Pressure Systems Safety Procedure	
Enabling Policy Statement; Executive Owner; Approval Route:	Our Safety - Chief Operating Officer - Compliance Committee
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Associated Policy Statements:	N/A
Authorised Owner:	Director of Health and Safety
Authorised Co-ordinator:	Health and Safety Manager (Professional Services)
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Due date for full review:	1 May 2027
Sub documentation:	Piped Compressed Gas Systems Safety Procedure New Pressure System or Change to Existing Pressure System Notification Form Appendices 1 to 6 Appendix 1 – Examples of types of Pressure Systems Appendix 2 – PSSR 2000 Decision Tree Flow Chart Appendix 3 – Key Exemptions Appendix 4 – Written Schemes of Examination Appendix 5 – User and Owner Advice Appendix 6 – Response in the Event of a Pressure System Causing an Explosion or Dangerous Occurrence.

Approval History

Version	Reason for review	Approval Route	Date
1.0	Reviewed and updated (including in accordance with new Policy Framework). Replaces the University of Surrey Pressure Systems Policy (Version 1, dated 15th June 2021).	Compliance (Health, Safety and Wellbeing) Committee	1 May 2024

1. Purpose

This Procedure outlines the University's arrangements to prevent injury to persons and or damage to equipment from the use of pressures systems and the uncontrolled releases of relevant fluids and stored energy. The arrangements are based on the requirements of the Pressure Systems Safety Regulations (PSSR) 2000 and the accompanying Approved Code of Practice, together with other legislative standards and guidance documents.

This Procedure is not designed to replace detailed technical guidance from relevant associations. The aim of this Procedure is to provide a framework designed to effectively manage the risks associated with pressure systems, thus safeguarding the safety and health of staff, students, and others from the use of such equipment.

2. Scope and Exceptions to the Procedure

This Procedure applies to all University of Surrey's controlled premises and activities. Its requirements apply to staff, students, contractors, and visitors either using or working on pressure systems.

This document does not include aspects of piped compressed gas systems attached to gas cylinders and standalone compressed gas cylinder installations, as they are detailed in their own Procedure (Compressed Gas Systems Safety). However, such systems must still adhere to this Procedure in relation to the duties and requirements of the Pressure Systems Safety Regulations 2000.

Acceptable exemptions to this Procedure and the legal requirements of PSSR 2000 can be given in certain circumstance and in particular if the pressure system itself is the subject of a research experiment and only if:

- The pressure system being used for the experiment is temporarily used or designed to be single use only, and;
- Only where it is not reasonably practicable to comply with the relevant regulations.

Partial exemptions to parts of PSSR 2000 are allowed for very small pressure vessels, where the product of the internal volume and pressure of the vessel is less than 250 bar litres, unless the relevant fluid in question is steam. However, they must conform to other parts of the regulations which can be seen by Appendix 3 (PSSR decision tree flow chart). Any exemption from a Written Scheme of Examination does not mean that an annual examination by Competent Person(s) is not required. These examinations are also often a requirement of the University's insurers. These exemptions do not remove other statutory responsibilities set out in PSSR 2000 or other health and safety legislation, where adequate precautions must be taken to protect all personnel and ensure the system is always in a safe condition.

Any exemptions for a pressure system will need to be approved by the appropriate Duty Holder of the School/Department who owns the pressure system or the Authorising Engineer (Pressure Systems) for those under the ownership of Estates & Facilities. An exemption should be given only after relevant personnel have been consulted, which may include the Authorised Engineer (Pressure Systems) and the University Competent Person(s) and other external specialists. Whilst research may require equipment to be designed from new or be in temporary use only, once the system is brought into regular use, it must have a Written Scheme of Examination and an examination undertaken in line with the regulations. All exemptions must be approved and rationale for exemption must be recorded.

For a comprehensive list of exemptions or partial exemptions to PSSR 2000 requirements see Schedule 1 (parts I and II) of PSSR 2000 ACOP.

3. Definitions and Terminology

Duty Holder – The person with overall responsibility and ownership of the pressure system equipment, or the premises where the pressure system is installed.

A pressure system – is

- Any system comprising of one or more pressure vessels of rigid construction, their associated pipework, and protective devices.
- The pipework with its protective devices to which a transportable pressure receptacle is or is intended to be connected.
- A pipeline and its protective devices, which contain or are liable to contain relevant fluids but does not cover transportable pressure receptacles.

You can find common examples of pressure systems in Appendix 1.

A relevant fluid – is

- Steam at any pressure.
- Any fluid or mixture of fluids which is at a pressure greater than 0.5 bar above atmospheric pressure, and which fluid or mixture of fluids is — (i) a gas, or (ii) a liquid which would have a vapour pressure greater than 0.5 bar above atmospheric pressure when in equilibrium with its vapour at either the actual temperature of the liquid or 17.5 degrees Celsius.
- A gas dissolved under pressure in a solvent contained in a porous substance at ambient temperature and which could be released from the solvent without the application of heat.

A pipeline – a pipe or system of pipes used for the conveyance of relevant fluid across the boundaries of premises, together with any apparatus for inducing or facilitating the flow of relevant fluid through, or through a part of the pipe or system, and any valves, valve chambers, pumps, compressors, and similar works which are annexed to, or incorporated in the course of the pipe or system.

Pipework – a pipe or system of pipes together with associated valves, pumps, compressors, and other pressure containing components and includes a hose or bellows but does not include a pipeline or any protective devices.

Installed System – means any pressure system other than a mobile system.

Mobile System – means a pressure system which can be readily moved between and used in different locations.

