1. Haringey Council Procedure

1.1 This procedure addresses the application of the Pressure Systems Safety Regulations 2000 (PSSR) for the London Borough of Haringey. The aim of the PSSR is to prevent serious injury from the hazard of stored energy as a result of the failure of a pressure system or one of its components. The PSSR are statutory regulations and compliance is mandatory.

Haringey Council recognises their duties and responsibilities under these regulations to reduce and control the risks associated with pressure systems containing stored energy. This document is provided to ensure all persons involved with pressure systems understand their management and individual responsibilities ensuring safe practices are in place.

2. Scope of Procedure

2.1 This procedure applies to all areas, installations, operational buildings and schools within Haringey Council but does not apply to domestic premises as this is covered by Homes for Haringey.

2.2 The Pressure Systems Safety Regulations 2000 (PSSR), and therefore these procedures, are only concerned with steam at any pressure, gases which exert a pressure in excess of 0.5 bar above atmospheric pressure and fluids which may be mixtures of liquids, gases and vapours where the gas or vapour phase may exert a pressure in excess of 0.5 bar above atmospheric pressure. For a list of pressure systems exempt from PSSR, see Appendix 1.

PSSR, and therefore this procedure, does not consider vacuum systems or the hazardous properties of the contents released following system failure.

2.3 The duties under PSSR are in addition to the general duties set out in the Health and Safety at Work Act 1974. These general duties extend to the safeguarding of the health and safety of people who are not Haringey Council employees, such as agency staff, students, voluntary workers, visitors, contractors and members of the public. This means that Haringey Council needs to do what is reasonably practicable to safeguard their health and safety by action similar to that taken for employees.

2.4 This procedure shall apply to all employees, students, non-employees such as agency staff, contractors and visitors working with or operating any pressure system.

2.5 Employees also have duties under the Health and Safety at Work Act to take care of their own health and safety and that of others whom their work may affect; and to co-operate with employers so that they may comply with health and safety legislation. Pressure equipment failures can kill or seriously injure users as well as people nearby and can also cause serious damage to property. Therefore, it is essential that employees do not interfere with, or misuse any equipment including pressure systems, and shall follow any training and instructions received when working on or operating pressure systems.

3. Key Terms and Summary Information

3.1 Key Terms

Pressure system	Pressure systems are defined as: • a system comprising one or more pressure vessels of rigid construction, any 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
Relevant fluid	A 'relevant fluid' is: • steam at any pressure • any fluid (ie. gas or liquid) or mixture of fluids which is at a pressure >0.5 bar above atmospheric pressure • a gas dissolved under pressure in a solvent (acetylene) Relevant fluids do not include hydraulic oils. Hydraulic systems, while using high pressures, do not store energy in the system and so are not covered by PSSR. If the system does not contain a 'relevant fluid' then PSSR does not apply. If the pressure vessel contains steam at any pressure then PSSR does apply.
Pressure equipment	Vessels, piping, safety accessories and pressure accessories. Where applicable, includes elements attached to pressurised parts such as flanges, nozzles, couplings, supports, lifting lugs etc.
Vessel	A housing designed and built to contain fluids under pressure. Includes its direct attachments up to the coupling point connecting it to other equipment. A vessel may be composed of more than one chamber.
Piping	Piping components intended for the transport of fluids when connected together for integration into a pressure system. Includes a pipe or system of pipes, tubing, fittings, expansion joints, hoses, or other pressure-bearing components as appropriate. Heat exchangers consisting of pipes for the purpose of cooling or heating air are considered as piping.
Difference between a pipeline and pipework	Pipelines cross boundaries and pipework does not (except where there is a common supply to a number of units). The terms also include associated protective devices, valves, compressors etc.
Safety accessories	Devices designed to protect pressure equipment against the allowable limits being exceeded. Such devices include devices for direct pressure limitation, such as safety valves and bursting discs etc, and limiting devices which either activate the means for correction or provide for shutdown or shutdown and lock out, such as pressure switches or temperature switches etc.

