings for approval prior to commencement of his installation.
- The M&E contractor shall be solely responsible to liaise and co-ordinate his work and installation with the works and installations of all other contractors.
- All drainage work to be carried out in accordance with BS 8301, BS 8005 and the building regulations.
- For exact location of rain water and foul water outlets, refer to the architects drawings.
- Surface water drains shall be either H.D.P.E. rigid twin wall carrier pipe by 'POLYPIPE PLC' (or similar approved) to B.S. EN 1401-1 or P.C.C. pipes to B.S. 5911 (Part 100) or vitrified clay to B.S. 65
- Foul water drains shall be either P.V.C. pipework by 'POLYPIPE PLC' (or similar approved) to B.S. EN 1401-01 or vitrified clay to B.S. EN 295
- All GRP underground tanks are to be bedded on and encased in 225mm C30 20mm AGG. Concrete strictly in accordance with the manufacturers instructions.
- All manhole and inspection chamber covers, frames in trafficked areas shall comply with either B.S. 407 - Part 1 Heavy duty covers to MA60, or B.S. EN 124 Grade D400 (11.5 Tonne wheel loading). Manhole/inspection chamber covers in paving/landscape to be Grade B125
- For drainage construction and pipe bed details refer to drawing No. D-700.
- All drainage branches to be 110mm for foul water & 150mm for surface water unless marked otherwise. All soil & vent stacks to have roddable access 150mm above ground floor slab level with removable access plates.
- All floor gullies to be trapped & roddable and to be a waste type gully for internal usage
- All drainage channels to have rodding access at ends of runs & be surrounded in c30 concrete surround to manufacturers details.
- All shallow drainage (<900mm cover) and drainage below floor slab to be incased in min 150mm concrete surround.
- All concrete surrounds for the drainage to be class dc2 (sulphate resisting)
- Cavity drainage details subject to Architect's detailed drawings.
- All Service Penetrations through walls & floors shall be suitably sleeved, sealed and fire stopped in accordance with Building Regulation Part B requirements.
- All pipework supports, hangers and anchors required to support and control the movement of the various pipes shall be supplied and fitted.
- Plugs shall be used during the course of the contract to prevent dirt getting into the pipes. Should a stoppage occur due to this cause, the trouble shall be rectified at the contractor's expense. The installation shall be thoroughly flushed clean before commissioning.
- The contractor shall ensure that the work is protected during installation and to keep openings sealed to prevent the entry of foreign matter into the system during construction.
- The contractor shall include for connecting up to every fixture throughout the building.
- The contractor will be responsible for submitting the following certificates when the installation is complete:
  - Certificate or statement of completion of entire installation.
  - Soil pipe and trap test certificates
  - Certificate or statement that installation complies with requirements of the local authorities.

C3 Htg F&R Reduced to 28mmØ  
L.Grđ UFH 22Ø Added 15.02.17  
C2 Updated as indicated 10.02.17  
C1 Construction Issue 20.12.16

Project:  
**24 CHURCH ROW HAMPSTEAD LONDON**

Architect:  
**CASSON CONDER PARTNERSHIP**

**Cu-tec Building Services Design**  
26 Park Street Tring Hertfordshire HP23 6AW  
tel. 01442 828 864  
e-mail. info@cu-tec.co.uk  
web. www.cu-tec.co.uk

Drawing Title:  
**MECHANICAL SERVICES HEATING AND H&CWS SERVICES SCHEMATIC**

Scale: 1:50 @ A1 Drawn by: BFH  
Date: 22.02.16 Chkd. by: SMG

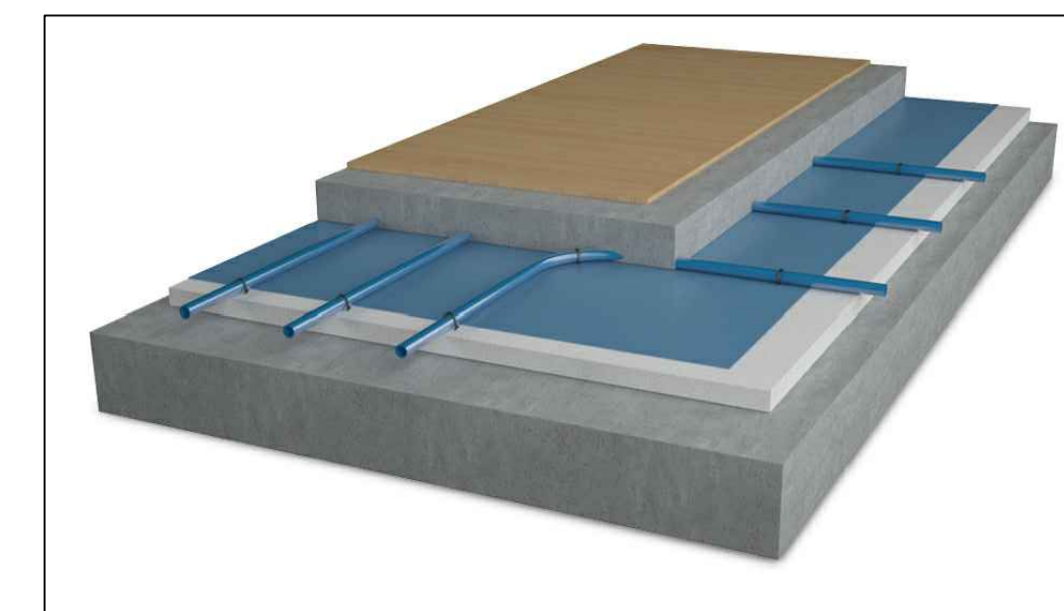
Drawing Number: 16.0622 - M - 301 Rev: C3

Drawing Status:  
**CONSTRUCTION ISSUE**

© copyright 2016  
All dimensions to be verified on site. Figured dimensions to be taken in preference to those scaled.  
This is a general arrangement drawing only. Manufacturers must adhere to the indicated design. All manufacturer details to be approved by client prior to construction. Client approved contractor is responsible for suitability of materials, form and manufacturing techniques.  
Unauthorised reproduction and use of information herein is strictly forbidden.

Notes.

- This drawing is for tendering purposes only and shall be read in conjunction with the accompanying technical specification and all associated project related drawings and documentation.
- All work shall comply with all relevant British & European Standards, BS Codes of Practices, Local Regulations and Byelaws applicable to the installation.
- It shall be the responsibility of the M&E Contractor to carry out a thorough survey of the building to acquaint himself with the full extent of the work and to prepare working drawings for approval prior to commencement of his installation.
- The M&E contractor shall be solely responsible to liaise and co-ordinate his work and installation with the works and installations of all other contractors.
- All drainage work to be carried out in accordance with BS 8301, BS 8005 and the building regulations.
- For exact location of rain water and foul water outlets, refer to the architects drawings.
- Surface water drains shall be either H.D.P.E. rigid drain twin wall carrier pipe by 'POLYPIPE PLC' (or similar approved) to B.S EN 1401-1 or P.C.C. pipes to B.S 5911 (Part 100) or vitrified clay to B.S 65
- Foul water drains shall be either P.V.C. pipework by 'POLYPIPE PLC' (or similar approved) to B.S. EN 1401-01 or vitrified clay to B.S. EN 295
- All GRP underground tanks are to be bedded on and encased in 225mm C30/20mm AGG. Concrete strictly in accordance with the manufacturers instructions.
- All manhole and inspection chamber covers, frames in trafficked areas shall comply to either B.S. 407 - Part 1 Heavy duty covers to MA60, or B.S. EN 124 Grade D400 (11.5 Tonne wheel loading). Manhole/inspection chamber covers in paving/landscaped to be Grade B125
- For drainage construction and pipe bed details refer to drawing No. D-700.
- All drainage branches to be 110mm for foul water & 150mm for surface water unless marked otherwise. All soil & vent stacks to have roddable access 150mm above ground floor slab level with removable access plates.
- All floor gullies to be trapped & roddable and to be a waste type gully for internal usage
- All drainage channels to have rodding access at ends of runs & be surrounded in c30 concrete surround to manufacturers details.
- All shallow drainage (<900mm cover) and drainage below floor slab to be incased in min 150mm concrete surround.
- All concrete surrounds for the drainage to be class dc2 (sulphate resisting)
- Cavity drainage details subject to Architect's detailed drawings.
- All Service Penetrations through walls & floors shall be suitably sleeved, sealed and fire stopped in accordance with Building Regulation Part B requirements.
- All pipework supports, hangers and anchors required to support and control the movement of the various pipes shall be supplied and fitted.
- Plugs shall be used during the course of the contract to prevent dirt getting into the pipes. Should a stoppage occur due to this cause, the trouble shall be rectified at the contractor's expense. The installation shall be thoroughly flushed clean before commissioning.
- The contractor shall ensure that the work is protected during installation and to keep openings sealed to prevent the entry of foreign matter into the system during construction.
- The contractor shall include for connecting up to every fixture throughout the building.
- The contractor will be responsible for submitting the following certificates when the installation is complete:
  - Certificate or statement of completion of entire installation.
  - Soil pipe and trap test certificates
  - Certificate or statement that installation complies with requirements of the local authorities.



