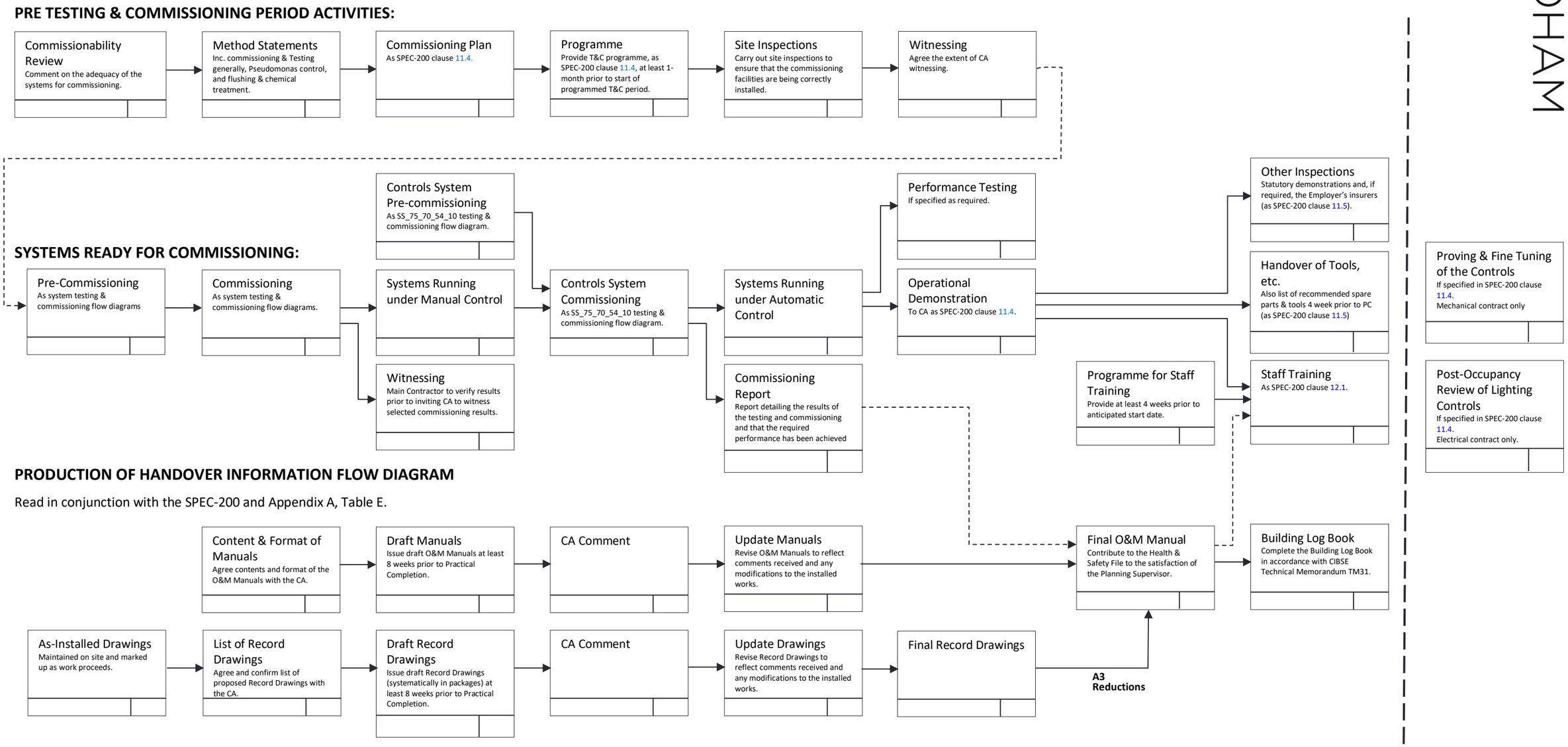
Mayford Estate

Architect:
Issue Status: D2 – TENDER

The following testing and commissioning schedules are to be read in conjunction with the Specification Preliminaries. The Contractor is deemed to have allowed for all cost and time, both explicitly and implicitly, required by these schedules.