Pressure accessories	Devices with an operational function and having pressure-bearing housings.
Written Scheme of Examination (WSE)	A WSE is a site-specific technical document drawn up by a competent person containing information about items of plant or equipment that form a pressure system, operate under pressure and contain a 'relevant fluid'. It defines the control measures and procedures to maintain efficient and effective control of a pressure system, for ongoing compliance with current UK Regulations.
Statutory Examination (pressure systems)	Examination as detailed by the written scheme of examination by a competent person appointed by Haringey Council and who is independent of the equipment and its use.
Competent person (general meaning)	Competence can be described as the combination of training, skills, experience and knowledge that a person has and their ability to apply them to perform a task safely. Other factors, such as attitude and physical ability, can also affect someone's competence.

Competent person (for written scheme of examination and examination required under WSE)	Competent independent engineer contracted by Haringey Council to:
	• carry out examinations in accordance with the Written Scheme of Examination (WSE) including:
	  ○ review WSE and confirm it is suitable
	  ○ produce a written report for each examination
	  ○ notify Haringey Council of repairs required
	  ○ identify action in case of imminent danger
	  ○ agree postponements of examination, where appropriate
	• draw up or certify written schemes of examination

4. Responsibilities for Implementation

Ownership of pressure systems

Control and management of pressure systems/vessels within Haringey Council's buildings will fall within one of the groups below. Each group named below is responsible for ensuring the procedures, arrangements and minimum legal standards are observed and that any remedial action is carried out in good time.

1) Operational buildings – Corporate Landlord
2) Schools – Schools (Head Teachers), overseen by Corporate Landlord
3) Commercial Premises – Strategic Property

4.1 Directors

4.1.1 Bring to the attention of all their staff who have responsibilities under this procedure the contents of this document and monitor its implementation.

4.1.2 Ensure that the specification, design, fabrication, purchase, commissioning, operation, modification, maintenance/repair, thorough examination and

decommissioning of pressure systems are carried out by competent people and that sufficient resource and facilities are available to implement the requirements of this procedure and relevant pressure systems regulations.

4.1.3 Ensure that only competent persons are authorised as Pressure System Permit to Work issuers.

4.2 Managers/Head Teachers

Managers/Head Teachers will, if required, seek advice or support from Corporate Landlord and/or Corporate Health and Safety Team, and:

4.2.1 Ensure the independent engineer appointed by the Insurance Department compiles the Written Scheme of Examination (WSE), conducts the statutory examinations required under the WSE and where necessary, provides technical advice and assistance for all pressure systems that fall within the scope of PSSR.

4.2.2 Ensure the pressure system, with the assistance of Corporate Landlord, has been assessed in order to establish whether or not the system or parts of the system fall under the scope of the PSSR Regulations and therefore requires a Written Scheme of Examination (WSE). See the flow diagram at Appendix 2 to work out if the PSSR Regulations apply to your pressure system.

The decisions to exclude the system or parts of the system from the scope of a WSE must be documented (eg. within the risk assessment) and the document shall be made readily available for inspection. The register should also be amended to highlight this change.

4.2.2.1 Where a WSE is required, ensure that for all existing pressure systems and those purchased directly from a supplier, the following actions are taken:

- For any existing pressure systems and those used for the first time, a WSE is prepared by a competent person.
- All pressure systems within their control are thoroughly examined to the prescribed timescale by a competent third party inspector in accordance with the WSE.
- Clear written normal and emergency operating procedures/instructions are available for operators of the system including information on equipment markings and warnings.
- The pressure system only be operated by trained competent people.

4.2.2.2 In cases where a Written Scheme of Examination is not required, equipment must continue to be inspected and tested and maintained in a safe condition.

4.2.3 Ensure that details of any significant modifications to pressure systems are notified to the competent third party engineer (pressure systems) so that the WSE can be modified accordingly.

4.2.4 Ensure suitable risk assessments are carried out and regularly reviewed for all pressure systems/equipment including those previously unidentified and that all actions for minimising risk are carried out and recorded.

4.2.5 Prior to work starting on any pressure system, ensure that significant risks arising from the use, maintenance and repair of pressure systems under their control have been:

- Assessed and hazards identified;
- Suitable control measures put in place;
- The risk assessment is recorded and associated safe system of work developed.

4.2.6 Ensure that employees, non-employees and contractors operating, installing, maintaining, repairing, and testing pressure systems/equipment have the necessary competency, skills, experience, and knowledge as well as appropriate information, instruction and training to carry out their job safely. This includes all new employees, who should have initial training and be supervised closely.