Specification  
OMNIE Staple system using 16.5mm PE-RT pipe to DIN 4726 fixed using staples. Expansion foam to be installed around the perimeter of the room. The system to be designed, installed and commissioned to BS1264.

Pipe  
16.5mm PE-RT to DIN 4726

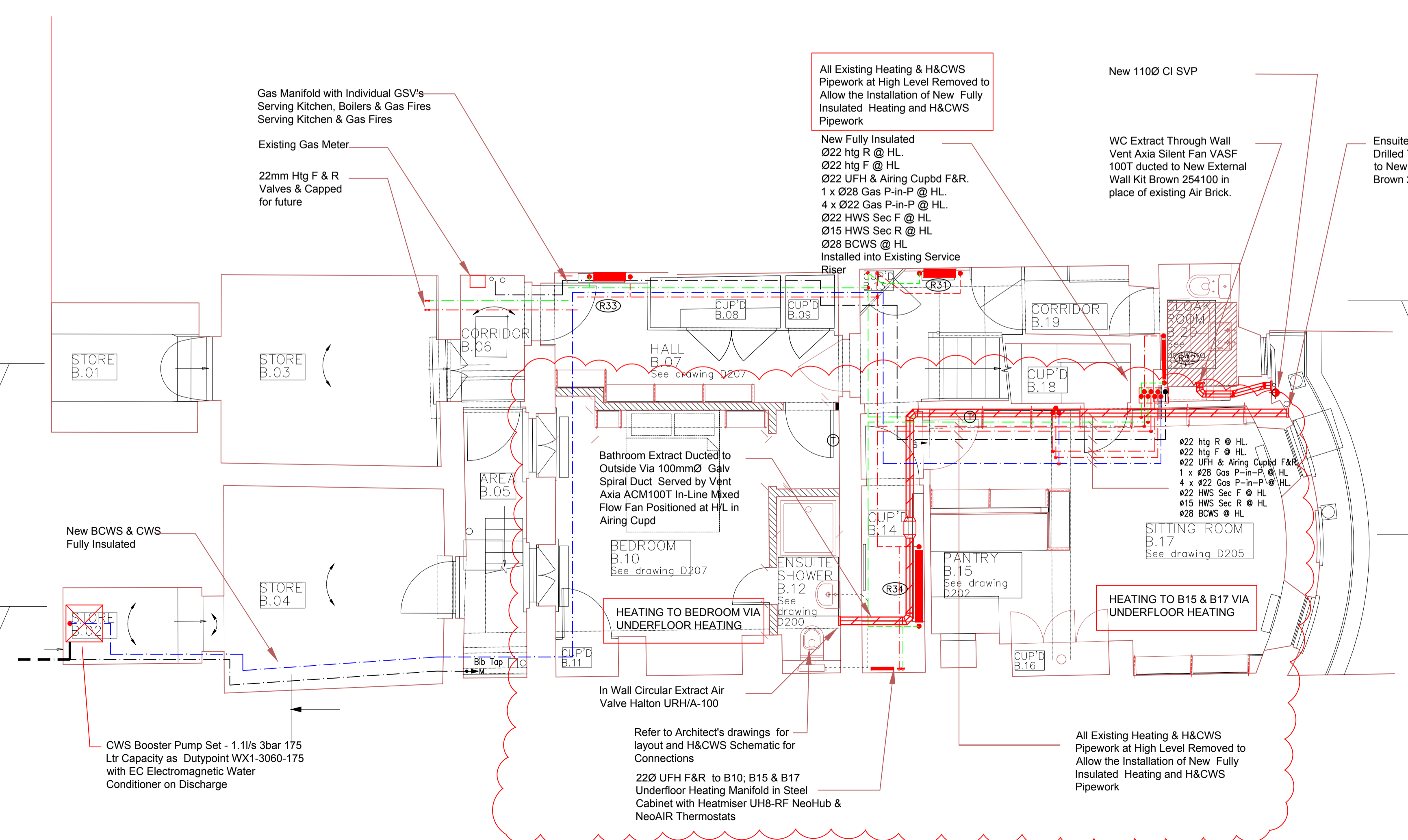
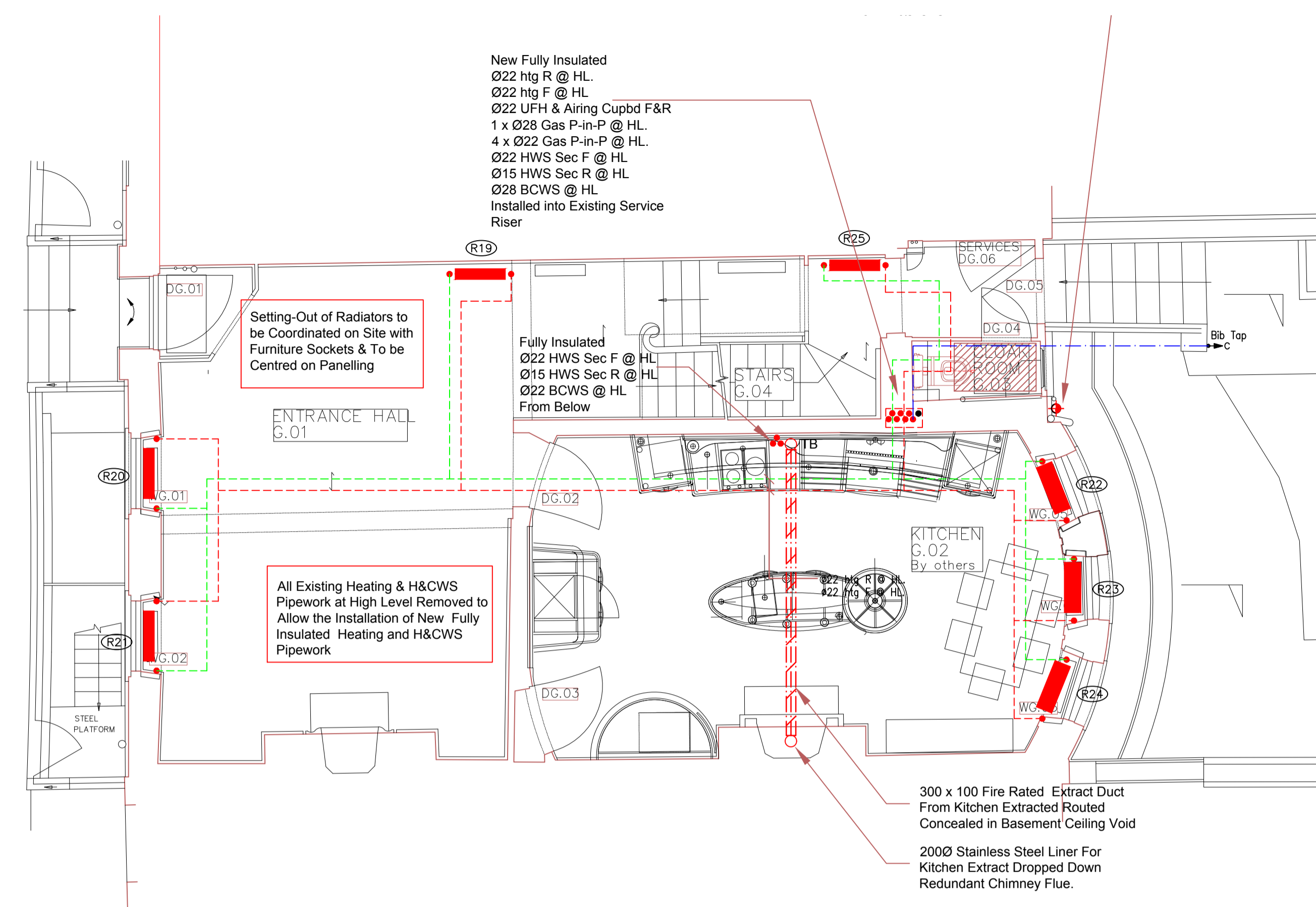
Pipe Centres  
150mm

Screed

Standard sand/cement screed of 65/75mm or a specialist thinner anhydrite or liquid screed (confirmation of thickness to be sought by screed supplier).

