14. MECHANICAL VENTILATION (Standards)

14.1) Surgeries and OPG:
In accordance with CIBSE guide B2:2001 Section 3.13
See also Dept. of Health Technical Memorandum 03-01

14.2) Reception and waiting:
In accordance with CIBSE manual AM13:2000 Mixed mode ventilation and CIBSE guide A and B2.

14.3) WCs:
Provide mechanical extract ventilation operating at the rate of minimum 6 air changes/hour (BC/1) integrated with lighting with 15 minute overrun.

14.4) Staff room:
Provide mechanical extract ventilation operating at the rate of minimum 10 air changes/hour (BC/1)

15. HVAC, HOT WATER SERVICES

15.0 Existing system:
Existing system to be retained, extended, modified and/or up-graded to suit the additional requirements below.

15.1 Hot water requirements:
Additional Provisions: 3 no sinks, 1 no whb.
To be installed by a registered operative employed by companies included in the list of Approved Installers published by the IOPH up to 31.12.81 or The Institute of Plumbing.

15.2) Space Heating:

15.2.1) Heating and air conditioning (HVCAV):
See Mechanical Engineering Specialists details and specification. To be designed in accordance with:
BS 5720: 1979 Code of practice for mechanical ventilation and air conditioning of buildings.
BS 5588: Part 9: Fire precautions in the design, construction and the use of buildings, Code of practice for ventilation and air conditioning ductwork.
The relevant recommendations of CIBSE Guide B: Installation and equipment data.
Department of Health Building Note HBN 46.
NHS Non domestic heating, cooling and ventilation compliance guide, 2006
CIBSE (1999) Minimising Pollution at Air Intakes. TM 21.

15.2.2) Commissioning: ALL HVCAV plant to be commissioned and tested and certified in accordance with CIBSE commissioning codes to ascertain that the systems perform in accordance with the specification.

15.2.3) Controls:
Zoning controls in Dental surgeries, reception area and circulation areas.
Timing and temperature controls to be provided to enable each functional area to be maintained at the required temperature only during period of occupation.
All controls to meet the design requirement guidance GPG 132:2001 Energy Efficiency Best Practice Programme, heating controls in small commercial and multi-residential buildings (BESCO).
CIBSE TM 39:2006 (Building energy metering)

15.2.4) Insulation of pipes ducts and vessels:
Provide insulation fittings in accordance with BS 5422: 2001 Methods for specifying thermal insulation materials on pipes, ductwork and equipment in the temperature range -40C to 700C.
NHS Non Domestic Heating, Cooling and Ventilation Compliance Guide, 2006

16. STAIRCASES:

16.1) New timber staircase to basement:
To serve floor area of less than 100m2 with an occupancy rate of 15 persons at any one time.
FFL to FFL = 2970mm
Riser 16x227mm (subject to site measurement)
Going 250mm
Width: Approx 804mm c.c. (eg building with dimensional constraints)
Handrails: Min 30mm wide. Between 900–1000mm above pitch line of flight. 1100mm above landing.
Guarding: Frameless glass or traditional timber balustrade subject to Clients choice. 1100mm above floor or landing.
Contrast strips on nosings.

All Design, workmanship, materials, etc in this section to be in strict accordance with the latest editions of BS 585–1:1989
BS 6180–1:2000

16.1.2) Stair underlining:
Provide 2 layers 12.5mm Fireline board to achieve 60 minutes fire resistance to underside of new and retained staircases.

17. CEILINGS:

17.1) Existing ceilings to be retained:
Existing ceilings to achieve 60 minutes fire resistance. If necessary overboard existing ceiling lining with 12mm Fireline board. New lining to receive skim plaster finish.

18. ABOVE GROUND FW DRAINAGE:
UPVC soil and ventilation system connected to new and existing branch discharge stacks.
To comply with:
BS EN 12056: 2000 Gravity drainage systems inside buildings Parts 1, 2 and 5.
All pipework to conform to BS EN 1329–1:2000 (PVCU)
All appliances to be fitted with Multiplex Anti-Syphon (Stainless) 75mm deep water seal.
Discharge pipework type, sizes and gradient as follows:

W.C's	100 dia	Fall	18mm/m
W.H.B's	40 dia	Fall	18–90mm/m
sinks	50 dia	Fall	18–90mm/m
suction pump	32 dia	Fall	18–90mm/m

18.1) Rodding access to be provided at ALL changes of direction in discharge pipework. Access to be provided at the foot of all new svp's or stub stacks where applicable.

