

Policy for Working in Confined Spaces	Type: Policy
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1. Purpose

- 1.1 The purpose of this policy is to outline the steps to be taken by Mid Essex Hospital Services NHS Trust to ensure that staff or others do not work in confined spaces where it can be avoided. Where this is not possible a written suitable and sufficient risk assessment must be undertaken and a safe system of work developed.
- 1.2 When entry into confined spaces is unavoidable, all hazards have been considered and there are sufficient safe systems of work and emergency arrangements in place that will reduce the risk of injury to the persons involved.
- 1.3 This policy will also ensure compliance with relevant legislation.

2. Introduction

- 2.1 The Confined Spaces Regulations 1997 are in place to protect staff and others against risks to their health while working in a confined space.

- A Confined Space means any place, including any chamber, tank, vat, silo, pit, trench, pipe, sewer, flue, well or other similar space in which, by virtue of its enclosed nature, there arises a reasonably foreseeable specified risk
- A confined space is firstly a place which is substantially (though not always entirely) enclosed and, secondly, there will be a reasonably foreseeable risk of serious injury from hazardous substances or conditions within the space or nearby.

- 2.2 Examples of such locations can be:

- ventilation ducts,
- service ducts,
- drains,
- vessels,
- culverts,
- tunnels,
- boreholes,
- manholes,
- excavations,
- sumps,
- inspection Pits,
- freight containers,
- tanks,
- building voids,
- some enclosed rooms (particularly plant rooms) and compartments within them, including some cellars, enclosures for the purpose of asbestos removal, and interiors of machines, plant or vehicles.

3. Scope

- 3.1 This policy is applicable to all Trust staff and their independent contractors working within the Trust inclusive of staff managed by the Broomfield PFI Operator (Bouygues) and Braintree Community Hospital (BCH) PFI Operator (Grosvenor). Persons responsible for developing Confined Spaces related guidance or procedures must ensure that it complies with this policy.

4. Responsibilities

4.1 Senior and line managers are responsible for:

- Ensuring that every effort is made to avoid entry into a confined space;
- Ensuring that, where entry into any confined space cannot be avoided, a suitable and sufficient assessment of the risks to health has been carried out;
- Ensuring employees and their representatives are consulted when assessing the risks connected with entering or working in a confined space;
- Ensuring that prior to entry into a confined space, a written safe system of work, including emergency procedures, has been developed and a permit to work issued (in accordance with the Trust Confined Space Permit to Work Policy see Appendix 3);
- Ensuring that all staff involved in entry into confined spaces are aware of this policy, understand its content and comply with local procedures and safe systems of work;
- Ensuring that any services requiring a Permit to Work prior to the work commencing have also been completed
- Ensuring all persons that enter a confined space must be mentally suitable (e.g. not claustrophobic) and be physically fit to do so.

4.2 Line Managers and Supervisors who have had training in the issuing of permits are responsible for:

- Ensuring that every effort is made to avoid entry into a confined space
- Assessing all associated risks involved in the entry into a confined space
- Developing a safe system of work
- Ensuring all necessary precautions, including emergency procedures, are taken
- Checking safety at each stage of the work
- Acting upon any report of an activity or defect likely to endanger safety
- Checking the workplace before it is used
- Checking work equipment installed or assembled prior to use
- The issue of the permit to work and its cancellation
- Managing contractors while they are on site.

4.3 Employees are responsible for:

- Ensuring that every effort is made to avoid entry into a confined space;
- Assisting with the assessment of risks;
- Complying with any safe system of work developed through risk assessment and any requirements of a permit to work;
- Informing their managers if they suspect that the system of work in place is ineffective or inadequate;
- Reporting all incidents (including near misses).and any defects in equipment using a Trust incident reporting form;
- Ensuring that all staff who enter confined spaces and those who issue permits to work have appropriate information, instruction, training and supervision in confined spaces working.