Competent Person(s) – a competent individual person (other than an employee) or a competent body of persons corporate or unincorporated, who has responsibilities under regulation 8 and 9 of the Pressure systems Safety Regulations.

Danger – means reasonably foreseeable danger to people from a system failure, but (except in the case of steam) it does not mean danger rising from the characteristics of the relevant fluid other than from its pressure.

System Failure – is the unintentional release of stored energy from a pressure system (other than from a pressure relief system).

Locking off – is a systematic process shutting down machinery or plant equipment that ensures the piece of machinery or equipment is made safe while it is either being worked on, inspected or if not safe for use. This process prevents machinery being able to start up or in the case of a pressure system release energy that could pose a risk to the users or others.

Protective Device – means any device fitted to a pressure system that is designed to protect the pressure system against failure, or that are devices designed to give warning that system failure might occur (including bursting discs).

Written Scheme of Examination – as established in regulation 8 of PSSR 2000 is a document containing the established inspection routine determined by a competent person as well as other key information about a pressure system. This may also include other examination techniques required (like stress tests, load tests, other inspections) that are not a part of a regular thorough inspection, but where the Competent Person(s) has deemed it necessary for them to be performed to be able to decide on the safety of the pressure system.

Thorough Examination – as established in regulation 9 of PSSR 2000 is the careful and critical scrutiny of a pressure system (in or out of service) by Competent Person(s), using suitable techniques including testing as required to assess:

- Pressure system actual condition; and
- That for the period up to the next inspection, the pressure system will not cause danger when properly used if normal maintenance is carried out. For this purpose, "normal maintenance", means such maintenance as it is reasonable to expect the user or owner of the pressure system to carry out independently from the advice of Competent Person(s).

Responsible Person– staff members who have been assessed as having sufficient training, competency, and knowledge to effectively manage pressure systems they use or that their School/Department/Directorate own.

Authorised Engineer (Pressure Systems) – Appointed staff member who have been assessed as having sufficient training, competency, and knowledge to effectively manage pressure systems within Estates & Facilities, and to supervise the pressure systems permit-to-work.

Competency – a person who has the skills, knowledge, attitude, training, and experience possessed by a person that allows them to undertake their role effectively.

Training – is equipping staff, students (and others where the University has a duty of care) with relevant skills to deal appropriately with a given health and safety situation.

Briefing – is informing all necessary people of relevant knowledge and information in relation to health and safety to ensure safe completion of their task.

4. Procedural Principles

4.1. Commitment

The University will ensure that:

- It defines the organisational arrangements for achieving compliance (see roles and responsibilities section of this Procedure) and ensure everyone knows their responsibilities.
- It provides resources to achieve compliance with this Procedure and PSSR 2000.
- All pressure systems are adequately designed, installed, maintained, and modified by qualified, skilled, and knowledgeable persons to relevant British Standards and in accordance with relevant legislation.
- Any pressure system can be operated safely, and there are suitable local and organisational management controls for the pressure systems in use, including safe systems of work.
- Suitable protective devices are fitted and function correctly, making sure that, where fitted, relief valves discharge to a safe place.
- All qualifying pressure systems have thorough inspections and Written Schemes of Examination, with records documented and retained.
- Those who are using, working on, or that are managing pressure systems during their work activities are appropriately informed, instructed, and where necessary, trained and supervised. Or in the case of third parties that they have been adequately vetted to ensure they are competent to do the work that they have been instructed to perform on behalf of the University.

4.2. Arrangements

In order to meet the above objectives, the University will:

- Appoint a Duty Holder in Estates & Facilities who will authorise any work which involves the installation or modification of any pressure systems that are considered part of building infrastructure, including but not limited to pipelines, protective devices, and associated plant.
- Have Responsible Person(s) within relevant Schools/Departments/Directorates to ensure compliance with this procedure.
- Appoint Competent Person(s) to ensure that, where required, Written Schemes of Examination are in place and thorough inspections are undertaken before any system is used for the first time, if modified, and then within the specified timescale as defined in the Written Scheme of Examination for each pressure system.
- Ensure that no qualifying systems are operated without clear and detailed safe operating limits and procedures in place, ensuring a system is established for recording and retaining this information, including updating this information when there are changes made to the pressure system.
- Instigate suitable and sufficient training for all users of pressure systems.
- Undertake appropriate user and maintenance checks for pressure systems (based on industry guidance and manufacturer's instructions), including retaining records of these checks and maintenance practices.
- Have planned preventative maintenance and service contracts in place for its pressure systems as required by manufacturers guidelines and current industry standards.
- Ensure that there is a safe system of work in place for all pressure systems in use, including where necessary a permit-to-work for working on any high-risk pressure systems, which includes documented safe isolation procedures to recognised industry standards.
- Appoint in writing a qualified, knowledgeable, and skilled Authorising Engineer (Pressure Systems) to manage and monitor compliance with PSSR 2000 and who will manage pressure system related works in relation to the Estates & Facilities permit-to-work system.
- Establish a process to ensure that any new pressure systems or changes to any existing system, is reviewed and approved by the necessary stakeholders, which may include external consultation from industry experts or the appointed Competent Person(s).
- Maintain a pressure system register to ensure all such systems are known and adequately managed.
- Review pressure systems management practices and arrangements periodically, or whenever there are substantial changes in relevant legislation, guidance, or University activities.

4.3. Ownership, Duty Holders, & Rented Systems

The University, as an employer, has accepted and ensures the fulfilment of all its statutory duties to its employees and others who may use or access its premises. Key personnel have documented functional and professional responsibilities within this Procedure for ensuring that all university pressure systems are managed and operated safely.