Managers/Head Teachers shall be required to obtain and keep copies of documented evidence of competency for Council employees who are involved in any of the above tasks. Evidence of competency may include proof of qualifications, training certificate/record, verification of suitable experience, etc. These records should be kept in their personnel files.

4.2.7 Any training, information and instruction given to employees should be in line with documented procedures from the designer, manufacturer and/or supplier, and any specific health and safety legislation and/or guidance. Training should include:

- the correct use of the equipment
- the risks that may arise from its use
- the precautions to take, and
- requirements for isolation, safe systems of work and permits to work where necessary

Records of all training, information and instruction shall be kept by the Manager/Head Teacher in the employee's personnel files.

The Corporate Landlord and/or the Corporate Health and Safety may offer their advice, knowledge and experience in relation to any training requirements.

4.2.8 Ensure contracts with third parties clearly define the responsibilities of both parties. Managers/Head Teachers shall ensure the following:

- Contractors demonstrate their competency, correct training and experience before undertaking any work on a pressure system.
- Contractors are properly inducted before starting any work.
- Instructed on the requirements for isolations, safe systems of work and permit to work where necessary.

4.2.9 Ensure that maintenance on steam systems or work involving entry into a pressure vessel is only carried out under a permit to work system, where the permit has been issued by a competent pressure system permit issuer who is familiar with the system concerned. (See also Section 4.4 'Pressure Systems Permit Issuers').

4.2.10 Maintain an accurate register, drawings and written schemes of pressure systems they are responsible for and ensure it is readily available for inspection or audit.

4.2.11 Where pressure equipment is hired or leased, they shall ensure that the WSE is in place and that the certificate of examination is also current.

4.3 Pressure Systems Permit Issuers

The following **must** be read in conjunction with the Council's Permit to Work Procedure (see Section 6 'Other documents you may need to consider').

4.3.1 Permits must only be issued in accordance with the Council's Permit to Work Procedure.

4.3.2 Only issue Pressure System Permits where they are competent to do so, having successfully completed appropriate training. They shall not issue permits for work they are going to carry out themselves unless this has been authorised by another Pressure System Permit Issuer.

4.3.3 Assess all associated risks involved in the proposed work on steam systems, or on entering a pressure vessel, develop a safe system of work and issue a Pressure System Permit, ensuring all necessary precautions, including emergency procedures are taken, and all other appropriate permits (e.g. Confined Space or Hot Work) have been taken out and issued by an appropriate person.

4.3.4 Oversee the issue of any permit and its cancellation and check safety at each stage of the work.

4.4 Maintenance Staff/Technicians who work on Pressure Systems:

4.4.1 Ensure that any work done on a pressure system is carried out in line with the relevant drawings and specifications and in accordance with the information provided by the designer, manufacturer and supplier.

4.4.2 Ensure that any protective devices are set to the correct relief pressure – defined by the system specification - before a system is passed over to an end user.

4.4.3 Ensure that all maintenance on a pressure system is documented, either electronically or on paper.

4.4.4 Report any incident or near miss to their Manager/Head Teacher following the Council's Accident and Incident Management Procedure HSP01 and in particular, any instances where:

- A working pressure system fails catastrophically.
- A protective device on a pressure system activates whilst the system is in use, for example failure of a bursting disc (unless the activation occurs as part of normal operations).

4.4.5 Where applicable, ensure that control measures, such as the use of warning signs, are adopted to make staff aware of the local hazards when pressure systems are being used.

4.5 Contractors (applicable also to sub-contractors)

4.5.1 Only contractors with the relevant system knowledge, experience and training shall be allowed to undertake work on pressure systems. These works must be undertaken as per the contract and agreed safe systems of work (and where applicable, permit to work), to ensure that:

- Systems are operated within their safe operating limits.
- Contractors only operate or carry out maintenance work on pressure systems (which are within the scope of PSSR) that have a WSE in place and a valid examination certificate.
- Contractors provide the Manager/Head Teacher with a suitable and sufficient task specific assessment of the risks inherent with their work and where appropriate a method statement.

4.5.2 The Contractor shall also ensure that their activities will not endanger members of the public, Council employees or others working in the location of the works and will ensure that all accidents and incidents are reported to the Manager/Head Teacher in control of the works.