5. Operational Systems

- 5.1 A process for working in confined spaces has been outlined in Appendix 1.
- 5.2 In the event that entry into a confined space cannot be avoided, a suitable and sufficient risk assessment (see sample Appendix 2) must be carried out and a written safe system of work developed including the provision of emergency procedures.
- 5.3 The Trust Retained Estate will hold on site equipment for use by trained personnel to facilitate the safe entry, working and egress in a confined space within the Retained Estate and associated off-site properties. This equipment will be inspected, tested, serviced and maintained by a third party specialist service provider.
- 5.4 Information detailing all persons and equipment entering and exiting a confined space must be maintained adjacent to the point of entry. An example whiteboard information schedule is detailed in Appendix 5.
- 5.5 **Assessing the risks from entry**
- 5.5.1 When assessing the risks, use must be made of all the information available about the confined space. All foreseeable hazards and risks must be considered and Risk Assessed in advance and the following issues may need consideration:
- 5.5.2 **Confined Spaces can include:**
- Some confined spaces are fairly easy to identify, e.g.
- Enclosures with limited openings
 - Storage tanks Water, Oil
 - Silos
 - Enclosed drains and sewers.
- Others may be less obvious, but can be equally dangerous, e.g.
- Open-topped chambers
 - Vats
 - Combustion chambers in boilers etc.
 - Ductwork
 - Unventilated or poorly ventilated rooms.
 - Some places which may only become confined spaces occasionally, such as rooms during fumigation
 - Areas which may have open tops such as water tanks
- 5.5.3 **Associated Hazards may include:**
- Previous contents, residues and contamination
 - Flammable substances or oxygen enrichment
 - Toxic gases, fumes or vapour
 - Oxygen deficiency
 - Flooding
 - Dust
 - Piped services
 - Physical dimensions
 - Ingress or presence of liquids
 - Solid materials which can flow

- Presence of excessive heat
- Electricity or static electricity
- Cleaning chemicals

5.5.4 The risk assessment must be recorded on a Trust risk assessment form (see an example of risk assessment for Fuel Oil Vessel entry in Appendix 2) by a person who is competent to do so. This must be signed by the assessor and by the manager or head of department. Managers must keep a copy of the assessment form in their department.

5.5.5 In gathering information for an assessment, managers may need expert advice. Information on confined spaces is available from the HSE website at <http://www.hse.gov.uk/confinedspace/> or from the Trust Health and Safety Adviser.

5.6 **Developing a Safe System of Work**

5.6.1 The information gathered during the risk assessment will be used to construct a written safe system of work document which will give information and instruction to the employees who are to carry out the work including safe means of access and egress. (See an example of Safe System of Work for Fuel Oil Vessel Entry in Appendix 4).

5.6.2 This will include all of the risk control measures and the reasons for their application. For example the need for forced air ventilation to ensure oxygen levels are maintained and a comfortable working temperature. It will also detail the means for preventing unauthorised access when there is no need for anybody to access the confined space. The emergency escape and rescue procedures will also be documented.

5.6.3 This is expected to be undertaken by the individual user departments using the Trust's Risk Assessment Form in accordance with the Trust Risk Policy.

6. **Monitoring**

6.1 The monitoring of this policy will be through monitoring of proactive risk assessments and the Trust risk event reporting procedure (DATIX) which will be reported to the Health & Safety Group for scrutiny.

6.2 The use of permits to work in Confined spaces will also be monitored via the monitoring of the activities of Contractors on site in accordance with the Control of Contractors Policy and for ensuring they have obtained and are operating to a Permit to Work where necessary or instructed. Annual reports are submitted to the Trust's Health & Safety Group of the compliance of Contractors on site.

7. **Training**

7.1 All personnel who wish to enter a confined space will have had appropriate training on the use of safety equipment which will include gas detection monitors, breathing apparatus, communications equipment, rescue procedures, safe entering and egressing from a confined space, from an accredited training organisation and be able to provide current documentation of completion.

