## Schedule 5

# Technical Specification

For the Provision of Maintenance Services Issued by

## GLOUCESTERSHIRE HOSPITALS SUBSIDIARY COMPANY LIMITED

## Gloucestershire Managed Services

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**Maintenance Contract**

# Specification for the Maintenance of Thermostatic Mixing Valves & Thermostatic Taps (TMV & TMT's)

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## Background

As part of Trust's water management policy and in compliance with NHS England HTM04 parts A, Part B and HTM04-01: Supplement in conjunction with HSG274 and ACOP L8 guidance, there is a requirement for Thermostatic Mixing Valves (TMVs) to be maintained and tested periodically (frequency listed below) across our two main sites namely Gloucestershire Royal hospital and Cheltenham General hospital. This is to prevent harbouring of harmful pathogens and guide patients and other users against scald risk.

TMV is a mechanical device fitted in between hot water supply pipe typically at around 60°c and cold-water pipe below 20°c to achieve a mixed water temperature between 40°c / 41°c in taps and showers which can be used for handwashing and general cleaning.

## Introduction

This document sets out the Authority's requirements for the provision of planned preventative maintenance, testing, inspection, cleaning, disinfection, recommissioning, defect identification and reporting services for Thermostatic Mixing Valves (TMVs), Thermostatic Taps (TMTs), shower mixers and associated components.

The service is required to support the Authority's water management arrangements, reduce scalding risk, reduce the risk of harmful pathogen development, and maintain safe operation across the Authority's estate.

The Contractor shall provide all services in accordance with the original equipment manufacturers' recommendations, all applicable legislation, relevant NHS guidance, recognised industry best practice, the requirements set out within this Technical Specification, and the technical requirements detailed within **Annex 1 – TMV (Harper Water) AE Report**.

You are required to complete all sections in the accompanying Invitation to Tender response document (ITT) and provide pricing in the accompanying Pricing Schedule.

All equipment is to be maintained in line with the following Specification.

**Please note any bids received that deviate from any aspect of this Technical Specification will be classed as variant bids, and bidders may be excluded from the procurement process.**

## Contract Overview

The Authority requires a competent and suitably qualified Contractor to deliver a compliant TMV and TMT maintenance service across Gloucestershire Royal Hospital and Cheltenham General Hospital.

The service shall include planned preventative maintenance, six-monthly servicing, fail-safe testing, cleaning and disinfection, recommissioning, defect identification, records management, reporting and attendance at contract review meetings.

The Contractor shall ensure that all work is planned and delivered in a way that minimises disruption to clinical services and maintains continuity of safe water services.

## Lots

This contract will be awarded in a single lot.

## Contract period

The Contract will be awarded for an initial period of twelve (12) months, with the option for the Authority to extend for a further four (4) periods of up to twelve (12) months each (1+1+1+1+1), subject to satisfactory performance against the Contract requirements, key performance indicators, service quality standards, and the ongoing needs of the Authority.

The total aggregate Contract term, including any extensions exercised, shall not exceed sixty (60) months. Extensions will be applied at the Authority's sole discretion and will be confirmed in writing.

## Pricing Requirements

Tenderers shall provide unit pricing based on the maintenance of TMVs, TMTs, and shower mixers.

Pricing shall be based on approximately 1,100 TMVs and shower mixers per site at Gloucestershire Royal Hospital and Cheltenham General Hospital.

The pricing model shall cover maintenance twice per twelve-month period, consisting of six-monthly servicing, including full strip, cleaning and disinfection during the first six months, and fail-safe testing during the second six-month period, in accordance with HTM 04-01 guidance.

Tenderers shall clearly identify what is included in the fixed price and any elements that would be charged separately, including reactive works, replacement components, consumables, out-of-hours access or additional visits where applicable. Please note, reactive work is not guaranteed business but will form part of the tender evaluation for ‘commercial’.

## Contract Implementation

The Contractor shall mobilise the service so that statutory and planned maintenance requirements continue without interruption from the contract commencement date.

## Location and sites

The service shall be delivered at Gloucestershire Royal Hospital and Cheltenham General Hospital.

The Authority reserves the right to add, remove or amend sites, areas, wards, departments, assets or equipment schedules during the contract term where operational requirements change.

The Contractor shall work with the Operational Estates Team to agree access arrangements before each service visit.