Manifold: Pumped Mixed Flow Multi

LOWER GRD. FLOOR UNDERFLOOR HEATING



**KEY-WATER:**

- PIPEWORK AT LOW LEVEL
- PIPEWORK BELOW FLOOR
- PIPEWORK IN CEILING VOID
- L/L LOW LEVEL
- H/L HIGH LEVEL
- HOT WATER CYLINDER
- BOILER
- M MAINS WATER CONN.
- C COLD WATER CONN.
- H HOT WATER CONN.
- T THERMOSTATIC SHOWER VALVE
- W WASHING MACHINE & DISHWASHER TAPS

BATH -22mmØ HWS & CWS  
SHOWER -22mmØ HWS & CWS  
BASIN -15mmØ HWS & CWS  
WC -15mmØ HWS  
SINK -15mmØ HWS & MWS  
DISHWASHER -15mmØ MWS  
WASHING M -15mmØ HWS & MWS

ALL APPLIANCES & ALL CONNECTIONS TO SANITARY APPLIANCES etc. TO BE FITTED WITH LEVER ISOLATING VALVES CONCEALED BEHIND ACCESS PANELS.

INCOMING MAINS WATER TO BE METERED AT MANIFOLD STOPCOCK & DRAIN PROVIDED IN b BASEMENT

EACH KITCHEN APPLIANCE TO HAVE SEPARATE ISOLATING VALVES & FLEXIBLE CONNECTIONS TO WRAS

KITCHEN SINK, ICE MAKER AND ALL BATHROOMS TO BE PROVIDED WITH POTABLE MAINS COLD WATER SUITABLE FOR DRINKING.

**KEY-HEATING:**

- PIPEWORK AT LOW LEVEL
- PIPEWORK BELOW FLOOR
- PIPEWORK AT HIGH LEVEL
- L/L LOW LEVEL
- H/L HIGH LEVEL
- PLANT or EQUIPMENT
- RO1 CAST IRON RADIATOR C/W HONEYWELL EVOHOME MULTIZONE HR92 THERMOSTATIC VALVES & LS VALVES
- TR DUAL FUEL BISQUE FLAT FRONT LADDER TYPE TOWEL RAIL -TBC
- T HEATMISER NeoAIR WIRELESS STAT

DEVIMAT 150 W/M ELECTRIC UNDER FLOOR HEATING

C2 Underfloor heating to L.Grd added	15.02.17
C2 Updated as indicated	10.02.17
C1 Construction Issue	20.12.16

Project:  
24 CHURCH ROW HAMPSTEAD LONDON

Architect:  
CASSON CONDER PARTNERSHIP

Cu-tec Building Services Design  
26 Park Street Tring Hertfordshire HP23 6AW  
tel. 01442 828 864  
e-mail. info@cu-tec.co.uk  
web. www.cu-tec.co.uk

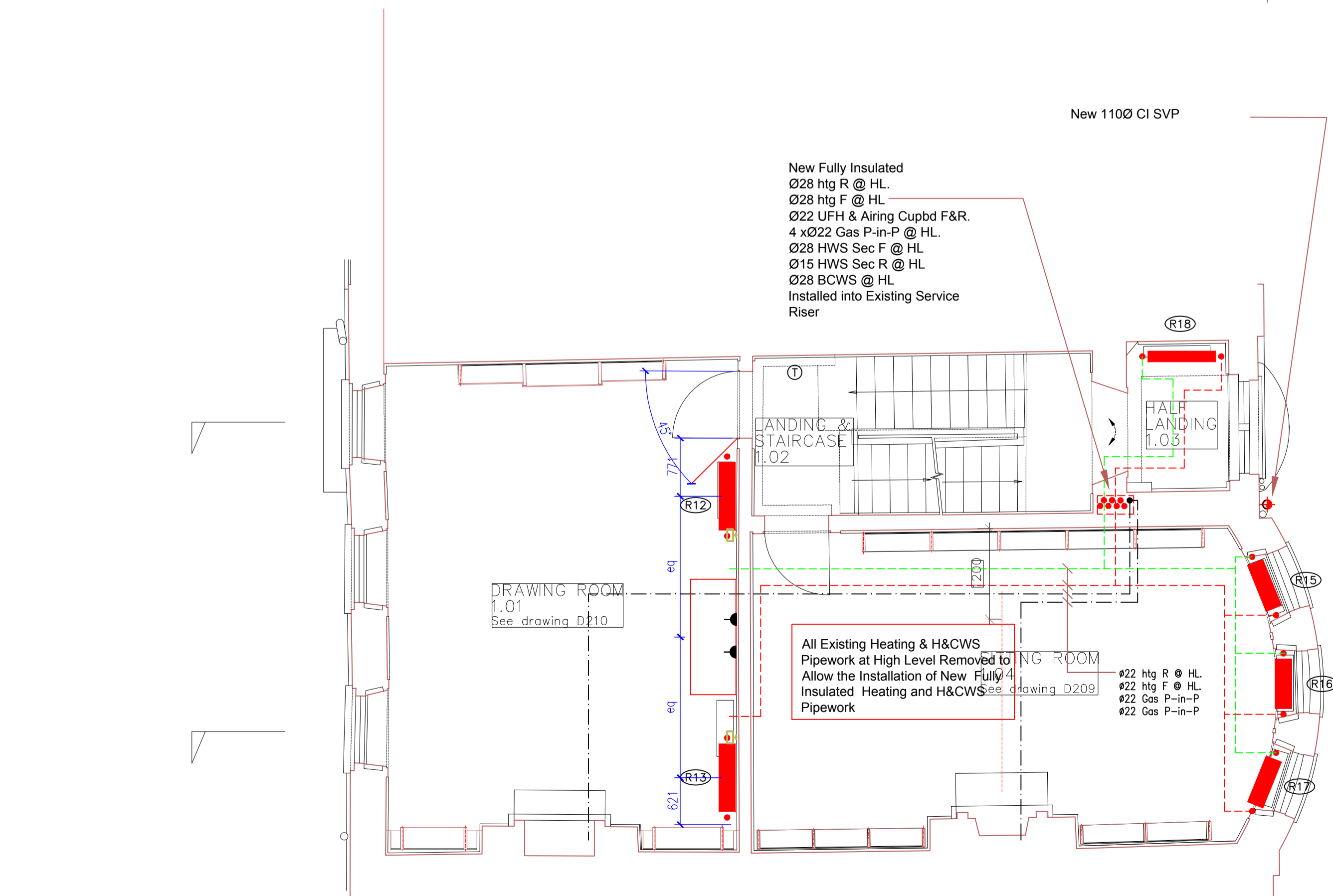
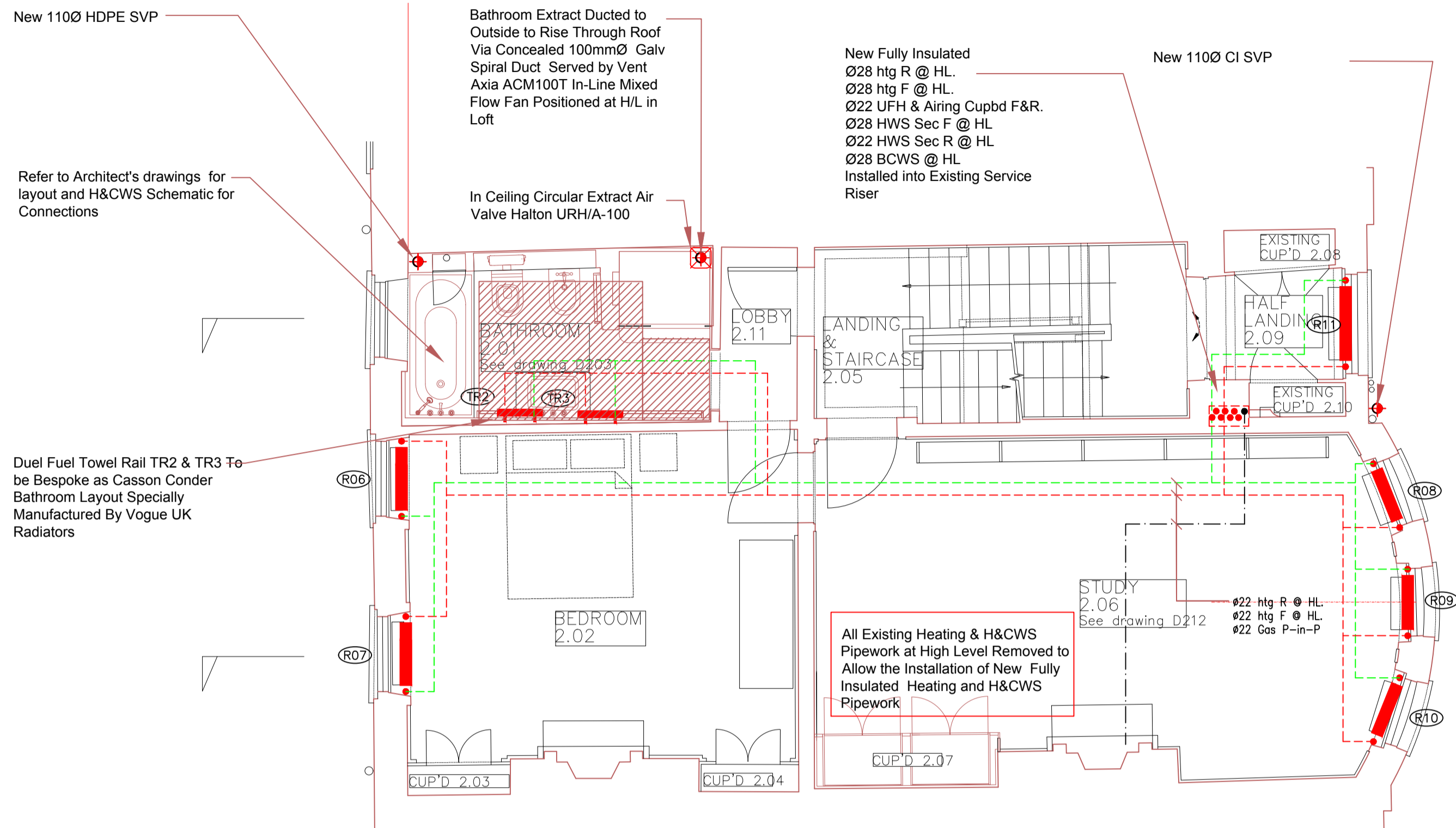
Drawing Title:  
MECHANICAL SERVICES  
BASEMENT & GROUND FLOOR  
LAYOUTS