Testing and Commissioning Flow Diagram



Testing and Commissioning Schedule
J6828-MXF-XX-XX-SH-J-00001 Rev P05

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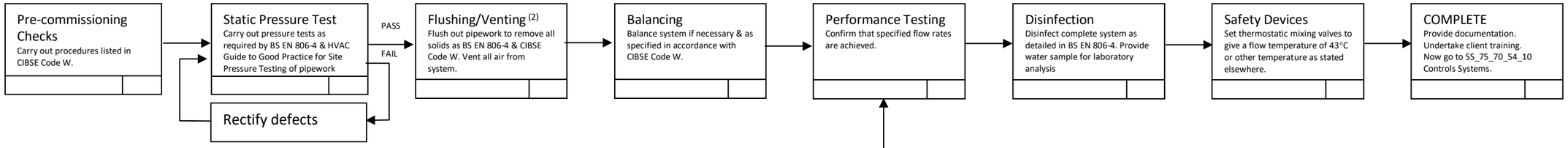
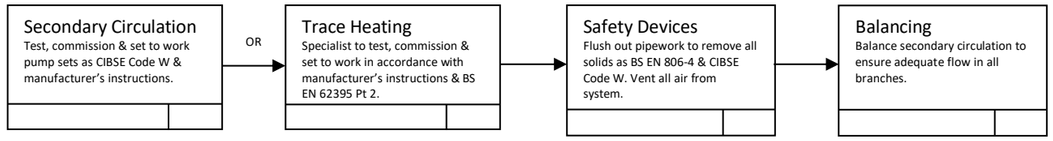
SS_55_70_38_00 – Water Services

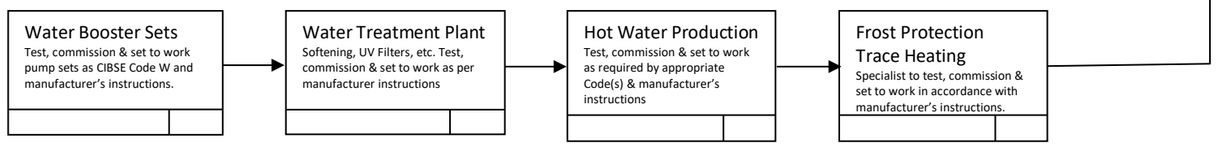
SYSTEM GENERALLY



HOT WATER



PLANT TESTING & COMMISSIONING



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Notes:

1. Read in conjunction with relevant Mechanical Specification clauses.
2. Unless specifically stated in the Specification the system pumps are NOT to be used for flushing purposes. The minimum flushing velocities should be those specified in Table 9 of BSRIA BG29/2012, or the design velocity plus 10% whichever is the greater. The flushing velocity must be selected based on the largest pipe size in the system or circuit to be flushed.
3. In general plant items are to be commissioned by the specialist supplier/manufacturer. Not all projects will have plant items listed.

Specific Witnessing Requirements:

Relevant Standards & Publications:

BS6700 / BS 8558 / BS EN 806
CIBSE Commissioning Code W: Water distribution systems
WRAS Guide
BSRIA Application Guide BG29/2012: Pre-commissioning cleaning of pipework systems
BSRIA Application Guide BG2/2010: Commissioning water systems
BSRIA Application Guide AG20/95: Commissioning of pipework systems
Building Regulations Approved Documents G & J
HSE ACoP L8: Legionnaires' disease. The control of legionella bacteria in water systems

Documentation:	Issued
Pressure test certificates	
Disinfection certificate	
Laboratory analysis of water quality	
Plant commissioning certificates	

Demonstrations/Client Training:	MFllp	Client
System generally including all main plant		
Location of building stop cock.		
Water treatment plant – oper. & maint.		
Trace heating – operation & maint.		
On-going health & safety matters		

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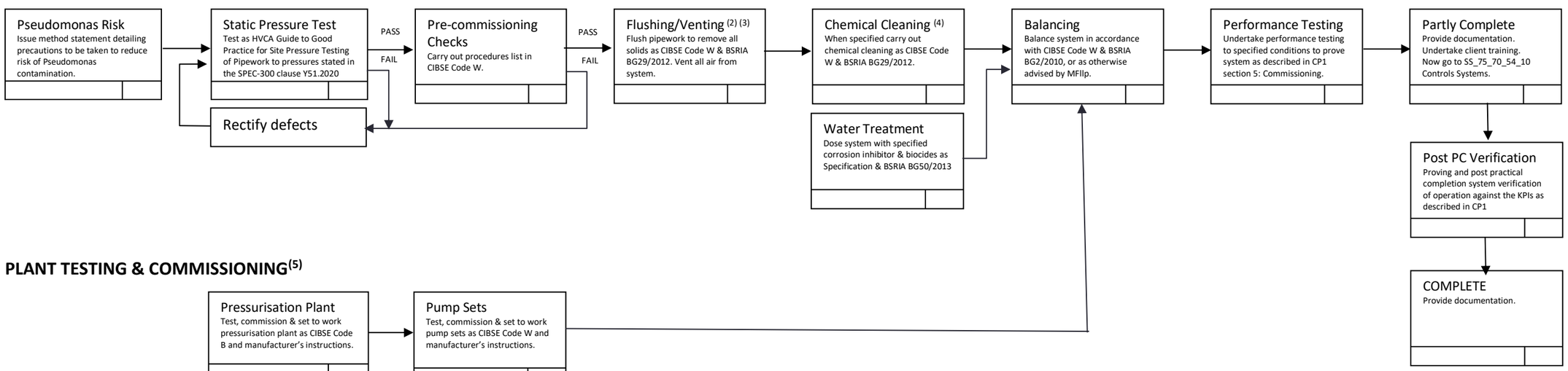
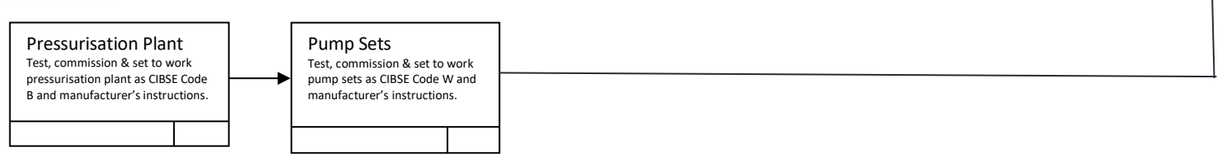
SS_60_40_37_48 – LTHW Heating