The Director of Estates & Facilities is the recognised owner of all pressure systems that are considered to be a part of a building's fabric, services, and essential infrastructure, including but not limited to pipelines, plant equipment and protective devices. Heads of Schools/Departments/Directorates are the owners of any pressure systems that they may design, purchase, install, and use within their areas of responsibility, that are not deemed to be under the ownership of the Director of Estates & Facilities.

Where a pressure system is rented from an external source, the University will not be the recognised owner, and all owner responsibilities as defined within PSSR 2000 will fall to the rental company. The exceptions to this, is when as part of the rental agreement we have taken on ownership responsibilities or if the rental company has no place of business or a representative in Great Britain, then the University will then be the recognised owners of these items, which will then come under

the responsibility of the Duty Holder that rented the system.

4.4. Installation and Modification

When planning installations or modifications to systems, Duty Holders, or their Responsible Person(s), including the Authorising Engineer (Pressure Systems) for capital works, will ensure that all pressure systems installed are in accordance with relevant standards and that the required new installation or modification checks are carried out (see Appendix 5). All modifications or changes to existing installations should only be conducted if a sufficient risk assessment has been undertaken in accordance with the manufacturer's recommendations, specifying all control measures or work methods required to conduct the work safely. All associated drawings, inspection, and testing documents should be created or updated by the systems designer and given to the Authorised Engineer (Pressure Systems) and the Responsible Person(s) on completion of the installation or modification. All new installations or modifications to existing pressure systems must have a Written Scheme of Examination or an existing scheme amended to suit the modified system, which must be undertaken by a Competent Person. Any new or modified qualifying pressure system must be inspected by a Competent Person on completion of the installation or modification, or before the system is used for the first time.

Any staff member purchasing a new pressure system or making a modification to an existing pressure system, must complete the New Pressure System and Modification to Existing Pressure Systems Notification Form. This form ensures that all necessary University stakeholders are consulted, approvals obtained, documentation completed, and inspections performed.

4.5. Safe Operating Limits and Documentation

Where a Duty Holder, Authorised Engineer (Pressure Systems), Responsible Person(s) accepts a pressure system (purchased or rented), they must accept the system on behalf of the University and ensure that all required documentation is handed over to them (see Appendix 5). If this documentation is missing or incomplete, then the pressure system must not be accepted. If these systems are built within the university, then it is the responsibility of the Duty Holder, Authorised Engineer (Pressure Systems), Responsible Person(s) who constructed these systems, to create all the required documentation as required by regulation 14 of PSSR 2000 ACOP (see Appendix 5).

Any pressure system purchased, built, rented, or modified by the University must be registered with the Authorised Engineer (Pressure Systems) using the University's New Pressure System and Modification to Existing Pressure Systems Notification Form which will be then added to the pressure system register, with all required documentation being supplied. The Authorised Engineer (Pressure Systems) and each School/Department/Directorate Responsible Person(s) are responsible for maintaining the documentation for their pressures systems, ensuring all such documents are available for review by Competent Person(s), maintenance engineers, and any other interested parties such as the Health and Safety Executive (HSE), at the point of use for the pressure system. All documentation must be retained and made available for auditing purposes and for potential future transfer of the system to a new owner or user.

The safe operating limit for a pressure system will depend on the complexity and operating conditions of the system, and must include a suitable margin for error, beyond which system failure will occur. A system for recording and retaining information about safe operating limits and any changes to them should be maintained by the owner of the pressure systems (or designated to another appropriate staff member).

Where a standard system is installed, the designer/manufacturer should have assessed the safe operating limits of the system or parts and pass this information to the person authorising the purchase of the system, Authorised Engineer (Pressure Systems), or the designated Responsible Person(s).

In cases where the University has specified the design or built a pressure system in house, then the responsibility for establishing safe operating limits sits with the Authorised Engineer (Pressure Systems) or the Responsible Person(s) who authorised the installation of the pressure system. If the required expertise or knowledge to establish safe operating limits is not available within the University, then advice will be sought from appropriate external bodies, which may include the University's appointed Competent Person(s) or other qualified specialist engineers.

Information (including updates) relating to safe operating limits on new installations and changes to safe operating limits for existing pressure systems due to modifications, repairs, and or from examinations must be sent to the Authorised Engineer (Pressure Systems) for recording on the University's pressure system register. It is also the responsibility of the School/Department/Directorate Responsible Person(s) for their systems and the Authorised Engineer (Pressure Systems) for Estates & Facilities systems, that all safe operating limits including changes to established systems, are clearly marked on the pressure system and that it is recorded in all local documentation, including user guides, user induction information, and other safe systems of work documentation such as standard operating procedures.

4.6. Written Scheme of Examination

A certified Written Scheme of Examination will be carried out and available for all qualifying pressure systems owned by the University. The University will ensure that each Written Scheme of Examination is sufficient; however, advice may be sought from appropriate internal staff like the Authorised Engineer (Pressure Systems) or sources external to the university like recognised Competent Person(s). All Written Schemes of Examination will be reviewed at the point of each examination to ensure they are still sufficient. The Competent Person(s) will specify the nature and frequency of examinations and any special measures needed to prepare systems for examination.

No qualifying pressure systems shall be operated without a Written Scheme of Examination (see Section 2, Appendices 2 and 3), outside the scope of safe operation or beyond the further examination date identified on the current examination report. It is illegal to operate a (non-exempt) pressure system without a Written Scheme of Examination and to operate a pressure system that has not been examined by a Competent Person. Where an amendment or change of a pressure systems examination date is required or warranted, this must be approved in advance, and in writing, by a Competent Person.

The extent of examination for each system will be clearly outlined within its Written Scheme of Examination (see Appendix 4). The University's Competent Person(s), in consultation with the University's Authorised Engineer (Pressure Systems) and Responsible Person(s), will decide which systems require inspection and examination under the PSSR 2000.