Managers or supervisors who issue permits to work in confined spaces will have had specific training on issuing permits to work, the training will include topics such as:

- Awareness of the Confined Spaces regulations and in particular the need to avoid entry where possible
- An understanding of the work to be undertaken, the hazards, the safe system of work and all necessary precautions
- An understanding of the 'permit to work' and the 'permit to enter' systems
- How emergencies arise, the need to follow prepared emergency plans and the dangers of not doing so

This will enable them to be competent and confident with procedures, legislation and equipment associated with confined space operations.

8. Communication & Implementation

- 8.1 The policy will be made available on the Trust's intranet and website by the Principal Engineer who will be responsible for issuing copies to senior operational managers for them to disseminate within their wards and departments.
- 8.2 The Principal Engineer will be responsible for ensuring all Retained Estate staff read and fully understand the policy and that it is read in conjunction with the Control of Contractors Policy.
- 8.3 The General/Contract Manager of the Broomfield PFI Operator (Bouygues) and The Estates Manager of Braintree Community Hospital (BCH) PFI Operator (Grosvenor) will be responsible for ensuring all staff under their supervision read and fully understand the policy and that it is read in conjunction with the Control of Contractors Policy.
- 8.4 The approved policy will be notified in the Trust's Staff Focus that is sent via e-mail to all staff and published on the Trust intranet.

9. Equality & Diversity

- 9.1 The Trust is committed to the provision of a service that is fair, accessible and meets the needs of all individuals.

10. References

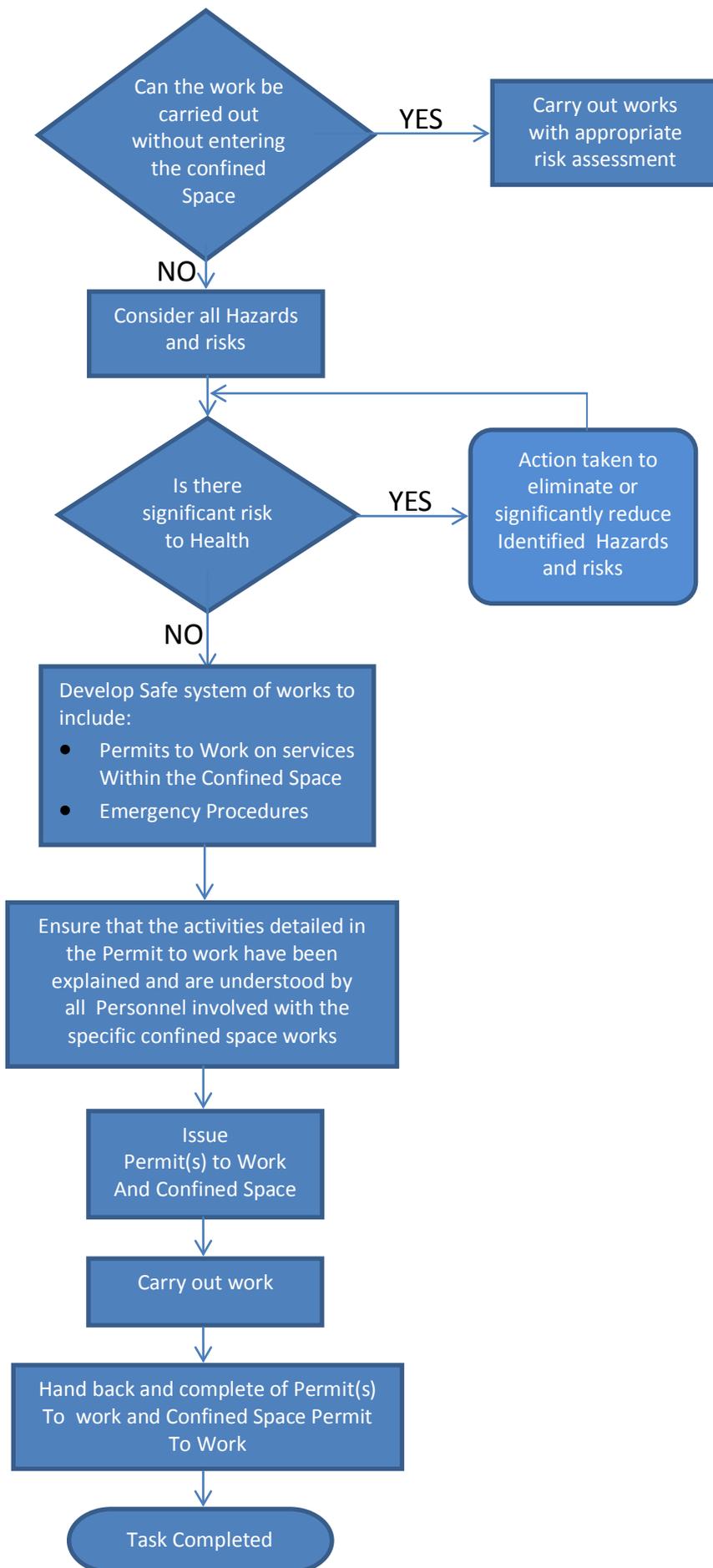
Safe work in Confined Spaces INDG258 Rev 1,