SYSTEM GENERALLY



PLANT TESTING & COMMISSIONING(5)



Notes:

1. Read in conjunction with relevant Mechanical Specification clauses.
2. If there is a delay of more than 48 hours between pressure testing and flushing then the system is to be left full of biocide dosed water.
3. Unless specifically stated in the Specification the system pumps are NOT to be used for flushing purposes. The minimum flushing velocities should be those specified in Table 9 of BRSIA BG29/2012, or the design velocity plus 10% whichever is the greater. The flushing velocity must be selected based on the largest pipe size in the system or circuit to be flushed.
4. Use an approved chemical cleaning specialist. Chemical cleaning must not be carried out until system flushing has been completed to the satisfaction of the CA & chemical cleaning specialist.
5. In general plant items are to be commissioned by the specialist supplier/manufacturer.

Specific Witnessing Requirements:
Confirmation that flushing velocities are being achieved. Flushing water samples are to be retained for examination.

Relevant Standards & Publications:

CIBSE Commissioning Code W: Water distribution systems
CIBSE Commissioning Code B: Boiler plant
CIBSE Guide B1: Heating
CIBSE Heat Networks: Code of Practice for the UK, CP1 2020
BSRIA Application Guide BG29/2012: Pre-commissioning cleaning of pipework systems
BSRIA Application Guide BG2/2010: Commissioning water systems
BSRIA Application Guide AG20/95: Commissioning of pipework systems
BSRIA Application Guide BG50/2013: Water treatment for closed heating and cooling systems
Building Regulations Approved Documents J, L1 & L2
HVAC Guide to Good Practice for Site Pressure Testing of pipework
BS EN12327: Gas supply systems – pressure testing, comm. & de-comm. procedures
IGE/UP/1: Soundness testing & purging of industrial & commercial gas installations
IGE/UP/4: Commissioning of gas fired plant on industrial & commercial premises

Documentation:	Issued
Pressure test certificates	
Pre-commissioning checklist certificate	
Flushing & chemical cleaning certs.	
Final commissioning results	
Water treatment (dosing) certificates	
Plant commissioning certificates	

Demonstrations/Client Training:	MFllp	Client
System generally including all main plant		
Safety devices & F.A. interfaces		
Fault finding & preventative maintenance		
On-going health & safety matters		