## Working hours and access arrangement

Most service visits are expected to take place during weekday working hours. Approximately 80% of PPM assets are accessible during midweek days.

| Site | Standard Access Hours |
|---|---|
| Gloucestershire Royal Hospital | 08:00 to 16:00 |
| Cheltenham General Hospital | 07:30 to 15:30 |

At Gloucestershire Royal Hospital, standard access hours are 08:00 to 16:00. At Cheltenham General Hospital, standard access hours are 07:30 to 15:30.

Access to areas such as Theatres and the IGIS Centre may require Saturday attendance between 08:00 and 16:00. Where the Contractor deploys only one technician at each main site, **up to six consecutive Saturdays every six months may be required to complete PPM activity in these areas.**

The Contractor shall coordinate dates with the on-site Operational Estates Team and ensure ward and departmental staff are aware of planned work before activities commence.

## Contract Requirements and Level of Cover

The Contractor shall provide a planned preventative maintenance service for TMVs, TMTs, shower mixers and associated components.

The service shall include the maintenance of under-counter mixer valves, integrated cartridge TMV types, shower mixers and other related outlet arrangements present across the estate.

The Contractor shall deliver all planned services in accordance with HTM 04-01 Part A, HTM 04-01 Part B, HTM 04-01 Supplement, HSG274 and ACOP L8 guidance, as applicable.

The Contractor shall respond to defects and issues identified during PPM visits and shall report any reactive maintenance requirement to the Operational Estates Team in accordance with this specification.

## Planned Preventative Maintenance Requirements

All relevant TMVs, TMTs and shower mixers shall be maintained every six months unless otherwise instructed by the Authority.

The first six-monthly service shall include full strip down, cleaning and disinfection. The second six-monthly visit shall include fail-safe testing in accordance with HTM 04-01 guidance unless the Authority requires additional service.

The Contractor shall complete each assigned area before moving to another ward or department, unless access is denied for clinical or operational reasons. **Where access is denied, the Contractor shall make repeated visits or make further enquiry from the ward on access to difficult areas, however, in a situation whereby access is denied on more than 3 repeated visits, the contractor shall notify the on-site Operational Estates Team immediately so that this can be documented and alternative arrangements made.**

## TMV and TMT Maintenance Standards

During each six-monthly service, inline strainers shall be removed, descaled, and disinfected before reinstatement.

Under-counter TMVs and cartridges on integrated taps shall be removed, cleaned in chlorine solution for 15 to 20 minutes and inspected to ensure all internal filters are free from scale, biofilm, slime and debris. Where contamination is significant, contact time may be increased to 30 minutes.

Where a TMV or cartridge cannot be cleaned effectively, it shall be replaced and recommissioned on the same day where practicable. Where replacement service kits are required, such as packing glands or O-rings, the Contractor shall replace these as necessary.

Shower mixers shall be dismantled, cleaned, and disinfected, including strainers and mixing valve components, using the same principles applied to TMVs and TMTs.

Actichlor Plus, or an Authority-approved equivalent, shall be used for routine servicing of taps, strainers and relevant components where appropriate.

## Temperature Testing and Fail-Safe Testing

For all outlets, the Contractor shall measure and record the temperature of mixed water at the maximum available flow.

Where required, mixed outlet temperatures may be adjusted to a maximum of 41°C for wash hand basins and showers and 44°C for baths.

The Contractor shall isolate the cold-water supply to the mixing valve and observe the mixed water outlet. If water flows after five seconds, the Contractor shall collect the discharge into a measuring vessel for 60 seconds. If the volume collected is greater than 120 ml, recommissioning or service work is required.

If there is no flow, or if the volume collected is less than or equal to 120 ml, the cold-water supply shall be restored, and the outlet runs for at least 15 seconds on the maximum hot setting.

The Contractor shall verify that the mixed water temperature does not differ by more than 2°C from the earlier temperature recorded. If the temperature differs by more than 2°C from the set temperature, the Contractor shall recheck the supply conditions, readjust the valve and recommission the valve in accordance with manufacturers' instructions.

All temperatures and fail-safe results shall be recorded accurately on the relevant PPM log sheet and on the Gloucestershire Managed Services Micad/ZetaSafe system.

## Shower Mixer Requirements

The Contractor shall maintain shower mixers installed across wards and departments, including but not limited to brands such as Mira, Matteson, Mynell and Horne, where present.