Scale: 1:50 @ A1  
Date: 22.02.16  
Drawn by: BFH  
Chk'd by: SMG

Drawing Number: 16.0622 - M - 302  
Rev: C3

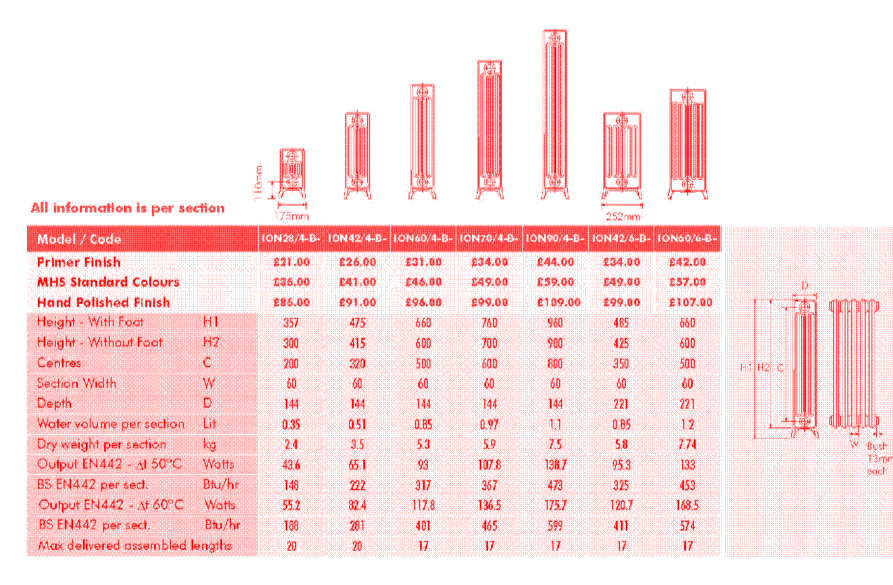
Drawing Status:  
**CONSTRUCTION ISSUE**

© copyright 2016  
All dimensions to be verified on site. Figure dimensions to be taken in preference to those scaled.  
This is a general arrangement drawing only. Manufacturers must adhere to the indicated design. All manufacturer details to be approved by client prior to construction. Client approved contractor is responsible for suitability of materials, form and manufacturing techniques.  
Unauthorised reproduction and use of information herein is strictly forbidden.



**24 Church Row Hampstead RADIATOR SCHEDULE**

Ref	Room/Area Name	Level	Area m <sup>2</sup>	Heat Output Required Watts	Radiator Type	Window Sill Height	Radiator Height With Foot	Output per Section - Watts	# of Radiators	# of Sections/Radiator	Section Width	Total Width	Total Width with Valves	Depth	Product No:
R02 & R03	Front Bedroom	3rd	20	3000	Ionic Cast Iron	0.9mm	760mm	136.5	2	11	60	659	835	144	ION70/4-B
R01	Utility Room	3rd	6	900	Ionic Cast Iron	0.9mm	660mm	117.8	1	8	60	458	534	144	ION60/4-B
R04	Study	3rd	25	3750	Ionic Cast Iron	0.9mm	760mm	136.5	1	27	60	1648	1824	144	ION70/4-B
R05	1/2 Landing	3rd	20	1000	Ionic Cast Iron	0.9mm	760mm	136.5	1	7	60	440	616	144	ION70/4-B
R06 & R07	Front Bedroom	2nd	20	3000	Ionic Cast Iron	0.67mm	660mm	117.8	2	13	60	764	940	144	ION60/4-B
R08, R09 & R10	Study	2nd	25	3750	Ionic Cast Iron	0.73mm	660mm	117.8	3	11	60	637	813	144	ION60/4-B
R11	1/2 Landing	2nd	20	2000	Ionic Cast Iron	0.96mm	760mm	136.5	1	15	60	879	1055	144	ION70/4-B
R12 R13	Drawing Room	1st	30	4500	Ionic Cast Iron	NA	660mm	168	2	15	60	900	1076	221	ION60/6-B
R15, R16 & R17	Living Room	1st	30	4500	Cast Iron	0.46	350mm	130	3	12	58	669	845	221	Cast Iron Radiators 01723 32100
R18	1/2 Landing	1st	20	2000	Ionic Cast Iron	0.96mm	760mm	136.5	1	15	60	879	1055	144	ION70/4-B
R19, R20 & R21	Entrance Hall	Ground	30	4500	Ionic Cast Iron	0.85mm	760mm	136.5	3	11	60	659	835	144	ION70/4-B
R22, R23 & R24	Kitchen	Ground	28	4200	Cast Iron	0.46	350mm	130	3	11	58	625	801	350	Cast Iron Radiators 01723 32100
R25	1/2 Landing	Ground	20	2000	Ionic Cast Iron	0.96mm	760mm	136.5	1	15	60	879	1055	144	ION70/4-B
R26 & R27	Bedroom	Basement	30	4500	Ionic Cast Iron	1.03mm	760mm	136.5	2	16	60	969	1165	144	ION70/4-B
R28, R29 & R30	Sitting Room	Basement	28	4200	Ionic Cast Iron	0.96mm	760mm	136.5	3	10	60	615	791	144	ION70/4-B
R31	Back Stair	Basement	8	1200	Ionic Cast Iron	NA	760mm	136.5	1	9	60	527	703	144	ION70/4-B
R32	WC	Basement	2	300	Multi-sec	na	502mm	477	1	1	585	609	785	89	NMW-0500-2-13
R33	Back Stair	Basement	8	1200	Ionic Cast Iron	NA	760mm	136.5	1	9	60	527	703	144	ION70/4-B
R34	Airing Cupbd	Basement	2	300	Multi-sec	na	502mm	477	1	1	585	609	785	89	NMW-0500-2-13