4.5.3 Contractors must comply with all relevant H&S legislation, follow the Council's H&S procedures and be provided with/have an understanding of the fire procedures for the premises in which work is being carried out.

4.6 Employees using pressure systems

4.6.1 When using pressure systems, employees should use the equipment properly and safely, follow documented safe systems of work and where necessary seek assistance or clarification from their Manager/Head Teacher. They shall use the equipment and safety devices in accordance with any training and instructions provided.

4.6.2 Report any incident or near miss to their Manager/Head Teacher following the Council's Accident and Incident Management Procedure HSP01 (see Section 6.2 'Forms and Procedures') and in particular, any instances where:

- A working pressure system fails catastrophically.
- A protective device on a pressure system activates whilst the system is in use, for example failure of a bursting disc (unless the activation occurs as part of normal operations.

4.6.3 Where teachers wish to bring a pressure system to school for use in an experiment, they should request details about that system and pass that onto the Head Teacher for initial assessment and authorisation. A suitable risk assessment must be carried out prior to use. Information about how to plan and deliver lessons safely can be found on the CLEAPSS website at http://www.cleapss.org.uk/.

5. Specialist Advice

5.1 Corporate Health and Safety Team

5.1.1 Provide technical assistance, advice and support with interpretation of the requirements of this procedure and relevant regulations and in any other matters relating to Pressure Systems.

5.1.2 Assist managers/head teachers in undertaking Pressure Systems related incident investigations.

5.2 Health and Safety Wellbeing Champion

5.2.1 The Health, Safety and Wellbeing Champion shall bring any significant concerns reported to them, and in relation to Pressure Systems, to the attention of their Director, Assistant Director or relevant Health and Safety Board.

6. Other documents you may need to consider

6.1 Legislation and Guidance (hyperlinks)

6.1.1 Safety of Pressure Systems - Regulations, Approved Code of Practice and Guidance L122 (HSE)

6.1.2 Written Schemes of Examination INDG178 - HSE guidance

6.1.3 Safe management of industrial steam and hot water boilers INDG436 - HSE Guidance

6.1.4 Pressure Systems - HSE website

6.1.5 The safe isolation of plant and equipment HSG253 - HSE Guidance

6.1.6 Provision and Use of Work Equipment Regulations, Approved Code of Practice and Guidance L22 - HSE

6.1.7 Guidance on safe operation of boilers - SAFED

6.2 Forms and Procedures (hyperlinks)

6.2.1 Haringey Council Risk Assessment Form

6.2.2 Haringey Council Accidents, Near Misses and Ill Health Reporting Form

6.2.3 Haringey Council Accident Investigation Form

6.2.4 Haringey Council Accident and Incident Management Procedure HSP01

6.2.5 Haringey Council Permit to Work Procedure

7. Action to Take

7.1 Examples of Pressure Systems and Equipment (Note: this is not a definitive list):

- Steam sterilising autoclave and associated pipework and protective devices.
- Steam boiler and associated pipework, calorifiers, heat exchangers and protective devices.
- High temperature hot water boilers and associated pipework, calorifiers, heat exchangers and protective devices.
- Air receivers and associated equipment, compressor, filters, pipework etc.
- Compressed gas distribution systems.
- Pressure/steam cooker.
- Tea/coffee hot water boiler.
- Steam generating commercial coffee machines.
- Gas - loaded hydraulic accumulator, if forming part of a pressure system.
- Portable hot water / steam – cleaning unit fitted with a pressure vessel.
- Pressure process plant and piping.
- Compressed air systems (fixed and portable).
- Heat exchangers and refrigeration plant.

For a list of pressure systems exempt from PSSR, see Appendix 1.

7.2 Hazards and Causes of Incidents

7.2.1 The main hazards associated with pressure systems and equipment include:

- Impact from the blast of an explosion or release of compressed liquid or gas; Impact from parts of equipment that fail or any flying debris;
- Contact with released liquid or gas, such as steam; and
- Fire resulting from the escape of flammable liquids or gases.

7.2.2 The principal causes of incidents are:

- Poor equipment and/or system design;
- Poor maintenance of equipment;
- An unsafe system of work;
- Operator error, poor training/supervision;
- Poor installation; and
- Inadequate repairs or modifications.

