

Statutory basis: HSWA 1974 s.2(2)(a) and MHSWR 1999 regs 3 and 5 — this document is the recorded safe system of work. HTM 02-01 (2006) is the NHS standard for medical gas pipeline systems: Part A governs design, installation, testing, validation and verification by competent persons; Part B the operational management, including the MGPS permit-to-work issued by the Authorised Person (MGPS) before any work on a live system. DSEAR 2002 applies to oxygen enrichment and to medical air and nitrous oxide; the Pressure Systems Safety Regulations 2000 to the manifolds and pipework as a pressure system, and PUWER 1998 to the brazing, purging and test equipment. Prepared against legislation current at 10/08/2026.

1 DOCUMENT AND PROJECT IDENTIFICATION

RAMS REFERENCE	PROJECT / SITE REF	SITE NAME AND ADDRESS	DATE PREPARED	NEXT REVIEW DATE
CLIENT / PRINCIPAL CONTRACTOR	PLANNED START	DURATION	OPERATIVES	SUPERVISING THE WORK

2 SCOPE OF WORKS

Installation and alteration of medical gas pipelines — oxygen, medical air, surgical air, nitrous oxide, vacuum, AGSS: degreased copper to the standard, brazing under nitrogen purge, supports and labelling, terminal units and area valve service units, connection to the live system only under the MGPS permit.

This document does not cover: the manifold and plant (specialist supplier) and clinical commissioning — the Quality Controller's role.

SITE-SPECIFIC SCOPE, LOCATIONS AND LIMITATIONS

3 RISK ASSESSMENT — SCORE EACH RISK FOR THIS SITE, THEN ADD WHAT IS MISSING

The hazards and controls below are the starting point for this activity, written by a working main contractor. They are not complete for your site until a competent person has scored each risk, added the site-specific hazards, and struck out anything that does not apply. Rate risks High / Medium / Low before and after controls.

1. Work on a pipeline that is live to patients — loss of supply to a ward or theatre

At risk: Patients, clinical staff

Controls: No work on any medical gas pipeline without the MGPS permit-to-work issued by the AP(MGPS); isolation valves locked and labelled by the AP; clinical staff and the Quality Controller informed; back-up cylinder supply confirmed before isolation.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

2. Oxygen enrichment — violent combustion of oils, greases and clothing

At risk: Operatives

Controls: Oxygen-clean components and tools only; no oil or grease; no smoking or naked flames; brazing under nitrogen purge; ventilation of the work area; clothing not oxygen-saturated.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

3. Wrong gas at an outlet — cross-connection between services

At risk: Patients

Controls: Gas-specific pipework identification maintained; every outlet tested for identity and purity by the Quality Controller before use; no outlet handed over on the installer's word.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

4. Work at height from steps, podiums, towers or MEWPs

At risk: Operatives, and anyone below

Controls: Select access by the Work at Height hierarchy — podium or tower before steps; MEWPs by trained (IPAF) operators only. Inspect access equipment before use, establish an exclusion below overhead work, and secure tools and materials against dropping.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

5. Manual handling of copper coil, cylinders and manifold components in ceiling voids and plant rooms

At risk: Installers

Controls: Copper coil uncoiled at floor level; cylinders always on a trolley and chained; work in voids from a platform with materials passed up, not carried.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

6. Interface with occupants, other trades and the public

At risk: Occupants, other trades, the public

Controls: Segregate the work area — barriers, signage, sheeting; agree access routes and working hours with the occupier; never obstruct escape routes; deliveries and waste runs outside peak movement times where agreed.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

7. Brazing in a ceiling void of an occupied hospital

At risk: Occupants, operatives

Controls: Hot works permit and fire watch; fire detection isolated under permit; nitrogen purge during brazing; ventilation; work within the Trust's agreed hours.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

Site-specific hazards not listed above — every site has at least one:

HAZARD	WHO IS AT RISK	CONTROLS	INITIAL H/...	RESIDUAL...	ACTION OWNER	BY WHEN

4 METHOD — SEQUENCE OF WORK

- 01 Receive the design and the AP(MGPS) permit; confirm the installer's competence to HTM 02-01; confirm the isolation and the back-up supply.
- 02 Install pipework — degreased, capped, identified — with supports and sleeves; braze under nitrogen; keep the system capped at every break.
- 03 Install terminal units and AVSUs to the schedule; label.
- 04 Pressure test and leak test to HTM 02-01 with the AP; anti-confusion and purity tests by the Quality Controller before any outlet is released to clinical use.
- 05 Complete the installation records and the handover to the AP; permit cancelled by the AP.

SITE-SPECIFIC AMENDMENTS TO THE SEQUENCE

5 PLANT, EQUIPMENT AND MATERIALS

Nitrogen purge kit

Test gauges and analysers (specialist)

Brazing equipment with fire watch

INSPECTION / THOROUGH EXAMINATION REFS

COSHH ASSESSMENT REFS

6 PPE — THE LAST LINE OF CONTROL, NOT THE FIRST

Head protection

Gloves — task-rated

Oxygen-clean gloves for component handling

Safety footwear

Eye protection

High visibility

Hearing protection

RPE TYPE, FACE-FIT STATUS, AND ANY OTHER PPE REQUIRED

7 PERMITS REQUIRED BEFORE THIS WORK STARTS

A permit authorises this work in that place, on that day. It extends the safe system of work in this document — it does not replace it (HSE HSG250). The site issues the permit; record its number before work starts.

KD-PTW-HW-001 — Hot Works Permit

For brazing.

PERMIT NUMBER

KD-PTW-FI-023 — Fire Alarm and Detection Isolation Permit

For brazing in an occupied building.

PERMIT NUMBER

KD-PTW-MI-029 — Mechanical Isolation and Lock-Off Certificate

Alongside the AP's own MGPS permit — the AP's permit governs.

PERMIT NUMBER

8 EMERGENCY ARRANGEMENTS — COMPLETE FOR THIS SITE

FIRST AIDER AND LOCATION

NEAREST A&E

ASSEMBLY POINT

HOW THE ALARM IS RAISED

EMERGENCY ACCESS FOR THIS WORK AREA

SPILL / ENVIRONMENTAL RESPONSE

9 BRIEFING RECORD — EVERYONE WORKING UNDER THIS RAMS SIGNS BEFORE STARTING

By signing you confirm the contents of this RAMS have been explained to you, you understand the hazards and controls, and you will work to the sequence stated. Tell the supervisor if the work or the site does not match this document — work stops until it does.

NAME	COMPANY	SIGNATURE	DATE

10 PREPARED AND ACCEPTED

Prepared / adapted for this site by — I confirm I have adapted this document to the site, scored the risks, and that it describes how the work will actually be done.

PRINTED NAME	ROLE / COMPETENCE	COMPANY	SIGNATURE	DATE	TIME

Accepted for the site by — principal contractor or site manager review.

PRINTED NAME	ROLE	COMPANY	SIGNATURE	DATE	TIME

Review this RAMS if the work, the site or the law changes, and at least before each new phase of the works. Flatten the completed PDF before filing so the record cannot be silently edited.

R REVISION HISTORY

Every revision of this document, and every review that found nothing to change. The revision on the front of this sheet is the one you are holding — check kubitdocs.com for the current one before use.

Rev	Date	Class	What changed	Authorised by
D0	2026-08-28	first-issue	First issue.	— not yet approved —
A0	2026-08-29	review	Approved for issue by the author. Content unchanged from the draft; the draft status strip is removed. No independent third-party review has been carried out.	Author — director, UK principal contractor, SMSTS. Not an independent review.

Class: first-issue · material (the law, a control, a field or the scope changed — past buyers are notified) · editorial (wording or layout only) · review (checked, nothing changed) · withdrawal. Revision prefix D = draft, not approved and not for sale; A = approved for issue by the person named, on the date shown.