4.7. Reporting Unsafe Pressure Systems and Emergency Procedures

If there is a defect to any part of a pressure system that affects its safe operation, the following escalation process will occur:

- The Competent Person(s) will issue a notice of defect with a required timescale for corrective action. If it is a serious defect that could result in imminent danger, the Competent Person(s) will immediately withdraw the pressure system from use, locking off, and making safe. Inform local users (if present) and relevant Responsible Person(s) and the Estates & Facilities Authorised Engineer (Pressure Systems), indicating the required actions to remedy the fault. Reports will be issued to relevant bodies following the inspection, which may include a direct report to the Health and Safety Executive (HSE) if it was found to be a system in imminent danger or could cause a Dangerous Occurrence.
- Where user inspections or authorised maintenance work has been conducted and a fault which is deemed to be dangerous found, the operators will immediately take the equipment out of

use, employing locking off procedures. They should contact the School/Department/Directorate Responsible Person(s) and/or the Estates & Facilities Authorised Engineer (Pressure Systems). The Responsible Person(s) or Authorising Engineer (Pressure Systems) will then organise the required works or examinations, notifying the Competent Person(s), as needed.

- It is the responsibility of the School/Department/Directorate Responsible Person(s) or Authorised Engineer (Pressure Systems) to inform local users and Duty Holders of a shutdown, and the pressure systems that will be affected. They must also put mitigations in place to reduce impact to business-critical activities.

The pressure system will only be returned to use following completion of repairs to the satisfaction of the Competent Person(s), Responsible Person(s), Authorised Engineer (Pressure Systems), and the relevant Duty Holder.

In the event of either an explosion or dangerous occurrence involving a pressure system, the incident will be handled in accordance with the University's Incident Management Plan, be investigated by the Central Health and Safety Team and the affected Faculty's Health and Safety Advisors. All serious incidents concerning pressure systems must be reported to the Health and Safety Executive (HSE) within 24 hours of the incident occurring (see incident flow chart Appendix 6).

4.8. Roles and Responsibilities

All responsibilities can be delegated, unless otherwise stated, but it remains the responsibility of the named roles to ensure they are completed in accordance with this Procedure and that those they delegate any responsibility to, is adequately competent to fulfil the responsibility.

4.8.1. Director of Estates & Facilities as the 'Duty Holder' will ensure the following:

- Correct installation, management, maintenance, and inspection of all pressure systems that are owned and used by the University, that are considered part of the buildings fabric, services, and essential infrastructure.
- The appointment in writing of a Competent Person/s as defined within this Procedure.
- Authorise installations of pressure systems that come under the term 'construction work', in accordance with the University's Management of Health and Safety for Work and Services Contractors Procedure
- Appointment, in writing, of an Authorising Engineer (Pressure Systems) with responsibility for managing Estates & Facilities pressure systems and administering Competent Person(s) documentation for all pressure systems at the University.
- Advising relevant Faculties/Departments/Directorates of Estates & Facilities managed inspection and maintenance schedules in a timely manner.
- Keeping all records with regards to installation, inspection, and maintenance of the pressure systems under their control and maintain a university-wide pressure system register.
- Supply a copy of inspection documentation to relevant Faculties/Departments/Directorates, advising in a timely manner of any defect highlighted within routine examinations or other inspections carried out by the Competent Person(s).
- Any incidents involving pressure systems under their control are investigated and reported in consultation with the Director of Health and Safety.

4.8.2. Head of Maintenance (Estates & Facilities) must ensure the following:

- Risk assessments for pressure systems under Estates & Facilities control are in place, periodically reviewed, and controls implemented.
- A planned preventative maintenance program is in place for all Estates & Facilities owned pressure systems.
- Develop appropriate safe systems of work and procedures for pressure systems under

their control, ensuring that these are followed and regularly reviewed.
- Any permit-to-work requirements that involve pressures systems are clearly understood and followed.
- Line management of the appointed Authorised Engineer (Pressure Systems), ensuring that this individual has sufficient experience, knowledge, and competence to undertake this role.
- All Estates & Facilities staff and contractors engaged to work on pressures systems for Estates & Facilities are competent and qualified to do the work.

4.8.3.Authorised Engineer (Pressure Systems) in responsible for:
- Keeping updated with any changes in relevant regulations and industry standards, including updating relevant stake holders of these changes (i.e. Duty Holders, Responsible Person(s), Authorised Skilled Maintenance Persons, and the Compliance Management Group).
- Ensuring Authorised Skilled Maintenance Personnel are trained to the required level and that their skills and knowledge are checked before being approved to work on pressure systems. Conducting assessments of pressure systems skilled staff every three years, to ensure they can perform work safely; maintaining the records for any training and assessments they have carried out.
- Maintaining the University's pressure systems register, including recording any changes to safe operating limits.
- Organising pressure systems and specific pressure systems task competency training for Estates & Facilities staff, and any specialist training required for Authorised Skilled Maintenance Persons.
- Providing advice and guidance to Duty Holders and other staff members on pressure systems that are part of building infrastructure including, but not limited to, plant, pipelines, and safety devices.
- Being the point of contact for the University's Competent Person(s) and the School/Department/Directorate Responsible Person(s).
- Consulting with the Competent Person(s) on any Estates & Facilities owned and used pressure systems that are believed to sit under the exemption criteria (see Section 2).
- Arranging with the Competent Person(s) the development of Written Schemes and required thorough examinations for all pressure systems owned by the University. This includes liaising with School/Department/Directorate Responsible Person(s) to develop these schemes and to ensure access to required locations.
- Ensure all pre-use, weekly and monthly checks of pressure systems are carried out and where needed documented to confirm these have been completed.
- Ensuring that all Estates & Facilities owned pressure systems are shutdown, depressurised, locked off (using the established safe isolation procedure) and made available to Competent Person(s) for any examination, informing any impacted stakeholders in advance of the examinations.
- Ensuring that any faults with Estates & Facilities owned pressure systems are rectified within the timescale prescribed by the Competent Person(s) or service contractor.
- Ensuring if a pressure system is determined as unsafe, that it is appropriately locked off and communicated to all relevant parties as out of use. If needed, organise any alternative measures to ensure business critical activities can safely proceed.
- Producing safe systems of work and procedures for all pressure systems under the ownership of Estates & Facilities, including assessing and authorising permits to work in relation to pressure systems.
- Immediately report any incidents involving pressure systems to the Central Health and Safety Team and the Director of Estates & Facilities.