18.2) New branch connections:
All new branch connections to be connected above floor level.

18.3) Service penetrations through floor zone:
Provide Sleeve FS Fire collars to protect ALL UPVC combustible pipes penetrating separating floors.
For simple UPVC pipe penetrations incorporate Sleeve FS Firefilings/Sleeve FS Wrapbat.

18.4) Testing:
All pipes and fittings on completion of the above fw ground drainage system to be tested to air positive pressure (min 3 mins test time) = 38mm water gauge.
All work in this section to comply with BS 8000: Part 13 :1989 Code of practice for above ground drainage and sanitary appliances.

19. BELOW GROUND FW DRAINAGE:
Not applicable

20. GENERAL NOTES

20.1) Fitting out:
20.1.1) Wall finishes:
All walls to be rubbed down and filled to remove any imperfections. Dry walls where applicable to receive paint finish to have two coats Dulux matt emulsion. New plaster to have one mist coat and two matt emulsion coats.

20.1.2) Ceiling finishes:
New plaster to have one mist coat and two matt emulsion coats.

20.1.3) Floor finishes:
To be advised

20.1.4) Joinery Finishes:
On all internal joinery to receive paint finish (internal woodwork, door frames, skirtings, architraves, trims, etc.) provide one knotting coat Dulux wood primer, and two finishing coats Dulux Trade satin dry gloss. Comply with BS 8000: Part 12: Sections 2 & 3.2. Materials to be used in preparation to be types recommended by coating manufacturer for the situation and surfaces being prepared. Apply all board stoppers/fillers after priming, water based stoppers/fillers before priming unless recommended otherwise by the manufacturer.

20.2) Luminaires and lighting:
Surgery lighting: Surface mounted LED lights complete with daylight type lamp (min. 4000° K colour temperature). Fitting to clients' choice.
Emergency version where noted.
Lighting elsewhere to be surface mounted mains voltage LED lights (warm white).
Emergency version where noted.
Fire exit signs to be ceiling mounted flush, white finish.
Relevant pictogram to EC Directive 92/58/EEC

20.3) Dental Surgery Electrical Installation:
For cabinetry electrics provide 2.5mm electric supply to form a ring to each end of cabinet run approx 700mm above floor with 1000mm tails to pull through to various socket outlet points. Sockets and fused spurs shown in cabinetry and upstands, to be provided by the cabinetry supplier. Electrician to make final connection. Elsewhere, all electrical fixtures to be supplied by the electrician.

Install x-ray generator wall plate (refer to template) 1500mm above ffl in location shown on the drawing. Wall to be strengthened where necessary. Wall plate to be fixed to masonry using chemical anchor fixings (eg Rawl/fix bolts together with Resin R/KF2 resin). Run 7 core 1.5mm cable from x-ray generator to x-ray control.
Provide 13A switched fused spur for x-ray control 1220mm above ffl. For ceiling mounted operating lights run 5A supply with 1500mm tail from electricity control.

Provide where necessary suitable noggins, metal framing etc above suspended ceilings to mount specified light support from structural floor.

20.4) Water supply:
General:
Installation to comply with The Water Supply (Water Fittings) Regulations 1999, in particular:
a.) All handbasins to be supplied from a clean water system (bottle feed)
b.) Spittoons and cup fills to incorporate air gap if supplied from mains.
c.) All water storage cisterns to have close fitting lids.
d.) X-ray developing machines requiring water supply to have built in AB air gaps or supplied from independent water storage cistern.
e.) Wet line suction systems, and separators on dry line suction systems requiring a water supply to be supplied from an independent water cistern.
f.) Mixer taps to either be of "In-line" or "Dual-flow" design or to have non return valves fitted to hot and cold water supplies.
g.)Hot and cold water supplies to sinks:
15mm copper pipes finished 500mm above ffl with ball isolating valves. Double non return valves fitted to both supplies unless both are tank fed.
Cold water located 75mm to right of sink waste and hot water located 75mm to left of sink waste.
h.)All sinks to be earth bonded.