Shower mixing valves shall be dismantled, cleaned, disinfected, inspected, tested, and recommissioned in accordance with applicable guidance and manufacturers' recommendations.

Any faulty shower mixer component identified during servicing shall be reported to the on-site Operational Estates Team on the day of identification.

## Contractor Competency Requirements

All operatives undertaking the service shall be suitably trained, competent, and experienced in TMV/TMT maintenance, water hygiene, and fail-safe testing.

Operatives shall be able to demonstrate knowledge of why TMVs are commissioned, serviced and maintained in line with NHS England HTM 04-01 Parts A and B, HTM 04-01 Supplement, HSG274 and ACOP L8 guidance.

Operatives shall understand expected temperature set points, be able to recognise abnormal results, identify scale and biofilm build-up, determine whether to clean or replace components, diagnose faults and understand the actions required where isolation valves fail, leaks occur or equipment becomes defective.

Operatives shall be able to complete accurate documentation, use the correct forms, understand schematic plans and drawings, and hold relevant Water Safety Hygiene and TMV Maintenance Servicing competence.

## Contractor Responsibilities

The Contractor shall provide competent personnel, appropriate supervision, suitable tools, calibrated equipment, PPE, cleaning materials, and all resources necessary to deliver the service safely and effectively.

The Contractor shall check and record the condition and current calibration certificate of each digital temperature probe required for TMV commissioning, servicing, maintenance and fail-safe testing.

Where any testing equipment is found to be defective at any point, the Contractor shall discontinue the relevant testing activity until a functioning replacement is available.

The Contractor shall perform all activities aseptically using clean and disinfected tools before moving to the next tap, shower or outlet to avoid cross-contamination.

The Contractor shall ensure all necessary PPE is worn, particularly when working with chemicals.

The Contractor shall comply with the Authority's hygiene policy, Health and Safety Policy, Control of Contractors Policy, Fire Safety Policy, Safeguarding Policy and any other relevant Trust policy briefed during induction.

The Contractor shall report to the appropriate Estates location, sign in before commencing work and sign out before leaving site each day. For out-of-hours attendance, the Contractor shall follow the arrangements agreed with the Operational Estates Team.

The Contractor shall not leave site without submitting completed PPM documentation and debriefing the Operational Estates Team regarding access issues, failures, defects and any other matters requiring attention.

## Health, Safety and Infection Prevention Requirements

The Contractor shall comply with the Health and Safety at Work Act 1974 and all other relevant legislation, regulations, codes of practice, NHS guidance and Authority policies and procedures.

The Contractor shall complete site induction and area familiarisation before PPM activities commence. The briefing shall include the location of main isolation points and local outlet isolation points relevant to the ward, department, or area being worked in.

The Contractor shall ensure its staff always display acceptable identification while on site and comply with all local arrangements relating to access, site safety, infection prevention and clinical area restrictions.

Where contractor personnel are required to enter hospital buildings, they shall comply with all current NHS and local hospital infection prevention requirements in force at the time of attendance.

## Parts, Consumables and Replacement Components

The Contractor shall identify and report any defective items requiring replacement, including TMV cartridges, isolation valves, taps, O-rings, packing glands, shower components, fittings and associated consumables.

Spares and consumables for certain works may be provided by the on-site Operational Estates Team where needed or required. The Contractor shall confirm parts requirements with the Operational Estates Team daily while on site.

Where minor replacement service kits such as packing glands and O-rings are required, the Contractor shall provide and fit these where this forms part of the agreed service scope.

The on-site Operational Estates Team shall be responsible for shutting down and making safe main ward isolation valves where this is required to facilitate removal or replacement of defective valves, taps or associated components.

## Documentation and Record Keeping

The on-site Operational Estates Team shall provide TMV PPM log sheets for assigned areas and instructions for completion.

The Contractor shall record cold, hot and mixed water temperatures, disinfection actions, fail-safe results, failures, defects, access issues and remedial recommendations accurately and legibly.

All measured temperatures and fail-safe records shall be entered onto the Gloucestershire Managed Services Micad/ZetaSafe system.

Completed, signed and dated PPM log sheets shall be returned to the on-site Operational Estates Team at the end of each working day.

## Service Reporting Requirements

The Contractor shall provide a completed and detailed service report to Gloucestershire Managed Services within seven working days of the completed service date.

The service report shall include before and after photographic evidence of works completed, failures, defects, remedial works required, missing TMVs (where identified) and any further recommendations.