An Authorised Engineer (Pressure Systems) must be competent to JSP 375 Volume 3 Chapter 4,

MOD UK, standards or equivalent. Boiler & Pressure Systems Certified, HSG 253 Safe Isolation of Equipment or equivalent and required to keep themselves qualified by doing appropriate refresher training.

4.8.4. Head of Projects (Estates & Facilities) and Project Managers are responsible for the following:

- That the requirements of this Procedure are supplied to any third party who is engaged to conduct work on any pressure system as part of the construction management process.
- Ensuring that any pressure system being purchased or installed as part of any project is sufficient for the purposes that it is required for and meets all necessary standards required to comply with PSSR 2000, Pressure Equipment (Safety) Regulations 2016, Simply Pressure Vessels (safety) Regulations 2016, as well as any applicable British Standards. They must consult with the Estates & Facilities Authorised Engineer (Pressure Systems) concerning any pressure system equipment being installed and purchased as part of the infrastructure in a building.
- Ensuring all those engaged to work on, modify, or install any pressure systems on behalf of the University are sufficiently competent to undertake the task.
- That they ensure any pressure system brought onto university owned or managed sites by contractors they have engaged, is safe, well maintained, and has all necessary safety inspections and documentation.
- Liaising with other University stakeholders if working on or making changes to a pressure system is likely to disturb or impact other university activities.
- Ensuring that any work on a pressure system that is conducted outside any contractual agreed demarcation boundaries of a project, is performed through the Estates & Facilities permit-to-work for pressures system and using its safe isolation procedure.
- Confirming that all risk assessments and method statements for work involving pressure systems performed by contractors they engage are in place and are adequate.
- Considering the requirements of this Procedure within any capital works at the project design stage.
- Assisting with any investigation process and immediately reporting any incidents involving pressure systems from third parties they have engaged, using the online incident reporting system, or if it could be deemed a Dangerous Occurrence, reporting it as soon as possible (within 24-hours) to the Central Health and Safety Team and the Director of Estates & Facilities.

4.8.5. Competent Person(s) engaged by the University will be required to:

- Review all existing Written Schemes of Examination and confirm whether they are sufficient after the examination of all qualifying pressure systems.
- Write and develop any Written Schemes of Examination for new, built, or modified pressure systems.
- Review all recorded operating limits for pressure systems at the time of each examination and report any issues to the appropriate Responsible Person(s) and to the Authorised Engineer (Pressure Systems).
- Conduct all examinations for pressure systems in accordance with the Written Schemes of Examination and produce a written report for each examination, to be provided to the University within 28 days of the examination.
- Notifying the user/owner of any repairs required, issuing a notice of defect before leaving site which require a qualified repair.
- Respond where there is imminent danger, providing a notice of defect and acting to make safe in all such cases, providing a formal report to the University, Health and Safety Executive (HSE) and/or local authority within 28 days of examination.
- Agree postponements of examination in writing, where required.

- Advise the University of other matters relating to pressure system regulations. In such circumstances, a Competent Person would be acting solely as an advisor, rather than a Competent Person as defined.

Note: The University can engage the services of more than one Competent Person to cover different types of pressure systems, as needed. Any Competent Person(s) engaged can or will be asked to perform one, some, or all of these duties.

Bodies holding United Kingdom Accreditation Service (UKAS) accreditation to BS EN 17020:2012 or equivalent accreditations for the scope of in-service inspections of Pressure systems can provide Competent Person(s) to perform this role.

4.8.6. Head of Procurement is responsible for:

- Ensuring that a rigorous tendering process is performed for the engineering insurance inspection contract, including conducting all necessary contractor due diligence checks on those who perform the University's Competent Person(s) role, in particular, ensuring they are accredited to UKAS 17020 standard.
- In the event that they are informed of any incident involving a pressure system, that has either caused injury to an individual or material damage to either University equipment, buildings, or the pressure system itself, it will be reported to the University's engaged Insurance provider.

4.8.7. Authorised Skilled Maintenance Persons (Pressure Systems) must:

- Follow all procedures, safe systems of work and operating instructions for pressure systems, including requirements of the Estates & Facilities permit-to-work system and its safe isolation procedures.
- Only carry out work on pressure systems if they have been authorised to do so by the Authorised Engineer (Pressure Systems). They will have received instruction and training to such a degree that they possess the skills and knowledge to carry out the task safely and must only use the tools and equipment for which they have been trained.
- Report to the Authorised Engineer (Pressure Systems) any defects, faults, or any conditions they think are unsafe, or are likely to become so. Where any plant or part of a pressure system has developed a fault or malfunctioned, efforts should be made to make this safe, providing this does not put the employee in any danger.
- Support the Authorising Engineer (Pressure Systems) in the performance of their duties if they have been sufficiently trained and deemed competent to do so, including the signing off and recording of a pressure systems safe Isolation procedure and permit-to-work.