Safe work in confined spaces Confined Spaces Regulations 1997- Approved Code of Practice, Regulations and Guidance L101 third edition 2014

Confined Spaces Regulations 1997

APPENDIX 1:

Confined Spaces Flow Chart



APPENDIX 2: Sample Risk Assessment for fuel oil vessel entry

Department	
Work location	
Manager Responsible	
Risk Assessor(s)	

Description of Task / Environment

Entry into a vessel for the purposes of inspection.

The vessel has been used for the storage of heavy fuel oil.

Identify significant hazards / threats within the area (See Hazard Identification Sheet(s) for examples)

Vessel will contain flammable gas.

Residue left after the vessel has been drained may contain pockets of toxic gas.

Electrical heaters are located in the vessel.

There is no natural lighting inside the vessel.

Air flow is restricted.

Height is restricted.

Skin can be contaminated by the hydrocarbon residue.

Entry manhole is restricted in width and situated one and a half metres above ground level.

Where in the task are the hazards / threats present? (e.g. preparation, storage, transportation, during the task, at the end)

The hazards exist during the preparation of the vessel entry and during the subsequent examination.

Who is at risk from the significant hazards / threats identified above? (e.g. Nursing / Medical / Technical / Domestic Staff, Porters, Admin & Clerical Staff, Maintenance Contractors, AHP's or vulnerable groups such as staff with disabilities, visitors, young persons, new and expectant mothers, inexperienced staff or people on training experience, lone workers, patients / clients, those with language difficulties or special needs)

The individuals who are at risk are the staff who will prepare the vessel and the staff who will carry out the examination.

Also others in proximity to the work location may be affected.

What risk control measures are in place now? (e.g. hoists, local exhaust ventilation, protective equipment, safe systems of work, personal alarms, training and supervision)

Staff carrying out the examination, and who are on standby are trained in confined space entry. Pipelines, incoming and outgoing are isolated by means of Locking OFF and the insertion spectacle blinds.

Power to the electrical heaters is isolated and the switchgear locked off. The padlock key is held with the Manager or Supervisor issuing the confined space permit to work.

The drain valve is opened, the vessel drained of any remaining contents, and any residue disposed of appropriately.

The gas off pipe on the top of the vessel is removed and the entry manhole opened to allow for circulation of air.

The inside of the vessel is force ventilated with air from a portable air blower.

Any flammable gas is vented to atmosphere away from any sources of ignition or incendive sparking.

Tests are carried out to ensure the vessel is properly earthed to discharge any static electricity.

The inside of the vessel is washed down from the outside using a high pressure water jet and detergent.

A platform is erected to afford easy access to the manhole.

Oxygen level and toxic/flammable gas levels are measured prior to entry, from the outside using a calibrated instrument. **(Identify instrument and gases being tested for, i.e. oxygen deficiency, combustible gas or toxic gas).**

The operative entering the vessel carries a calibrated portable gas detector. **(Identify instrument and gases being tested for i.e. oxygen deficiency, combustible gas or toxic gas).**

All temporary lighting is of a low voltage approved type.