20.5) Dental Unit:
Floors supporting dental unit to be capable of sustaining minimum loading of 4.79kN/m2 (100lbs/ ft2) to support dental unit of 224kg (494 lbs). On suspended timber floors provide additional timber joists below dental chair fixing positions in accordance with Engineers instructions. For fixing positions refer to the template drawing.
Services (s/f-on dental unit, terminate/originate at service reference point as noted on the drawing. Read in conjunction with the template drawing. All bends to be swept, service runs to be within the floor void or duct.

20.5a.) Power: 240 volt live and earth cable to terminate at service perforation with 1000mm tail. Cable isolated by spur in cabinetry.
1.5mm 3 core switching cable from suction pump to terminate at both ends with 1000mm tail.

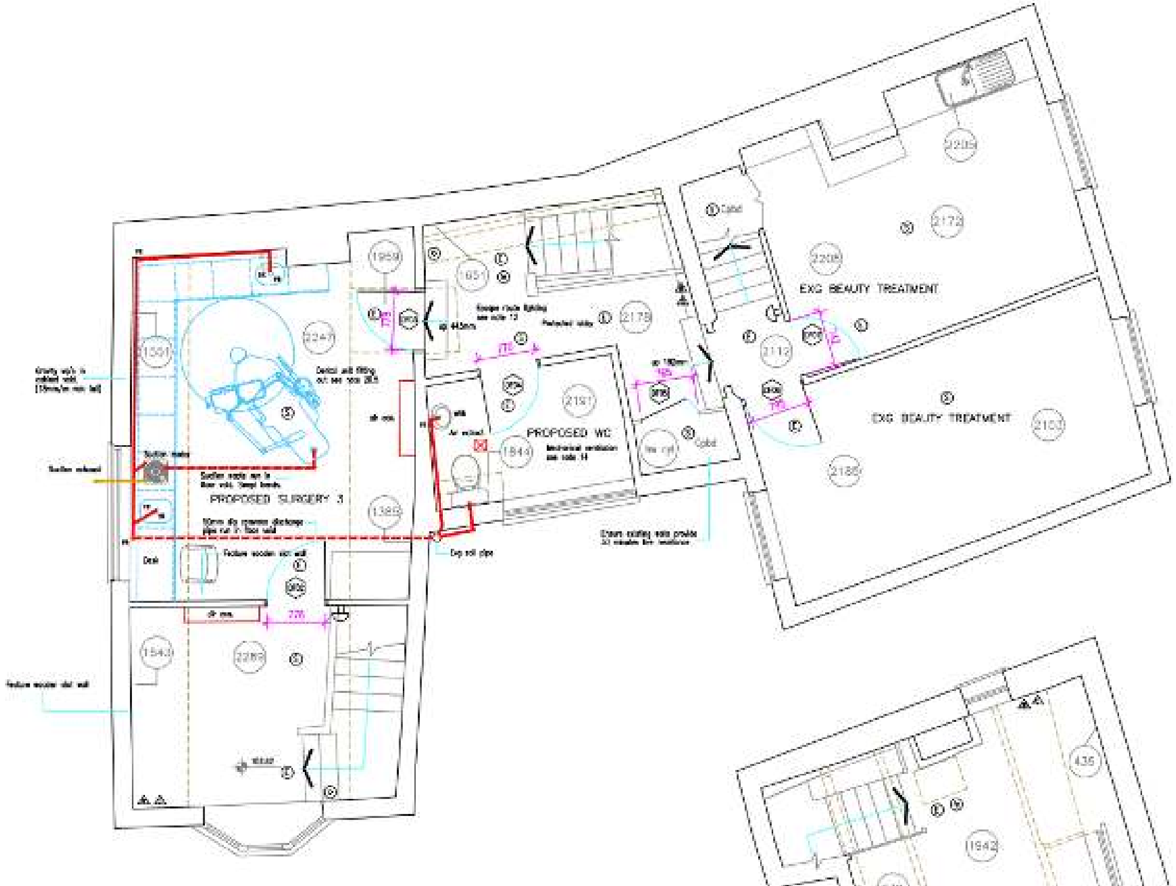
b.) Water: Mains water supply in 15mm copper pipe. Terminate at service perforation at ffl with Isolatic.