4.8.8. Heads of School/Department/Directorate (or other Senior Managers as administratively appropriate) as the Duty Holder, are responsible for, or must provide adequate resources to ensure that:

- There are appropriate Responsible Person(s) in position to manage and ensure compliance with this Procedure for pressure system equipment under their ownership.
- There are appropriate safe systems of work for pressure systems within their areas of control, including the development of appropriate management and operating procedures.
- All pressure systems that they own, authorise the purchase of, or modification to, are designed, manufactured, purchased, installed, and used by their School/Department/Directorate in accordance with this Procedure. And they are reported to Estates & Facilities using the New Pressure Systems or Change to Existing Pressure System Notification Form, to allow for the necessary review by the University's Competent Person(s) and for recording in the University's pressure systems register.
- All qualifying pressure systems under their ownership have all required documentation,

including a Written Scheme, and are examined by Competent Person(s).
- Approve pressure systems exemptions, based on advice from knowledgeable persons such as Authorised Engineer (Pressure Systems) and or Competent Person(s).
- All staff within their School/Department/Directorate are trained and instructed on pressure systems to an appropriate level, based on their level of responsibility and use of such systems.
- Safe systems of work are in place including all required instructions to safely inspect, maintain, and operate all pressure systems under their ownership.
- All pressure systems and work involving pressure systems have been risk assessed and risk controls implemented.
- Before work commences, obtaining approval from the Director of Estates & Facilities for any installations and modification to existing installations that will come under the term construction work or that are a part of a building's fabric, services, and essential infrastructure, or involving any pressure systems under the Director of Estates & Facilities ownership.
- Any incidents involving pressure systems are reported in accordance with the requirements of this Procedure.

4.8.9. School/Department/Directorate Responsible Person(s), for pressure systems under their supervision are responsible for ensuring:
- Where necessary, there are planned preventative maintenance contracts in place and where this is not necessary, other maintenance is performed as per manufacturers' requirements. They are to ensure that any contractors they engage are qualified for such work.
- All pressure systems they are responsible for are designed, manufactured, purchased, installed, and or used in accordance with the requirements of this Procedure. This will include the completion of installation or modification checks and reporting to Estates & Facilities using the New Pressure systems or Change to Existing Pressure System Notification Form, to allow for necessary review by the University's Competent Person(s) and for recording in the University's pressure systems register.
- Risk assessing pressure systems under their responsibility, reviewing these assessments regularly or when there is a significant change to the system, equipment, task, or process.
- Facilitating access for Competent Person(s) to any pressure systems on the agreed dates organised through the Authorised Engineer (Pressure Systems), ensuring all pressure systems are prepared for the examination.
- Ensure all pre-use, weekly and monthly checks of pressure systems are carried out and where needed documented to confirm these have been completed.
- Ensuring that any faults with pressure systems are rectified within the time period prescribed by Competent Person(s) or service contractor. Ensuring if a pressure system is deemed unsafe, that it is appropriately locked off and communicated to all relevant parties as out of use. If needed, organise any alternative measures to ensure business critical works can safely proceed.
- Liaising with the Authorised Engineer (Pressure Systems) to ensure all qualifying pressure systems have a Written Scheme of Examination and are examined within the timeframes specified within the scheme.
- Liaising with the Competent Person(s) for any pressure systems that are believed to be exempt which will be signed off by the relevant Duty Holder (see Section 2); rationale for exception must be recorded.
- Informing and training all users in how to use pressure systems safely, including getting those under their responsibility to attend any University central training courses, prior to allowing them to use such systems.
- Producing safe systems of work, including adherence to other procedures such as the Estates & Facilities permit-to-work system and safe isolation procedures.

- Ensuring that all pressure systems under their control and management have the required instructions and safe operating limits clearly displayed.
- Developing local management documentation and standing operating procedures as are necessary to ensure the correct and safe use of their pressure systems.
- Maintaining all required documentation, including implementing a local document management system for holding Written Schemes of Examination, thorough inspection reports, maintenance records, as well as updates relating to the pressure systems operation, design, and safe working limits.
- Immediately report any incidents involving pressure systems to the Central Health and Safety Team and assist with the investigation.

All appointed Responsible Person(s) must complete the Pressure Systems Responsible Persons Training session and if managing gas lines and gas cylinders must complete the University Gas Safety Awareness course.

4.8.10. Authorised Skilled Contractors (Pressure Systems) must:

- Follow all procedures, safe systems of work and operating instructions in place for pressure systems, including the requirements of the Estates & Facilities permit-to-work system and safe isolation procedure.
- Provide adequate risk assessments and method statements to their university point of contact which covers the risks of their work and confirms they can work safely and to recognised industry standards.
- Only carry out work that has been authorised by the Authorised Engineer (Pressure Systems) or the School/Department/Directorate Responsible Person(s). They will have received all necessary instruction and information to carry out the task safely.
- Report to the Authorised Engineer (Pressure Systems) or the School/Department/Directorate Responsible Person(s) any defects, faults, or any conditions they think are un-safe, or are likely to become so. Where any plant or part of a pressure system has developed a fault or malfunctioned, efforts should be made to make this safe, providing this does not put the contractor in any danger.