Emergency escape equipment is adjacent to the confined space. **(Identify type of equipment, e.g. harness, lifeline, winch, emergency breathing apparatus).**

A standby man is always at the entry to the vessel.

Two way communications is maintained by means of radio.

Personal protective equipment is worn. **(Identify type of equipment, e.g. head protection, gloves, eye protection, etc. specify types to be worn and protection level).**

Arrangements are in place for contacting Emergency Services. **(The telephone number of the emergency services is programmed into a mobile telephone held by the stand-by man).**

What risks are not adequately controlled? (Please indicated if risks are very low / low / moderate / major)

None

If risk is moderate or major, has it been entered on the Local risk register?

Yes No Risk Assurance Framework No:

What additional controls are required? (Remember to indicate who is going to take action and by when) (Consider emergency situations e.g. major spills, fire, cardiac arrest).

None

Has the risk assessment been agreed with your line manager?

Yes No Managers Signature
and Date

Have the findings of this Risk Assessment been communicated to all relevant staff?

Yes
No

How? Operatives have been involved in the risk assessment process and in the identification of risk control measures to develop the safe system of work.

Risk assessment completed by:

Print Name:

Signature:

Designation:

Date:

How soon should this assessment be reviewed?

Review carried out by:

Print Name:

Signature:

Date:

Appendix 3:

Confined Spaces Permit to work

Permit to Work No:

Mid Essex Hospital Services



NHS Trust

Confined Spaces

Job Details: Plant/Equipment/ Service being worked on

Job Location:

Permits to work on Services

Tools/Special Equipment to be used:.....

This permit is only valid when all sections are complete. If you are in doubt or don't understand, then please ask. Remember, all accidents are preventable and it is people who get hurt and suffer pain. Please use this permit in the spirit intended to protect other workers. **Please ensure that you sign this permit to work.** Do not proceed with your work until your permit has been authorised by the relevant member of staff. **A trained stand-by man must be present at the point of entry AT ALL TIMES while the work proceeds with suitable communications available to summon assistance if required.**

Details of specific task that permit is being issued for

Name of Personnel Entering confined space	Duty/Responsibility

HAZARDS TO BE AWARE OF AND PRECATIONS TO BE TAKEN

	State Yes	State No	Additional information
Has the risk assessment be completed and approved			
Are ALL persons named above qualified / trained to undertake this work and have produced valid evidence of confined space training?			Training organisation
Have All Permits to Work on services been completed and Authorised ?			
The confined space has been isolated from all connected pipe work?			
The confined space has been purged with steam/water/air?			
The confined space is electrically isolated and locked OFF?			
The confined space is below 30°C on full cooling?			
Is the entrance big enough to allow access and egress in an emergency?			
Supply of respirable air assured / ventilation required?			
Means of access to and escape from the confined space is acceptable?			
Is breathing apparatus at hand and in good working order?			
Are the safety line / tripod / harness and any other back up equipment to hand?			
Are there adequate emergency arrangements in place?			
Are the details on the point of entrance safety board correct?			

In the event of any question be answered NO the reason and the precautions to minimise danger will be part of the Risk and Method statement have been

ATMOSPHERE TEST REQUIRED

Note The acceptable oxygen concentration range is between 19.5% and 21%. Work must not be undertaken if the oxygen concentration is outside this range.

TIME OF TEST:			TIME OF TEST:		
Oxygen	%	Pass / Fail	Oxygen	%	Pass / Fail
Carbon Monoxide	%	Pass / Fail	Carbon Monoxide	%	Pass / Fail
Carbon Dioxide	%	Pass / Fail	Carbon Dioxide	%	Pass / Fail
Other (Specify)	%	Pass / Fail	Other (Specify)	%	Pass / Fail

Other precautions required:

Other safety equipment required:

This permit is only valid when all sections are complete. If you are in doubt or don't understand, then please ask. Remember, all accidents are preventable and it is people who get hurt and suffer pain. Please use this permit in the spirit intended to protect other workers. **Please ensure that you sign this permit to work.** Do not proceed with your work until your permit has been authorised by the relevant member of staff. **A trained stand-by man must be present at the point of entry AT ALL TIMES while the work proceeds.**

PREPARATION COMPLETE, ACCEPTANCE AND AUTHORISATION

I confirm that I have verified the above information and ensured that the necessary precautions have been taken. It is safe to carry out the work as defined above and the permit information has been explained to all workers involved. I accept responsibility for this work.