c.) Air: 15mm copper pipe run from compressor. Terminate at service perforation as for water.

d.) Suction: 40mm dia upvc pipe (solvent weld) from suction motor to terminate at service perforation 150 mm above ffl with open end. All bends to be swept slow type.
Suction motor to exhaust to external air with 32mm dia upvc pipe with down bend to atmosphere.
Waste from suction pump to discharge as shown on the drawings via 40mm dia upvc pipe (solvent weld) fall to fall.

e.) Waste: Spittoon waste combined with suction in suction 40mm dia upvc pipe.

f.) Conduit: 50mm dia upvc pipe from service perforation to viable behind cabinet and desk. Draw wires left inserted and of sufficient length to reach desk top or cabinets likely to house future PC disk drive, terminate at service perforation 50mm above ffl as for suction.



FIRST FLOOR PLAN

20. GENERAL NOTES (cont'd)

20.6) Information: (AD L1B –L2B):
On completion the contractor to provide the building owner with a suitably bound log book inc test certificates, operation manuals, Health and Safety files. To include:
a) details as required under Reg 40L2B (50–61)/ Reg 40L1B 56–61
b) Commissioning plans prepared in accordance with CIBSA Commissioning codes.
c) Endorsements by a suitably qualified commissioning engineer.
d) Endorsements by the main building contractor as to conformity for the purposes of compliance with Approved Document L1B/L2B
e) Endorsements by the Local Authority Building Control, including certificate of completion.
f) Construction (Design and Management) Regulations 1994:
The contractor to prepare a Construction Phase Health and Safety plan for this project.

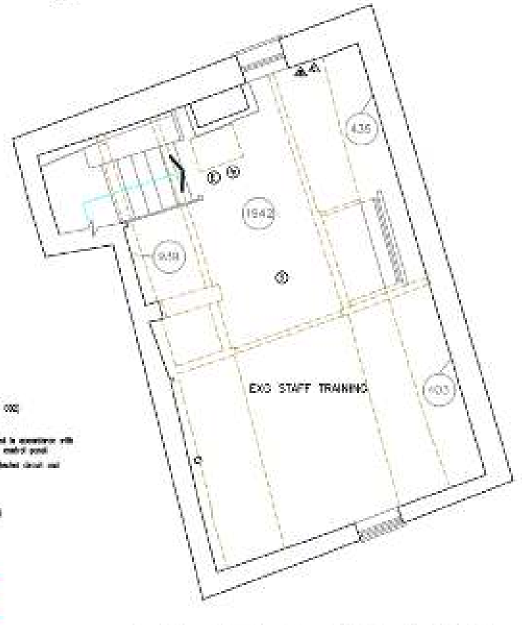
AFD SYSTEM (See note 13)

(S)	Smoke detector
(H)	Heat detector
(C)	Manual call point
	Electronic sounder
(E)	Emergency lighting
(X)	Fire Exit sign
	Extinguisher (W = water, C = CO2)
	Fire blanket