The Contractor shall debrief the Operational Estates Team daily on access denied issues, failures, defects, parts needs and any operational concerns identified during that day's service activity.

Hard copy or electronic service records shall be provided in the format required by the Authority.

## Incident and Non-Conformance Reporting

Non-compliant temperature readings, including elevated cold water above 20°C and pre-blended hot water supply below 55°C, shall be recorded on the PPM log sheet, included in the service report and reported to the on-site Operational Estates Team on the day of the service.

Failed TMVs shall be recorded on the PPM log sheet and service report. The Contractor shall make reasonable efforts to replace the TMV cartridge, recommission to HTM 04-01 standards, and record the temperatures and fail-safe test results again.

The Contractor shall report other minor faults preventing compliance, including cartridge issues, TMV failures, tap defects, faulty isolation valves and pipework issues, in accordance with Authority procedures.

## Performance Management and Review Meetings

The Contractor shall meet with the Gloucestershire Managed Services Operational Estates Management Team every six months to review service performance.

Review meetings shall consider the quality-of-service reports, the quality and completeness of PPM log sheets, the accuracy and timeliness of Micad/ZetaSafe updates, identified defects, access issues, completion rates, compliance matters and continuous improvement actions.

The Authority reserves the right to request ad hoc review meetings where performance, compliance, or operational requirements make this necessary.

## Statutory and Regulatory Compliance

The Contractor shall comply with all applicable legislation, statutory obligations, NHS guidance, industry standards and Authority policies relevant to the service.

This shall include, but is not limited to, HTM 04-01 Part A, HTM 04-01 Part B, HTM 04-01 Supplement, HSG274, ACOP L8, Health and Safety at Work Act 1974, water safety requirements, infection prevention requirements and Control of Contractors requirements.

The Contractor shall ensure that all services remain compliant with any updated legislative, regulatory, NHS or industry guidance introduced during the contract term.

| Requirement Area | Applicable Reference |
|---|---|
| Water safety and TMV maintenance | HTM 04-01 Part A, HTM 04-01 Part B and HTM 04-01 Supplement |
| Legionella and water hygiene | HSG274 and ACOP L8 |
| Site safety | Health and Safety at Work Act 1974 and Trust policies |
| Contractor site controls | Control of Contractors requirements and local induction arrangements |
| Procurement and contractual terms | Procurement Act 2023 compliant NHS documentation |

## Contract Management Requirements

An implementation meeting shall be held at contract commencement. The meeting shall include mobilisation arrangements, site access, induction, asset schedules, reporting arrangements, escalation routes, and any other operational requirements.

The Contractor shall cooperate fully with the Authority's contract management arrangements and shall provide information reasonably required to evidence of compliance and performance.

The Contractor shall maintain accurate records of work completed, outstanding defects, recommendations, access issues, and any additional spend incurred by the Authority.

## Reporting

Service Reports and Site TMV PPM Log Sheet:

The on-site Operational Estates Team will provide the TMV PPM Log Sheets for the area assigned with clear instructions on how to complete. The log sheet contains columns to record the results of cold, hot and mixed temperatures, a column for the recording of disinfection required action and a column for fail safe recording.

All measured temperatures and fail-safe records must be accurately recorded on the Gloucestershire Managed Services (Micad) Zetasafe System.

A completed service report with photo evidence of taps & TMVs is required to be submitted to Gloucestershire Managed Services within seven working days of the service completion date.

## Incident and Non-Conformity Reporting:

In the event of non- compliant temperature reading such as elevated cold water above 20°C and preblended Hot water supply below 55°C, this must be recorded on the PPM Log Sheet, on the Service Report and reported to the on-site Operational Estates Team on the day of the service being carried out.

A failed TMV must be recorded on the PPM Log Sheet, on the Service Report and effort must be made to replace the TMV Catridge and recommission to the HTM04 01 standard and record all temperatures and fail-safe test again.

This also covers other minor faults that prevents the outlet from achieving complaint other than tap replacement, faulty isolation valves or pipework replacement.

## Terms and Conditions

Bidders should be aware any contracts arising from this procurement process shall be subject to the NHS Conditions for the Provision of Services with Maintenance Schedule. A copy can be obtained from:

https://www.procurementservices.co.uk/media/0ywesfez/nhs-terms-conditions-provision-of-services-po-version-pa23.pdf