- Notes.
- This drawing is for tendering purposes only and shall be read in conjunction with the accompanying technical specification and all associated project related drawings and documentation.
  - All work shall comply with all relevant British & European Standards, BS Codes of Practices, Local Regulations and Byelaws applicable to the installation.
  - It shall be the responsibility of the M&E Contractor to carry out a thorough survey of the building to acquaint himself with the full extent of the work and to prepare working drawings for approval prior to commencement of his installation.
  - The M&E contractor shall be solely responsible to liaise and co-ordinate his work and installation with the works and installations of all other contractors.
  - All drainage work to be carried out in accordance with BS 8301, BS 8005 and the building regulations.
  - For exact location of rain water and foul water outlets, refer to the architects drawings.
  - Surface water drains shall be either H.D.P.E. rigid drain twin wall carrier pipe by 'POLYPIPE PLC' (or similar approved) to B.S EN 1401-1 or P.C.C. pipes to B.S 5911 (Part 100) or vitrified clay to B.S 65
  - Foul water drains shall be either P.V.C. pipework by 'POLYPIPE PLC' (or similar approved) to B.S. EN 1401-01 or vitrified clay to B.S. EN 295
  - All GRP underground tanks are to be bedded on and encased in 225mm C30 20mm AGG. Concrete strictly in accordance with the manufacturers instructions.
  - All manhole and inspection chamber covers, frames in trafficked areas shall comply to either B.S. 437 - Part 1 Heavy duty covers to MA60, or B.S. EN 124 Grade D400 (11.5 Tonne wheel loading). Manhole/inspection chamber covers in paving/landscaping to be Grade B125
  - For drainage construction and pipe bed details refer to drawing No. D-700.
  - All drainage branches to be 110mm for foul water & 150mm for surface water unless marked otherwise. All soil & vent stacks to have roddable access 150mm above ground floor slab level with removable access plates.
  - All floor gullies to be trapped & roddable and to be a waste type gully for internal usage
  - All drainage channels to have rodding access at ends of runs & be surrounded in c30 concrete surround to manufacturers details.
  - All shallow drainage (<900mm cover) and drainage below floor slab to be incased in min 150mm concrete surround.
  - All concrete surrounds for the drainage to be class dc2 (sulphate resisting)
  - Cavity drainage details subject to Architect's detailed drawings.
  - All Service Penetrations through walls & floors shall be suitably sleeved, sealed and fire stopped in accordance with Building Regulation Part B requirements.
  - All pipework supports, hangers and anchors required to support and control the movement of the various pipes shall be supplied and fitted.
  - Plugs shall be used during the course of the contract to prevent dirt getting into the pipes. Should a stoppage occur due to this cause, the trouble shall be rectified at the contractor's expense. The installation shall be thoroughly flushed clean before commissioning.
  - The contractor shall ensure that the work is protected during installation and to keep openings sealed to prevent the entry of foreign matter into the system during construction.
  - The contractor shall include for connecting up to every fixture throughout the building.
  - The contractor will be responsible for submitting the following certificates when the installation is complete:
    - Certificate of statement of completion of entire installation.
    - Soil pipe and trap test certificates
    - Certificate or statement that installation complies with requirements of the local authorities.

C3 Htg F&R Reduced to 28mmØ  
L.Grd UFH 22Ø Added  
C2 Updated as indicated

15.02.17  
10.02.17

C1 Construction Issue

20.12.16

Project:

**24 CHURCH ROW HAMPSTEAD LONDON**

Architect:

**CASSON CONDER PARTNERSHIP**

**Cu-tec Building Services Design**

26 Park Street Tring Hertfordshire HP23 6AW

tel. 01442 828 864

e-mail. info@cu-tec.co.uk  
web. www.cu-tec.co.uk

Drawing Title:

**MECHANICAL SERVICES  
FIRST & SECOND FLOOR  
LAYOUTS**

Scale: 1:50 @ A1

Date: 22.02.16

Drawn by: BFH  
Chk'd by: SMG

Drawing Number: 16.0622 - M - 303

Rev: C3

Drawing Status:

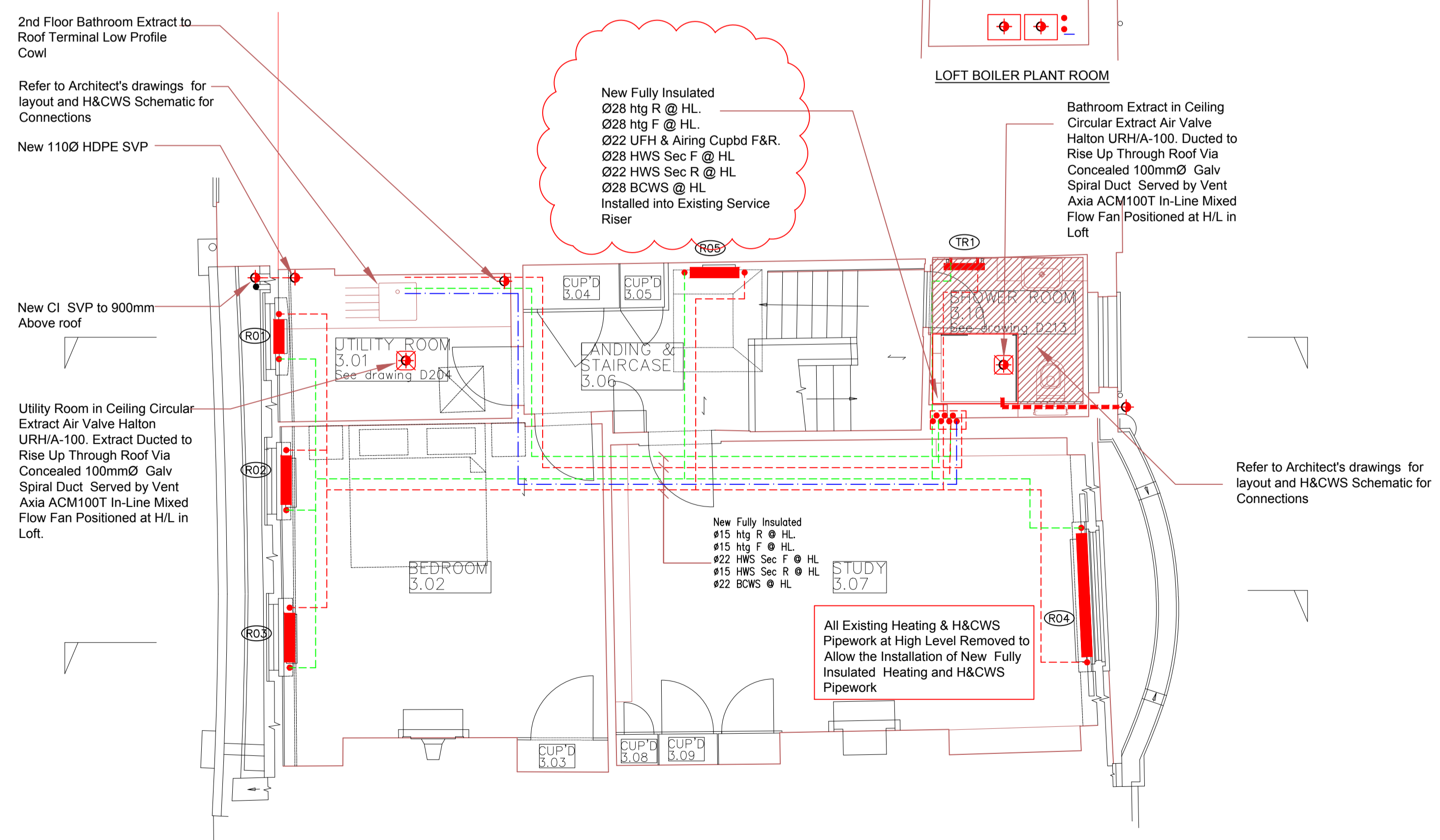
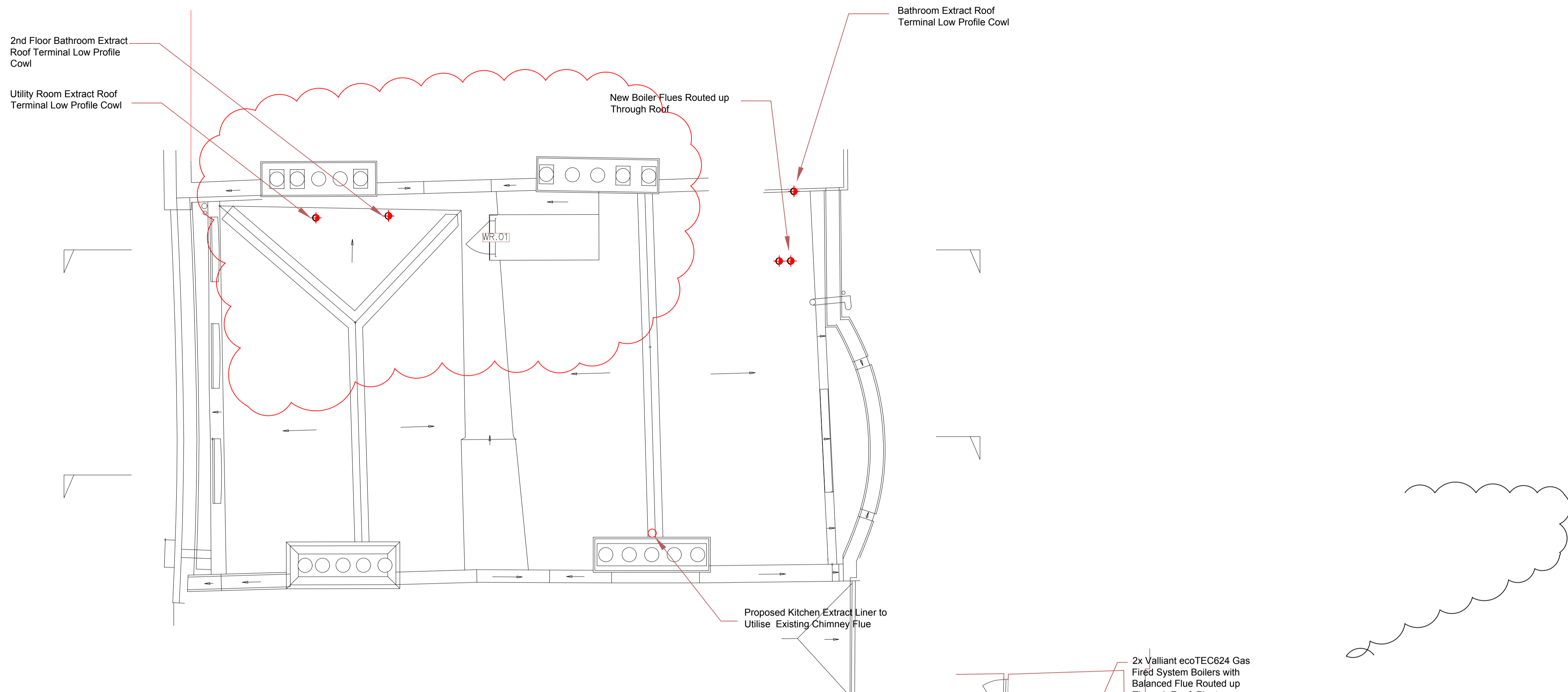
**CONSTRUCTION ISSUE**

© copyright 2016

All dimensions to be verified on site. Figured dimensions to be taken in preference to those scaled.

This is a general arrangement drawing only. Manufacturers must adhere to the indicated design. All manufacturer details to be approved by client prior to construction. Client approved contractor is responsible for suitability of materials, form and manufacturing techniques.

Unauthorised reproduction and use of information herein is strictly forbidden.



- Notes.**
- This drawing is for tendering purposes only and shall be read in conjunction with the accompanying technical specification and all associated project related drawings and documentation.
  - All work shall comply with all relevant British & European Standards, BS Codes of Practices, Local Regulations and Byelaws applicable to the installation.
  - It shall be the responsibility of the M&E Contractor to carry out a thorough survey of the building to acquaint himself with the full extent of the work and to prepare working drawings for approval prior to commencement of his installation.
  - The M&E contractor shall be solely responsible to liaise and co-ordinate his work and installation with the works and installations of all other contractors.
  - All drainage work to be carried out in accordance with BS 8301, BS 8005 and the building regulations.
  - For exact location of rain water and foul water outlets, refer to the architects drawings.
  - Surface water drains shall be either H.D.P.E. rigid twin wall carrier pipe by 'POLYPIPE PLC' (or similar approved) to B.S EN 1401-1 or P.C.C. pipes to B.S 5911 (Part 100) or vitrified clay to B.S 65
  - Foul water drains shall be either P.V.C. pipework by 'POLYPIPE PLC' (or similar approved) to B.S. EN 1401-01 or vitrified clay to B.S. EN 295
  - All GRP underground tanks are to be bedded on and encased in 225mm C30 20mm AGG. Concrete strictly in accordance with the manufacturers instructions.
  - All manhole and inspection chamber covers, frames in trafficked areas shall comply with either B.S. 407 - Part 1 Heavy duty covers to MA60, or B.S. EN 124 Grade D400 (11.5 Tonne wheel loading). Manhole/inspection chamber covers in paving/landscape to be Grade B125
  - For drainage construction and pipe bed details refer to drawing No. D-700.
  - All drainage branches to be 110mm for foul water & 150mm For surface water unless marked otherwise. All soil & vent stacks to have roddable access 150mm above ground floor slab level with removable access plates.
  - All floor gullies to be trapped & roddable and to be a waste type gully for internal usage
  - All drainage channels to have rodding access at ends of runs & be surrounded in c30 concrete surround to manufacturers details.
  - All shallow drainage (<900mm cover) and drainage below floor slab to be incased in min 150mm concrete surround.
  - All concrete surrounds for the drainage to be class dc2 (sulphate resisting)
  - Cavity drainage details subject to Architect's detailed drawings.
  - All Service Penetrations through walls & floors shall be suitably sleeved, sealed and fire stopped in accordance with Building Regulation Part B requirements.
  - All pipework supports, hangers and anchors required to support and control the movement of the various pipes shall be supplied and fitted.
  - Plugs shall be used during the course of the contract to prevent dirt getting into the pipes. Should a stoppage occur due to this cause, the trouble shall be rectified at the contractor's expense. The installation shall be thoroughly flushed clean before commissioning.
  - The contractor shall ensure that the work is protected during installation and to keep openings sealed to prevent the entry of foreign matter into the system during construction.
  - The contractor shall include for connecting up to every fixture throughout the building.
  - The contractor will be responsible for submitting the following certificates when the installation is complete:
    - Certificate or statement of completion of entire installation.
    - Soil pipe and trap test certificates
    - Certificate or statement that installation complies with requirements of the local authorities.