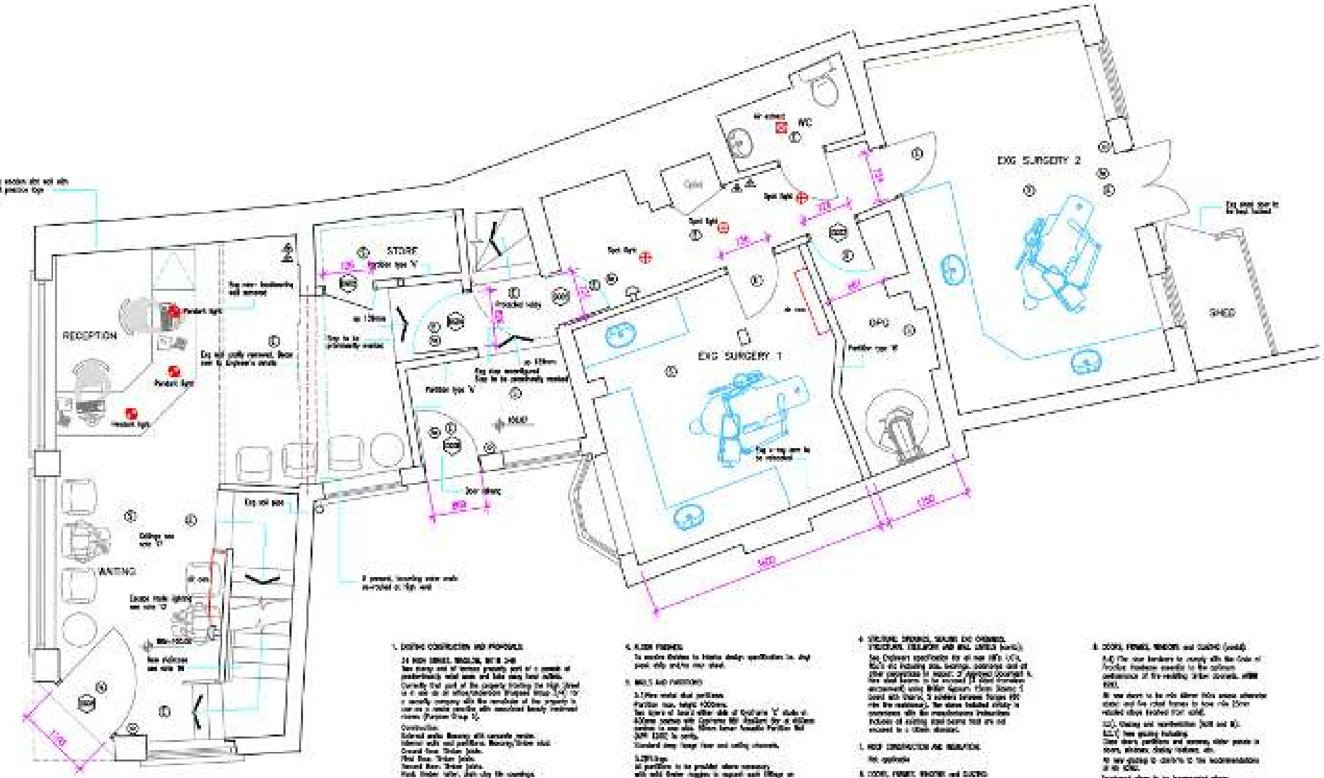
The above system to be installed and wired in accordance with BS 5839 Part 1 2017 and linked back to control panel.
Emergency lighting to be on separate protected circuit and conforms to BS 5266 Part 1 2016.

DRAINAGE LEGEND (Above gnd fw drainage)

AE	Access door/rodding eye
TB	To below
FA	From above
TA	To above
SVP	Soil vent pipe
	FW drainage in ceiling or floor void.
	FW drainage (indicative pipe run)



SECOND FLOOR PLAN



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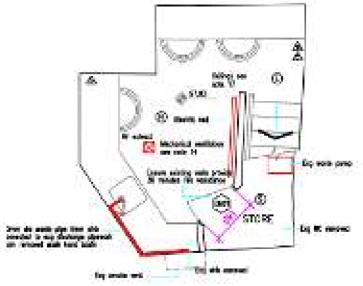

B A S E M E N T   P L A N

Smoke detector
Heat detector
Manual call point
Electronic sounder
Emergency lighting
Fire exit sign
Fire blanket

DRAINAGE LEGEND

1. EXISTING CONSTRUCTION AND PROPOSALS

2. FOUNDATIONS
Not applicable

3. FLOORS

4. FLOOR FINISHES

5. WALLS AND PARTITIONS

7. ROOF CONSTRUCTION AND INSULATION
Not applicable

8. DOORS, FRAMES, WINDOWS and GLAZING

9. LIGHTING REGULATIONS

10. ELECTRICAL INSTALLATION

11. EXIT SIGNAGE

12. ESCAPE ROUTE LIGHTING