4.8.11. Users: Approved Staff, Students and Visitors are required to:

- Read and comply with the requirements of any risk assessments, operating procedures, instructions, and safe systems of work for any pressure system they are using.
- Conduct and record any user/pre-use checks they have been instructed to perform.
- Only use pressure systems that they have been trained to operate or been approved to use by the Authorised Engineer (Pressure Systems) and/or the relevant School/Department/Directorate Responsible Person(s).
- Use pressure systems for purposes that they are designed and are not to make any unauthorised changes or modifications to such systems without prior approval; approval will need to be gained in writing from either the School/Department/Directorate Duty Holder, or the Authorised Engineer (Pressure Systems) if the modification will affect a pressure system under the ownership of Estates & Facilities. Any user who wants to change or modify a pressure system must use the University's New Pressure Systems or Change to Exiting Pressure System Notification Form.
- Participate in all required training, including any refresher training as requested by a School/Department/Directorate Responsible Person(s) or the Authorised Engineer (Pressure Systems).
- Report any shortcoming in the health and safety arrangements to the School/Department/Directorate Responsible Person(s), or the Authorised Engineer (Pressure Systems), even when no immediate danger exists.
- Report any incidents concerning pressure systems to their School/Department/Directorate Responsible Person or in the case of non-faculty users to

the Authorised Engineer (Pressure Systems). All users must report any pressure system related incident using the University's online incident reporting system.

4.8.12. Director of Health and Safety is responsible for:

- The provision of advice and guidance on the application of legislative requirements.
- Where necessary, liaising with the enforcement authorities. Ensuring that pressure system related incidents are appropriately investigated and, where necessary, reported under RIDDOR.
- Monitoring compliance with the requirements of this Procedure through the audit program.

4.8.13. Health and Safety Department and Faculty Health and Safety Managers/Advisors are responsible for:

- The provision of advice and guidance on the application of legislative requirements for pressure systems, including the adequacy of any established safe systems of work.
- Advise on the training needs of those using pressure systems and assist with training development as needed.
- Assisting the Director of Health and Safety with their duties, including the investigation of any pressure systems related incidents.

4.8.14. Compliance Management Group

The purpose of the Group is to contribute to the development and direction of health and safety compliance management across the University Estate. The Group monitors health and safety performance in respect of defined compliance areas, including pressure systems, and provides a forum for obtaining input from relevant departments on such compliance matters.

The Terms of Reference of the Group can be viewed here

5. Governance Requirements

5.1. Implementation: Communication Plan

This Procedure will be available on the University Procedures webpages. This Procedure and other relevant supporting documentation are also published on the University Health and Safety Intranet site.

Relevant Health and Safety Committees and EF/CS Committees will be notified, and information disseminated through their line management. The Faculty Health and Safety Committee's will also be informed.

This Procedure will also be referenced and communicated through instructions and guidance supplied by the University via its Contractor Health and Safety Induction material.

5.2. Implementation: Training Plan

The University will ensure that all staff are appropriately qualified and trained to the level required for the different roles and levels of responsibility for the pressure systems in use across the University. All training, instructions, and briefings will be made available in a range of formats according to the needs of the trainees and different groups of staff, students, and others impacted by these tasks and use of pressure system equipment.

5.2.1.Pressure Systems Responsible Person Training Sessions

This training session is organised by the Central Health and Safety Team, and all those responsible for the management and supervision of pressure systems will be required to attend. This is an informational session designed to give those managing and supervising this equipment a better understanding of what is legally required for these systems and what their responsibilities are as

users and owners of the equipment within the Pressure Systems Safety Regulations 2000. Two sessions are provided throughout each year for staff. This training will be refreshed by staff every three years.

5.2.2. Authorised/Competent Person(s) Boilers, Pressure Systems and Mechanical Training
Any staff member who is appointed as the Authorising Engineer for Pressure Systems or who deputizes for them in their duties, will be required to have a suitable qualification in an authorised/competent persons course for boilers, pressures, or mechanical systems**.** These courses are designed to meet the essential requirements of safe working procedures on pressure systems required by the Pressure Systems Safety Regulations 2000 and the Provision and use of Work Equipment Regulations 1998. These courses cover two levels, one as competent person to work on systems and the other to act as an authorising person. They are designed for those who are to be appointed under safety rules with responsibility for the operation and maintenance of plant and who will be responsible for isolation of mechanical and pressure systems following the standards set out in JSP 375 Volume 3 Chapter 4 and HSG 253 Safe Isolation of Equipment guidance. Any staff appointed to this role will be reviewed every three years to ensure their competency is sufficient and if needed will be required to do a refresher of appropriate training and keep themselves up to date with any industry practices that ensure that they can fulfil the requirements of this role.

5.2.3.Specialist Qualifications and Certifications
Using or working on certain pressure system equipment will require specialist qualifications or certification, such as natural gas work and Gas Safe registration. Where these essential qualifications and certifications are required, these will be reviewed, and staff competency assessed as part of the employment process or prior to allowing any staff member to do these types of tasks. Refresher training for these qualifications will be determined on an individual basis and based on industry standards.

5.2.4.Specialist University Courses
Staff using specialist pressure systems such as gas lines, gas cylinder installations or using cryogenic gas systems, will be required to attend these university courses prior to becoming an approved user and given access to restricted locations, equipment, and gas substances. Course availability can be found on the Health and Safety training SurreyNet page. These training courses will need to be refreshed at a frequency determined by the Central University Health and Safety Team.

5.2.5.Local PSSR Awareness and Task Specific Training
Any job role or educational program that uses pressure systems equipment as part of its job, learning requirements, or research, must have appropriate local toolbox talks and training in place, including where necessary this being included within established educational programs for students. This training must cover instructions, so the users know what is required of them, and what they must do to comply with the local safe system of work, safely use the equipment, and undertake the task safely. The level of training and instruction will be based on the risk assessment for the pressure equipment and will range from basic standing instructions compiled from manufacturers guidelines to locally produced toolbox talks, and to professional accredited training courses. This training will be refreshed as determined by the local risk assessments and training need assessments for the specific areas using the pressure systems, as well as based on the type, complexity, and the risks of the tasks involving pressure systems that they are using.