C3 Htg F&R Reduced to 28mmØ	15.02.17
L.Gnd UFH 22Ø Added	10.02.17
C2 Updated as indicated	10.02.17
C1 Construction Issue	20.12.16

Project:  
**24 CHURCH ROW HAMPSTEAD LONDON**

Architect:  
**CASSON CONDER PARTNERSHIP**

**Cu-tec Building Services Design**  
26 Park Street Tring Hertfordshire HP23 6AW  
tel. 01442 828 864  
e-mail. info@cu-tec.co.uk  
web. www.cu-tec.co.uk

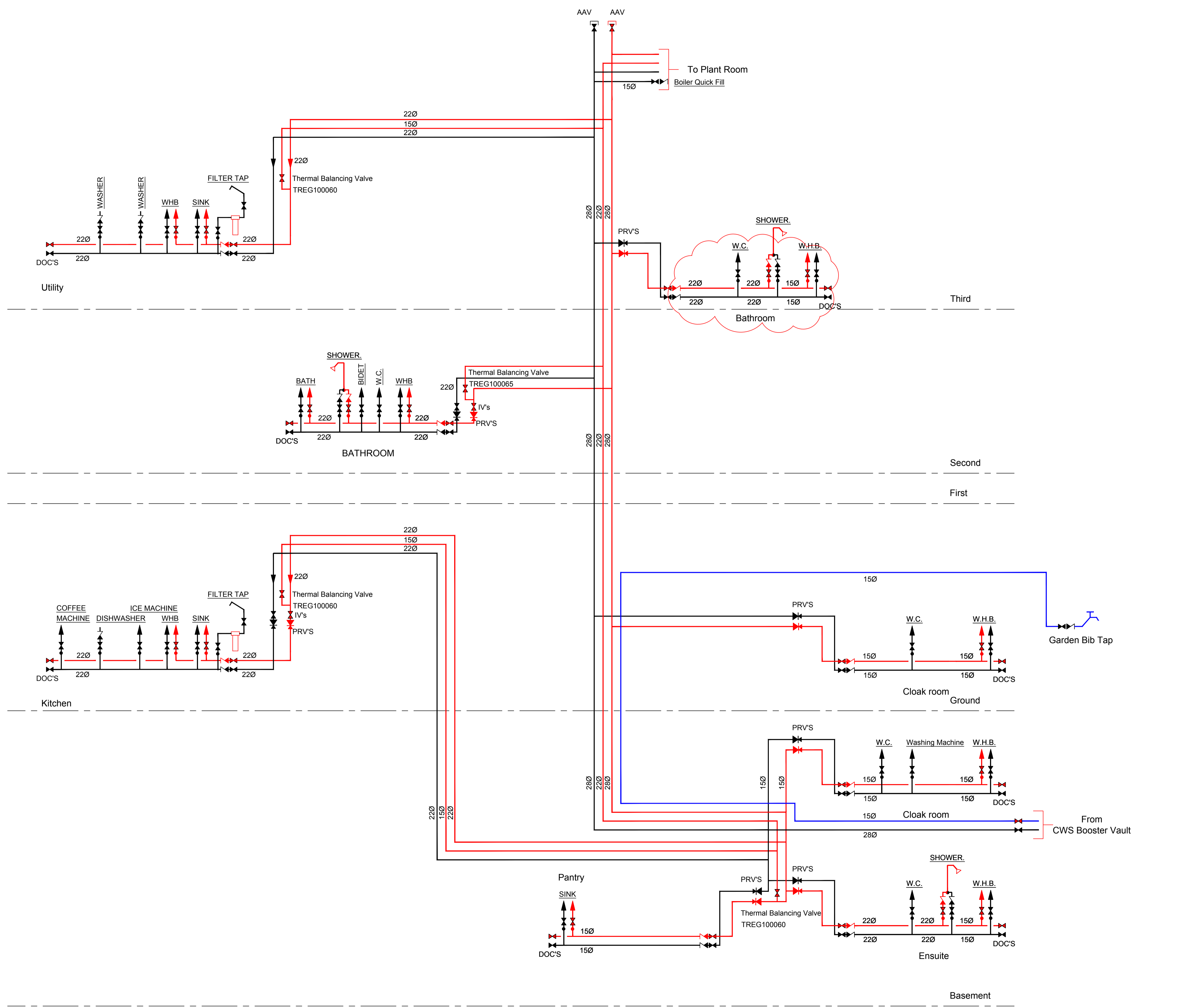
Drawing Title:  
**MECHANICAL SERVICES  
THIRD & ROOF FLOOR  
LAYOUTS**

Scale: 1:50 @ A1	Drawn by: BFH
Date: 22.02.16	Chk'd. by: SMG

Drawing Number: <b>16.0622 - M - 304</b>	Rev: <b>C3</b>
---	-------------------

Drawing Status:  
**CONSTRUCTION ISSUE**

© copyright 2016  
All dimensions to be verified on site. Figured dimensions to be taken in preference to those scaled.  
This is a general arrangement drawing only. Manufacturers must adhere to the indicated design. All manufacturer details to be approved by client prior to construction. Client approved contractor is responsible for suitability of materials, form and manufacturing techniques.  
Unauthorised reproduction and use of information herein is strictly forbidden.



**Notes.**

- This drawing is for tendering purposes only and shall be read in conjunction with the accompanying technical specification and all associated project related drawings and documentation.
- All work shall comply with all relevant British & European Standards, BS Codes of Practices, Local Regulations and Byelaws applicable to the installation.
- It shall be the responsibility of the M&E Contractor to carry out a thorough survey of the building to acquaint himself with the full extent of the work and to prepare working drawings for approval prior to commencement of his installation.
- The M&E contractor shall be solely responsible to liaise and co-ordinate his work and installation with the works and installations of all other contractors.
- All drainage work to be carried out in accordance with BS 8301, BS 8005 and the building regulations.
- For exact location of rain water and foul water outlets, refer to the architects drawings.
- Surface water drains shall be either H.D.P.E. rigid twin wall carrier pipe by 'POLYPIPE PLC' (or similar approved) to B.S. EN 1401-1 or P.C.C. pipes to B.S. 5911 (Part 100) or vitrified clay to B.S. 65.
- Foul water drains shall be either P.V.C. pipework by 'POLYPIPE PLC' (or similar approved) to B.S. EN 1401-01 or vitrified clay to B.S. EN 295.
- All GRP underground tanks are to be bedded on and encased in 225mm C30 20mm AGG. Concrete strictly in accordance with the manufacturers instructions.
- All manhole and inspection chamber covers, frames in trafficked areas shall comply with either B.S. 407 - Part 1 Heavy duty covers to MA60, or B.S. EN 124 Grade D400 (11.5 Tonne wheel loading). Manhole/inspection chamber covers in paving/landscape to be Grade B125.
- For drainage construction and pipe bed details refer to drawing No. D-700.
- All drainage branches to be 110mm for foul water & 150mm for surface water unless marked otherwise. All soil & vent stacks to have roddable access 150mm above ground floor slab level with removable access plates.
- All floor gullies to be trapped & roddable and to be a waste type gully for internal usage.
- All drainage channels to have rodding access at ends of runs & be surrounded in c30 concrete surround to manufacturers details.
- All shallow drainage (<900mm cover) and drainage below floor slab to be incased in min 150mm concrete surround.
- All concrete surrounds for the drainage to be class dc2 (sulphate resisting).
- Cavity drainage details subject to Architect's detailed drawings.
- All Service Penetrations through walls & floors shall be suitably sleeved, sealed and fire stopped in accordance with Building Regulation Part B requirements.
- All pipework supports, hangers and anchors required to support and control the movement of the various pipes shall be supplied and fitted.
- Plugs shall be used during the course of the contract to prevent dirt getting into the pipes. Should a stoppage occur due to this cause, the trouble shall be rectified at the contractor's expense. The installation shall be thoroughly flushed clean before commissioning.
- The contractor shall ensure that the work is protected during installation and to keep openings sealed to prevent the entry of foreign matter into the system during construction.
- The contractor shall include for connecting up to every fixture throughout the building.
- The contractor will be responsible for submitting the following certificates when the installation is complete:
  - Certificate or statement of completion of entire installation.
  - Soil pipe and trap test certificates
  - Certificate or statement that installation complies with requirements of the local authorities.