7.3 Provision, Design and Installation of Pressure Equipment

Managers/Head Teachers will, if required, seek support from Haringey Council's Corporate Landlord or Corporate Health and Safety Team, and ensure the following:

7.3.1 All new equipment shall be suitable for its intended purpose and installed correctly to be safe and without risks to health when used at work. Equipment shall be designed, constructed and installed in accordance with appropriate standards and/or codes of practice.

Note: since 2002, most pressure equipment placed on the market has had to meet the requirements of the Pressure Equipment Regulations 1999. For pressure equipment not covered by the Pressure Equipment Regulations 1999, the more general requirements of the Pressure Systems Safety Regulations 2000 apply.

7.3.2 The pressure system shall be designed and manufactured from suitable materials. Any vessel, pipes and valves shall be made of suitable materials for the liquids or gases they will contain.

7.3.3 All associated drawings, risk assessments and testing schedules shall be updated by the designer before system handover. Ensure that all new systems have completed drawings, risk assessments and testing schedules.

7.3.4 Ensure the system can be operated safely and can be accessed and egressed safely without having to climb or struggle through gaps in pipework or structures.

7.3.5 When repairing and/or modifying a pressure system, the whole system must be re-examined before allowing the system to come back into use.

7.4 Risk Assessment

7.4.1 The Manager/Head Teacher Risk must ensure that risk assessments are carried out with assistance from a competent person if necessary. Those involved in the risk assessment process shall have the relevant competency, experience and training to perform this function.

7.4.2 The risk assessment shall include:

- A list of the essential health and safety requirements which apply to the equipment;
- The liquid or gas being contained, stored or processed, and whether it toxic/flammable.
- The description of the protective measures implemented to eliminate identified hazards or to reduce risks and, when appropriate, the indication of the residual risks associated with the equipment;
- Any remedial works that may be required to ensure the system meets the current regulations and Approved Code of Practice & Guidance.
- Identify scheduled maintenance checks/tasks and records that shall be adhered to, to comply with current legislation and reduce the risk to an acceptable level.
- Where relevant, include an up-to-date line diagram of the system.
- A copy of the instructions for the equipment.

7.4.3 The risk assessment shall be reviewed whenever there is reason to believe that it is no longer valid (e.g. due to changes in plant, equipment, operating parameters or new information about risks or control measures).

7.4.4 Risk assessments shall be reviewed in any event at least every year. Reviews of the assessment shall be documented and filed with the original risk assessment.

7.5 Operating Conditions

Managers/Head Teachers will, if required, seek support from Haringey Council's Corporate Landlord or Corporate Health and Safety Team and ensure the following:

7.5.1 All pressure systems are correctly operated. The incorrect operation of a pressure system can lead to uncontrolled release of stored energy likely to cause serious injury or even death.

7.5.2 The designer, manufacturer and supplier are responsible for providing adequate information about the system or its component parts. Managers/Head Teachers and anyone else concerned with the system shall not operate any pressure systems before this documentation has been obtained and the safe operating limits have been established.

7.5.3 Suitable training, information and instruction is provided to employees who operate the system. Additionally, operating instructions may need to be posted by the controls for the pressure system. The detail of instruction will depend upon the complexity of the system, but as a minimum, it shall include:

- Starting/stopping the system.
- Maximum/minimum operating conditions.
- Action to take in emergency.
- Reporting of unusual occurrences.
- Consequences of taking short cuts.

7.5.4 Staff that are required to operate pressure systems are capable and competent to use the system safely.

7.6 Written Scheme of Examination (WSE)

7.6.1 Managers/Head Teachers shall ensure that all pressure systems are assessed by a competent person. The competent person (i.e. third party engineer appointed by the Insurance Department) shall have the appropriate and relevant technical expertise and experience of that particular system to establish which parts of the pressure system are pressure vessels, protective devices, or pipework as defined by PSSR.

Once this has been established, the Manager/Head Teacher, with the assistance of the competent person, must decide which pressure system or parts of the pressure system shall require a Written Scheme of Examination (WSE).

The following points should be taken into account when deciding which parts of the pressure system should be included in the WSE:

a) In general, pressure vessels should be included (it might be reasonable to exclude small vessels with low stored energy which form part of a larger system);
b) All protective devices should be included, even if they are on a part of the system which is not included;
c) Pipework, which is widely defined to include pipes, associated valves, pumps, compressors, hoses, bellows and other pressure-containing components, will only need to be included in the scheme if:
   (i) its mechanical integrity is liable to be significantly reduced by corrosion, erosion, fatigue or any other factors; and
   (ii) failure resulting in the sudden release of stored energy would give rise to danger.