5.2.6. Contractors
Contractors and other third parties engaged to work on university-owned pressure systems will be required to demonstrate their competency (through appropriate training and experience) before undertaking any work on site. The University will inform all contractors of the University's

health and safety procedures, including any specific information and instruction in relation to the pressure system and its safe system of work, including the requirements of the Estates & Facilities permit-to-work system and safe isolation practices (for high-risk pressure equipment).

5.3. Review

The Director of Estates & Facilities, Authorised Engineer (Pressure Systems), and the Director of Health and Safety will monitor for any required changes to this Procedure either in line with any future organisational changes, legislation, or key guidance changes. This Procedure will be reviewed every three years or in line with relevant changes, if sooner.

Minor changes will be reviewed by the Compliance Management Group and approved by the Compliance (Health, Safety and Wellbeing) Committee. Major reviews will also be reviewed by the Compliance Management Group and other key stakeholders, prior to submission to Compliance (Health, Safety and Wellbeing) Committee for approval, and if required, noted at the Executive Board. The Health and Safety Consultative Committee will be consulted during the review process, as required.

5.4. Legislative Context and Higher Education Sector Guidance or Requirements

The main guidance followed in the development of this Procedure is the Pressure Systems Safety Regulations and its Safety of Pressure Systems L122 Approved Code of Practice (ACoP). Although this guidance is not legally required to be followed, it does hold special weight in law and adhering to the standards established within it meets the necessary regulatory responsibility in established health and safety regulations.

5.4.1.Applicable Legislation

This Procedure is in accordance with the requirements of:

- The Health and Safety at Work Act 1974.
- The Management of Health and Safety at Work Regulations 1999.
- The Provision and Use of Work Equipment Regulations 1998.
- Pressure Equipment (Safety) Regulations 2016.
- Simple Pressure Vessels (Safety) Regulations 2016.
- Reporting of Injuries, Diseases, and Dangerous Occurrences Regulations 2013.
- UK Supply of Machinery (Safety) Regulations 2008

5.4.2.Legislative Context

This Procedure sets out to comply with the required ‘duty of care’ placed upon the University. Under Health and Safety Law a required ‘duty of care’ is generated between organisations and individuals when carrying out activities that could foreseeably cause harm. The duty is owed through the employer-employee relationship and extends to assurance that services provided by others (like contractors) are undertaken safely. With the level of assurance provided commensurate with the risk of the activity undertaken. In addition, anyone carrying out an activity owes a ‘duty of care’ to anyone who may be put at risk by said activity, such as students, staff, and visitors.

This duty of care cannot be delegated away; instead, the act of delegation must be accompanied by a realistic and workable system of monitoring or supervision to ensure that the delegated task has been adequately implemented (i.e., the responsibility is not met by giving directions; it is met when those directions have been confirmed as carried out). The result is a cascade of delegated accountability that runs throughout the organisation via the line management network, accompanied by a system of monitoring, supervision, and feedback.

It is a requirement of the University, as the insured body, to comply with all regulations imposed by any competent authority and take all reasonable precautions to prevent or minimise accidents,

loss, injury, or damage. In addition, the University will comply with appropriate guidance and recommendations of relevant professional bodies, wherever reasonably practical.

5.5. Sustainability

Although this Procedure does not have a direct impact on sustainability, it is recognised that the use and replacement of pressure systems may impact the University's sustainability targets or agenda. When deciding on the suitability of a pressure system, those authorising the purchase or replacement should consider the equipment's sustainability. They should consider equipment that has a lower impact in regard to either power consumption or fossil fuel use, where practical to do so. However, it should be noted that the safety of the equipment and users will always be the key deciding factor on the suitability of any equipment being purchased or replaced. Owners of pressure systems should also ensure adequate disposal, and where possible, recycle pressure systems or parts as part of the replacement process.

6. Stakeholder Engagement and Equality Impact Assessment

6.1. An Equality Impact Assessment was completed on **31/01/2024** and is held by the Authorised Co-ordinator.

6.2. Stakeholder Consultation was completed, as follows:

Stakeholder	Nature of Engagement	Request EB Approval (Y/N)	Date	Name of Contact
Governance	Review of Procedure	N	30th January 2024	Kelley Padley, Governance Officer
Members of the Compliance Management Group	Review of previous Policy material and creation of this Procedure v1.0. for PoPP framework.	N	29th January 2024	Members of this Group.
Sustainability	Review of previous Policy material and creation of this Procedure v1.0. for PoPP framework.	N	29th January 2024	Martin Wiles, Head of Sustainability.
Equality, Diversity & Inclusion	Review of previous Policy material and creation of this Procedure v1.0. for PoPP framework.	N	29th January 2024	Jo McCarthy-Holland, Equality & Diversity Advisor.
Health and Safety Managers/Advisors	Review of previous Policy material and creation of this Procedure v1.0. for PoPP	N	29th January 2024	All University Health and Safety Managers/Advisors

	framework.			
Estates Facilities & Campus Services Health and Safety Management Group	Review of previous Policy material and creation of this Procedure v1.0. for PoPP framework.	N	29th January 2024	All Groups Membership.
Health and Safety Consultative Committee	Review of previous Policy material and creation of this Procedure v1.0. for PoPP framework.	N	29th January 2024	Members of this Committee.
Procurement	Review of previous Policy material and creation of this Procedure v1.0. for PoPP framework.	N	14th February 2024	James Moore Procurement Category Manager - Built Environment.