C3 3rd Floor Shower Room Added	15.02.17
C2 Updated as indicated	10.02.17
C1 Construction Issue	20.12.16

Project:  
**24 CHURCH ROW HAMPSTEAD LONDON**

Architect:  
**CASSON CONDER PARTNERSHIP**

**Cu-tec Building Services Design**  
26 Park Street Tring Hertfordshire HP23 6AW  
tel. 01442 828 864  
e-mail. info@cu-tec.co.uk  
web. www.cu-tec.co.uk

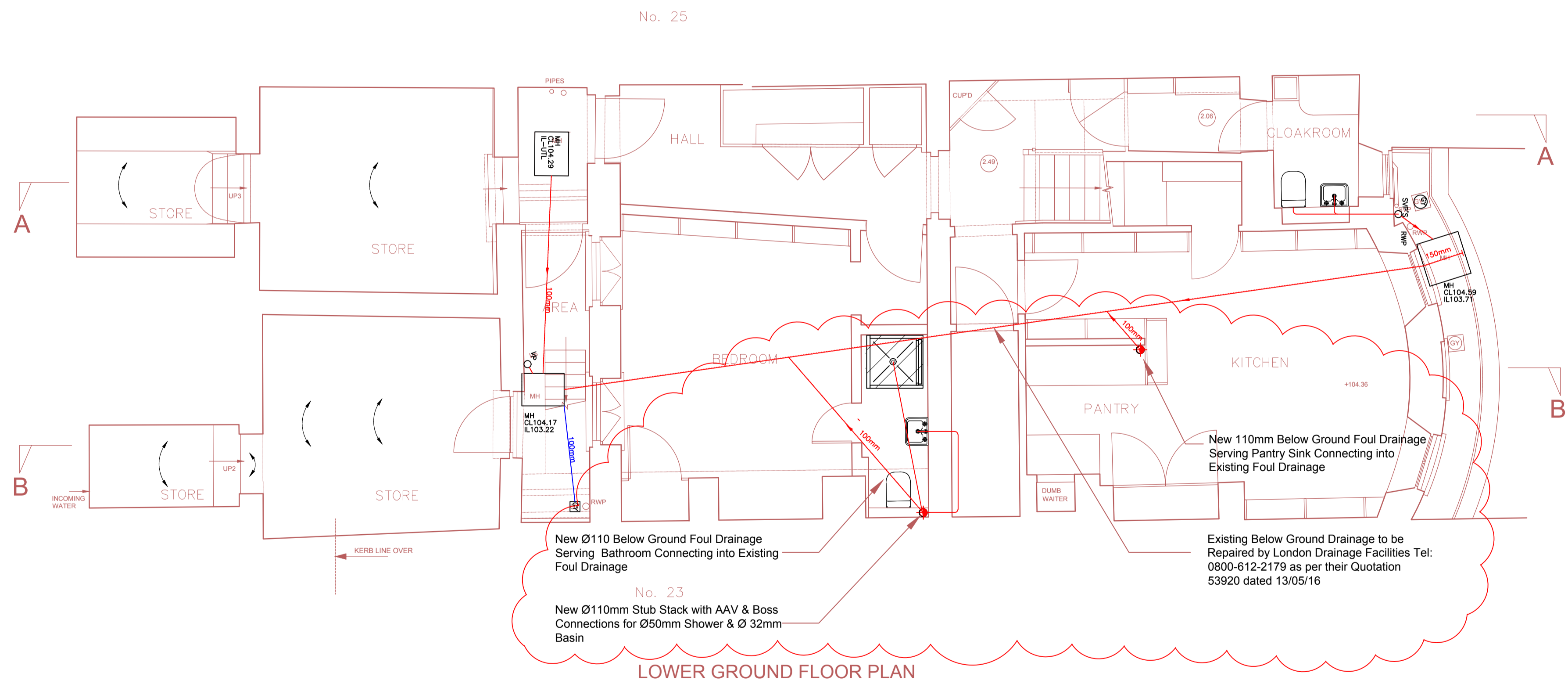
Drawing Title:  
**MECHANICAL SERVICES  
HOT & COLD WATER SERVICES SCHEMATIC**

Scale: 1:50 @ A1	Drawn by: BFH
Date: 22.02.16	Chk'd. by: SMG

Drawing Number: <b>16.0622 - M - 305</b>	Rev: <b>C3</b>
---	-------------------

Drawing Status:  
**CONSTRUCTION ISSUE**

© copyright 2016  
All dimensions to be verified on site. Figured dimensions to be taken in preference to those scaled.  
This is a general arrangement drawing only. Manufacturers must adhere to the indicated design. All manufacturer details to be approved by client prior to construction. Client approved contractor is responsible for suitability of materials, form and manufacturing techniques.  
Unauthorised reproduction and use of information herein is strictly forbidden.



LOWER GROUND FLOOR PLAN

Notes.

1. This drawing is for tendering purposes only and shall be read in conjunction with the accompanying technical specification and all associated project related drawings and documentation.
2. All work shall comply with all relevant British & European Standards, BS Codes of Practices, Local Regulations and Byelaws applicable to the installation.
3. It shall be the responsibility of the M&E Contractor to carry out a thorough survey of the building to acquaint himself with the full extent of the work and to prepare working drawings for approval prior to commencement of his installation.
4. The M&E contractor shall be solely responsible to liaise and co-ordinate his work and installation with the works and installations of all other contractors.
5. All drainage work to be carried out in accordance with BS 8301, BS 8005 and the building regulations.
6. For exact location of rain water and foul water outlets, refer to the architects drawings.
7. Surface water drains shall be either H.D.P.E. rigid twin wall carrier pipe by 'POLYPIPE PLC' (or similar approved) to B.S EN 1401-1 or P.C.C. pipes to B.S 5911 (Part 100) or vitrified clay to B.S 65
8. Foul water drains shall be either P.V.C. pipework by 'POLYPIPE PLC' (or similar approved) to B.S. EN 1401-01 or vitrified clay to B.S. EN 295
9. All GRP underground tanks are to be bedded on and encased in 225mm C30 20mm AGG. Concrete strictly in accordance with the manufacturers instructions.
10. All manhole and inspection chamber covers, frames in trafficked areas shall comply with either B.S. 407 - Part 1 Heavy duty covers to MA60, or B.S. EN 124 Grade D400 (11.5 Tonne wheel loading). Manhole/inspection chamber covers in paving/landscape to be Grade B125
11. For drainage construction and pipe bed details refer to drawing No. D-700.
12. All drainage branches to be 110mm for foul water & 150mm For surface water unless marked otherwise. All soil & vent stacks to have roddable access 150mm above ground floor slab level with removable access plates.
13. All floor gullies to be trapped & roddable and to be a waste type gully for internal usage
14. All drainage channels to have rodding access at ends of runs & be surrounded in c30 concrete surround to manufacturers details.
15. All shallow drainage (<900mm cover) and drainage below floor slab to be incased in min 150mm concrete surround.
16. All concrete surrounds for the drainage to be class dc2 (sulphate resisting)
17. Cavity drainage details subject to Architect's detailed drawings.
18. All Service Penetrations through walls & floors shall be suitably sleeved, sealed and fire stopped in accordance with Building Regulation Part B requirements.
19. All pipework supports, hangers and anchors required to support and control the movement of the various pipes shall be supplied and fitted.
20. Plugs shall be used during the course of the contract to prevent dirt getting into the pipes. Should a stoppage occur due to this cause, the trouble shall be rectified at the contractor's expense. The installation shall be thoroughly flushed clean before commissioning.
21. The contractor shall ensure that the work is protected during installation and to keep openings sealed to prevent the entry of foreign matter into the system during construction.
22. The contractor shall include for connecting up to every fixture throughout the building.
23. The contractor will be responsible for submitting the following certificates when the installation is complete.
  - i) Certificate or statement of completion of entire installation.
  - ii) Soil pipe and trap test certificates
  - iii) Certificate or statement that installation complies with requirements of the local authorities.

C2 Updated as indicated 10.02.17  
 C1 Construction Issue 20.12.16

Project:  
 24 CHURCH ROW HAMPSTEAD LONDON

Architect:  
 CASSON CONDER PARTNERSHIP

**Cu-tec Building Services Design**  
 26 Park Street Tring Hertfordshire HP23 6AW  
 tel. 01442 828 864  
 e-mail. info@cu-tec.co.uk  
 web. www.cu-tec.co.uk

Drawing Title:  
 MECHANICAL SERVICES  
 BELOW GROUND DRAINAGE REPAIRS &  
 MODIFICATIONS

Scale: 1:50 @ A1 Drawn by: BFH  
 Date: 22.02.16 Chk'd. by: SMG

Drawing Number: 16.0622 - M - 306 Rev: C2

Drawing Status:  
**CONSTRUCTION ISSUE**

© copyright 2016  
 All dimensions to be verified on site. Figured dimensions to be taken in preference to those scaled.  
 This is a general arrangement drawing only. Manufacturers must adhere to the indicated design. All manufacturer details to be approved by client prior to construction. Client approved contractor is responsible for suitability of materials, form and manufacturing techniques.  
 Unauthorised reproduction and use of information herein is strictly forbidden.