For examples of pressurised systems likely to require a WSE, please visit the HSE's Approved Code of Practice and Guidance document (L122) - Guidance point 8. However, this is not an exhaustive list and the onus still remains with the Manager/Head Teacher, in consultation with the competent person (i.e. third party engineer), to decide.

7.6.2 The Manager/Head Teacher shall arrange for the WSE to be drawn up by the competent third-party person. This is normally an engineer appointed by Haringey Council's Insurance Department.

7.6.3 The WSE must cover the following:

- Protective devices.
- Pressure vessels.
- Parts which, if they fail, may give rise to danger.

The WSE must specify:

- Which parts of the system are covered.
- State the nature and frequency of the examinations.
- Specify any special measures necessary to prepare the system for safe examination and, where appropriate, must provide for the examination to be carried out before the system is first used.

7.6.4 The WSE shall be periodically reviewed in accordance with the recommendation given by the competent person. This is normally specified in the WSE and is usually every 3-5 years. However, it is recommended this is done when an examination has been completed and before the written report of that examination is issued.

7.7 Statutory Examination in accordance with the Written Scheme of Examination

7.7.1 The Managers/Head Teachers of pressure systems covered by the Written Scheme of Examination (WSE) are responsible for ensuring those systems are examined by a competent person in accordance with the WSE.

Important note: The examination is not a substitute for regular and routine maintenance.

A competent person shall be a suitable third-party engineer, normally appointed by Haringey Council's Insurance Department.

7.7.2 The competent person shall examine and report on all parts of the system covered by, and within the intervals specified in the WSE. The competent person should be satisfied that, as a result of the examination, the condition of the parts included in the written scheme and their fitness for continued use has been properly assessed.

Ideally, the examinations should coincide with the routine maintenance as the system may need to be stripped down for the examining engineer to access different components.

7.7.3 Managers/Head Teachers are required to co-operate with the competent person to ensure that they provide proper preparation of the system including safety measures

and to ensure that it is made available in time for the competent person to carry out the examination.

The Manager/Head Teacher shall also prevent the use of equipment where the examination has identified serious defects requiring immediate attention [see also section 7.8 'Action in case of imminent danger'].

7.7.4 Pressure systems and equipment must not be operated beyond the date specified in the current examination report.

7.8 Action in case of imminent danger

7.8.1 Where the competent person (i.e. third party engineer) examining the pressure system reports a serious defect requiring immediate attention, the Manager/Head Teacher shall ensure the system is immediately taken out of action, safely isolated and remains out of action until they have arranged for the necessary repairs, modifications or changes to the system as specified in the examination report.

7.8.2 The system shall only be returned to use following completion of necessary repairs to the satisfaction of the Manager/Head Teacher, and where applicable, the Competent Person (Examiner).

7.8.3 Reporting of dangerous occurrences shall be carried out in accordance with the Council's Accidents and Incidents Management Procedure HSP01. The Council's Accidents, near misses and ill health reporting form must be completed by the relevant Manager/Head Teacher as soon as possible and sent to the Council's Corporate Health and Safety Team. A decision will need to be made as to whether the incident is reportable to the enforcing authority (ie. HSE). If so, the report shall be sent by the Corporate Health and Safety Team to the enforcing authority within 10 days of the incident.

Note: This section should also be read in conjunction with sections 7.9 (Maintenance), 7.10 (Modification and Repair), 7.11 (Arrangements for the safe disposal of pressure systems/vessels).

7.9 Maintenance

Managers/Head Teachers will, if required, seek support from Haringey Council's Corporate Landlord or Corporate Health and Safety Team and ensure that:

7.9.1 A suitable maintenance programme is in place for each pressure system, and that the required maintenance is being completed by a competent person. This is in addition to the examinations conducted under the WSE, as the two functions are completely different. The purpose of maintenance is to ensure the safe operation and condition of the system.

Note: Maintenance should not be confused with the requirement for examinations under the written scheme. They are two separate issues, although problems identified during an examination under the written scheme may require maintenance to correct.