Testing and Commissioning Schedule
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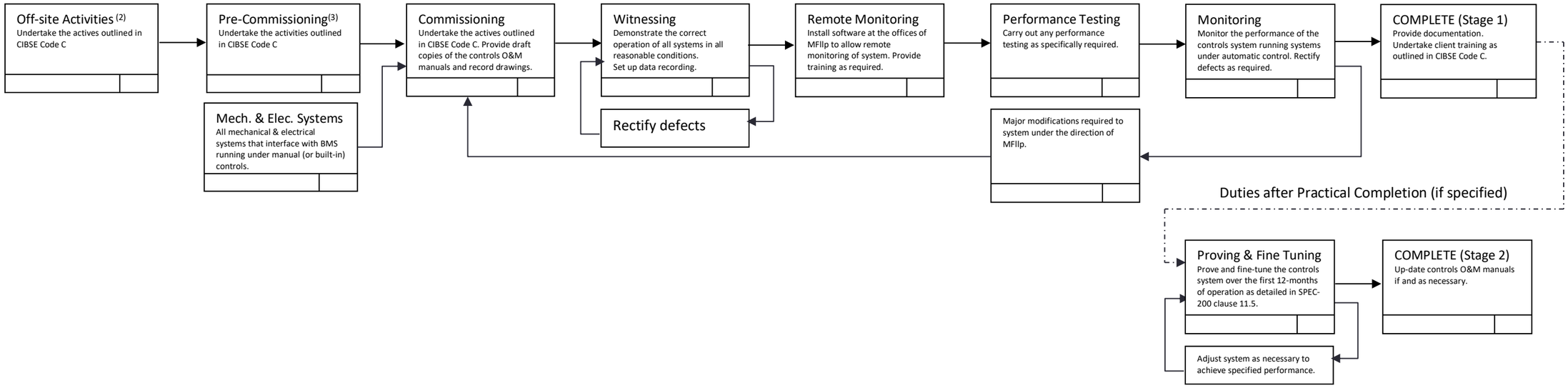
SS_75_70_54_10 AUTOMATIC CONTROL SYSTEMS



Notes:

1. Read with the Mechanical Specification work section SS_75_70_54_10.
2. As part of the off-site activities the controls specialist is to:
   - review the design and advise MFllp on number and location of sensors and actuators required to meet controls specification;
   - provide a plain English description of the operation of the controls for checking by the CA; and
   - provide a copy of the graphics pages for approval by the CA.
3. All M&E systems are to be completed, balanced and commissioned and left running in manual operation prior to the start of controls commissioning.

Specific Witnessing Requirements:

Relevant Standards & Publications:

CIBSE Commissioning Code C: Automatic controls (CIBSE 2001)

CIBSE Guide H: Building Control Systems

BSRIA Application Guide AG10/2001: Effective BMS – A guide to improving system performance

BSRIA Application Guide AG9/2001: Standard specifications for BMS
Building Regulations Parts L1 & L2

Documentation:	Issued
Provide documentation as CIBSE Code C	

Demonstrations/Client Training:	MFllp	Client
Operation of controls system		

Testing and Commissioning Schedule
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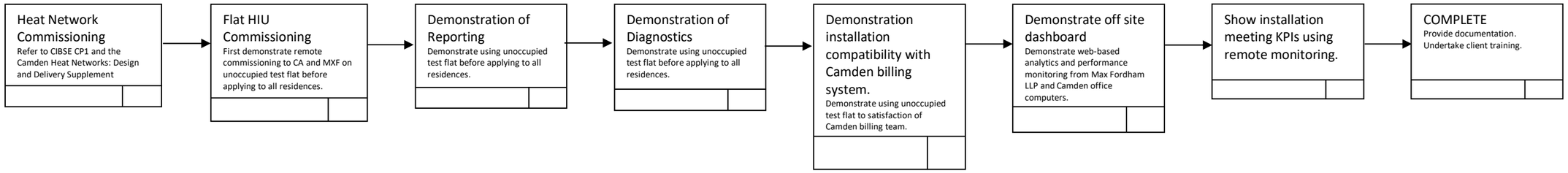
SS_75_70_54_20 HEAT METERING AND MONITORING



Notes:

1. Read with the Mechanical Specification work section SS_75_70_54_20.
2. As part of the off-site activities the metering and monitoring specialist is to:
   - review the design and advise MFllp on number and location of sensors required to meet meting and monitoring specification;
   - provide a plain English description of the operation of the system for checking by the CA; and
   - provide a copy of the graphics pages for approval by the CA.
3. All M&E systems are to be completed, balanced and commissioned and left running in manual operation prior to the start of controls commissioning.

Specific Witnessing Requirements:

Relevant Standards & Publications:

CIBSE Commissioning Code M: Commissioning Management (CIBSE 2003)

CIBSE Commissioning Code C: Automatic controls (CIBSE 2001)

CIBSE Heat Networks: Code of Practice for the UK, CP1 2020.

Documentation:	Issued
Provide documentation as CIBSE CP1	

Demonstrations/Client Training:	MFllp	Client
Operation of metering and monitoring system.		
Remote Dashboard		
Camden Billing System Interaction		
Diagnostics		
Reporting		
Flat HIU Commissioning		

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Notes

1. To be read in conjunction with MFLLP specifications and all relevant drawings.

Rev	Date	Status	Description	Engineer	Project Leader
P05	26/08/22	D2	TENDER	EO	DL
P04	08/07/21	D2	TENDER	EO	DL
P03	07/06/21	S2	For Information	EO	DL
P02	19/04/21	S2	For Information	EO	DL
P01	15/02/21	S2	Draft for Information	EO	DL

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