7.9.2 Maintenance instructions are obtained from the manufacturer/supplier of the system or components of the system. This should form the basis of the maintenance programme. Correct maintenance will ensure that examinations by the Competent Person are completed without defects being notified to the enforcing authority (e.g. HSE).

7.9.3 Suggestions for a suitable maintenance programme are detailed in the Pressure Systems Approved Code of Practice, L122 – Reg 12 (see 'Other documents you may need to consider'). General requirements for equipment maintenance are also covered in the Provision and Use of Work Equipment Regulations 1998 and Approved Code of Practice and Guidance L22 - Reg 5.

Note: Where systems or parts of systems have been competently assessed and do not fall within the scope of PSSR, the plant will not require a WSE or examinations under the WSE. However, the plant shall continue to be maintained (irrespective of whether it falls within the scope of PSSR) so that it does not give rise to risks to health and safety. This is a requirement under the Health and safety at Work Act and the Provision and Use of Work Equipment Regulations.

7.9.4 The Manager/Head Teacher shall keep written records of all maintenance carried out.

7.10 Modification and Repair

7.10.1 Modifications or repairs to a pressure system requires careful review to ensure that it does not give rise to danger or does not have a negative impact on the operation of the system or any of its protective devices. Common modifications include the addition of pressure vessels and pipework, changes to the safe operating limits, changes to the relevant fluid and the alteration of pressure vessels to perform a differing or improved function.

7.10.2 Before a modification or repair is undertaken, it must first be authorised by the Manager/Head Teacher and where necessary, after taking advice from a Competent Person who has the appropriate technical knowledge and understanding of such equipment.

7.10.3 The Manager/Head Teacher shall ensure a suitable risk assessment is carried out for the proposed work by a competent person who has the necessary experience and knowledge of the system as well as an understanding of the hazards relating to the system. Consideration shall also be given to the need for a permit to work. Advice may need to be obtained from an appropriate engineer, whether in-house or third party.

7.10.4 Modifications and repairs shall only be undertaken by a person who is competent to do such work.

7.10.5 Once the modification or repair has been made, the system must not be operated until the Written Scheme of Examination (WSE) has been updated by the competent person (ie. person compiling the WSE) and an initial examination completed on the modified/repaired sections of the system by a competent person (ie. written scheme examiner).

7.10.6 The Manager/Head Teacher shall keep the relevant documentation affected by the modification/repair.

7.11 Arrangements for the safe disposal of pressure systems/vessels

7.11.1 It may be necessary at times to take a system out of service either permanently or temporarily. Before a system is isolated or decommissioned, the Manager/Head Teacher must obtain authorisation from the Director. They must also ensure a suitable risk assessment is carried out by a competent person who has the necessary experience and knowledge of the system, and who has an understanding of the hazards concerned with isolating, reinstatement and decommissioning of the system. Advice may need to be obtained from an appropriate engineer, whether in-house or third party.

7.11.2 The risk assessment shall form the basis of a method statement (where required). The risk assessment shall also consider whether permits to work are required (see Section 6 'Other documents you may need to consider' for the Council's Permit to Work Procedure).

7.11.3 The risk assessment shall also take into account the potential for environmental damage (ie. during purging and flushing or disposal) and/or possible consequences of a loss of containment.

7.11.4 The Manager/Head Teacher will ensure the plant is removed from the register where necessary and will arrange for the maintenance schedule to be amended.

For more detailed HSE guidance on isolating plant and equipment safely, see Section 6 'Other documents you may need to consider'.

8. Record Keeping

8.1 The Manager/Head Teacher should keep the following documents readily available:

Records required by the Safety of Pressure Systems Approved Code of Practice:

a) Any designer's/manufacturer's/supplier's documents relating to parts of the system included in the written scheme;
b) Any documents required to be kept by the Pressure Equipment Regulations;
c) The most recent examination report produced by the competent person under the written scheme of examination;
d) Any agreement or notification relating to postponement of the most recent examination under the written scheme;
e) Records of abnormal or particularly arduous operating conditions if they will be of use to the competent person at the next examination; and
f) All other reports which contain information relevant to the assessment of matters of safety.

They shall keep the above records for the current year plus 6 years (as a minimum).

8.2 The Manager/Head Teacher shall also keep the following records:

- Up to date register/records of pressure systems they are responsible for.
- The register must specify which pressure systems require a WSE and written examination along with the frequency of reviews/examinations.
- Maintenance records for all pressure systems they are responsible for.
- Designer's/manufacturer's/supplier's documents relating to the pressure system, including operating and maintenance documentation.
- Current and previous risk assessment and method statement for the system.
- Permit to work records.
- Competency and training records.

Wherever possible, such records should be stored centrally allowing immediate access when necessary, eg. using Technology Forge.

9. Monitoring and Review

9.1 This safety procedure must be reviewed by the Council's Corporate Health, Safety and Wellbeing Board within a period not greater than 26 months and where necessary, it will be revised as soon as practicable where changes in statute or industry best practice deem the content out of date.

10. Approval of the Procedure

10.1 This safety procedure was reviewed by the Corporate Health, Safety and Wellbeing Board and approved by the Council's Head of Organisational Resilience on 15th February 2021. Any required variations from this safety procedure should be brought to the attention of the Council's Head of Organisational Resilience.

Approved by (print name): Andrew Meek, Head of Organisational Resilience

Signature: 

Date: 15.02.2021

APPENDIX 1

PRESSURE SYSTEMS EXEMPT FROM THE PRESSURE SYSTEMS SAFETY REGULATIONS (PSSR)

PSSR does not apply to the following systems:

1) Where the system **does not** contain a 'relevant fluid'.
   A 'relevant fluid' is:
   - steam at any pressure,
   - any fluid (gas or liquid) or mixture of fluids which is at a pressure >0.5 bar above atmospheric pressure,
   - a gas dissolved under pressure in a solvent (acetylene).

2) Hydraulic systems, while using high pressures, do not store energy in the system and so are not covered by PSSR.

A selection of pressure systems that are exempt from PSSR include:

- Pressure systems which form part of the braking, control or suspension system of road vehicles. No internal combustion engine is considered to be covered by PSSR.

- A system which is only a pressure system because it is subject to a leak test, eg. radiators under leak test, or situations where pressurisation is unintentional and not reasonably foreseeable.

- Pipelines normally used for conveyance of liquids but which are pressurised solely as part of a test or line clearance operation.

- Low pressure gas distribution pipelines provided that:
  (a) the operating pressure does not exceed 2 bar above atmospheric pressure; and,
  (b) a protective device prevents the pressure from exceeding a maximum of 2.7 bar above atmospheric pressure in the event of a temporary pressure excursion occurring.

- Pressurised apparatus set up in a laboratory and is itself the subject of a research experiment. In the case of other research projects, the individual circumstances and duration of the project will dictate whether it is reasonably practicable to comply with PSSR. Anyone relying on this exception should be able to justify their reasons for non-compliance and any failure to take the basic precautions required under PSSR to prevent risk of injury from system failure.

- Any working chamber, tunnel, manlock or airlock in which people work in compressed air and which are covered by the Work in compressed Air Regulations 1996. If pressure systems such as mobile compressors and air receivers are provided on the surface or are taken into the working chamber, tunnel, manlock or airlock for work activities, these pressure systems fall within the scope of PSSR.

- The fuel storage tank and fuel system of a vehicle which uses a relevant fluid for propulsion and other pressure systems found on a vehicle such as those for heating, cooking, ventilation and refrigeration.

- Pressurised water cooling systems both for internal combustion engines and compressors.

- Any vehicle tyre.

- Small refrigeration systems incorporating compressor drive motors, including standby compressor motors, having a total installed power not exceeding 25 kW.

- Electrical and telecommunications systems incorporating cables which are pressurised with air in excess of 0.5 bar above atmospheric pressure.

- Certain types of switchgear forming part of high-voltage electrical apparatus containing sulphur hexafluoride gas.

- Portable fire extinguishers if they have a working pressure below 25 bar (gauge) at 60°C, and have a total mass not exceeding 23 kilogrammes. However, fixed (installed) fire extinguishing systems containing a relevant fluid are subject to PSSR as a pressure system.

- Hand-held tools provided that the hand-held part of the tool contains the pressure vessel. This mostly applies to small, compressed air-driven tools. Tools where the pressure vessel is not part of the hand-held portion (such as steam strippers where the steam is generated in a tank) are subject to PSSR as a pressure system.

APPENDIX 2

Do the PSSR Regulations apply to my pressure system?