PERSON IN CHARGE
COMPANY
SIGNATURE

PLEASE PRINT		
PLEASE PRINT		
PLEASE PRINT MEHT USE ONLY	DATE	TIME

MEHT AUTHORISED PERSON

EXPIRY DETAILS		
DD	MM	YY
HH	MM	

HAND BACK AND CANCELLATION PROCEDURES

I confirm that the work has been **completed/partially completed***, checked by myself and the area left in a safe and tidy condition. (* delete as appropriate)

PERSON IN CHARGE

PLEASE PRINT

I have inspected the completed/partially completed work* and hereby cancel this permit. (*delete as appropriate)

AUTHORISING SIGNATURE

MEHT USE ONLY	DATE	TIME
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TIME OF TEST 2		HH MM
OXYGEN	%	PASS/FAIL
CARBON MONOXIDE	%	PASS/FAIL
CARBON DIOXIDE	%	PASS/FAIL
OTHERSPECIFY	%	PASS/FAIL

APPENDIX 4: **Sample safe system of work for fuel oil vessel entry**

Consideration has been given to work being carried out from outside the confined space and has been considered not to be feasible. The following safe system of work must be adhered to as it has been developed from the risk assessment carried out.

1. All pipelines to and from the vessel will be isolated by means of spectacle blinds and any internal mechanical or electrical equipment will be isolated and locked off, **(see piping and instrumentation and electrical drawings for locations).**
2. A check will be made to ensure that the vessel is securely earthed to ensure any static electricity is discharged safely.
3. The drain valve will be opened and facilities put in place to contain all residues washed out of the vessel. **(Identify means of disposal.)**
4. An entry/exit platform will be erected, to enable easy access and egress from the manhole.
5. The vessel will be opened by removing all covers and vented to atmosphere by means of an external air blower fan and supply hose. Care will be taken to ensure that the atmosphere being discharged is clear of any sources of ignition or incendive sparking. **(Identify location.)**
6. The external air blower fan will provide forced ventilation at all times to ensure the level of oxygen is maintained and a comfortable working temperature.
7. Care will be taken regarding the location of the blower to ensure it draws in no contaminants.
8. The interior will be washed down using high pressure washers and detergent, paying special attention to the base of the vessel where hydrocarbon sludge or residue may collect. **(As for item 3.)**
9. A portable gas detector will be tested in the open air to ensure it is functioning and then the atmosphere in the vessel will be tested for residual hydrocarbon gas and oxygen content. This operation will be carried out from the outside using a probe attached to the intake of the instrument. **(Identify type of gas detector.)**
10. Emergency escape equipment will be positioned and tested, in readiness, prior to a permit to work being issued. **(List types of equipment.)**
11. Two trained individuals will undertake the work, they will be familiar with and understand the hazards and control measures identified by the risk assessment. They will have been suitably trained and authorised for confined space work. **(Name the individuals and cross refer to the permit.)**
12. They will be familiar with the emergency escape equipment and be wearing personal protective equipment (PPE) suitable for the work to be carried out.

One will be on standby outside the vessel and the other will enter the vessel to carry out the work. **(List types of PPE.)**

13. The operative entering the vessel will wear a harness attached to a lifeline and hoist.
14. Suitable low voltage explosion proof lighting will be provided to illuminate the interior of the vessel while work is being carried out.
15. The operatives will be in radio contact with each other at all times.
16. On ensuring that all conditions of the permit to work for confined spaces entry have been met. **The permit will be issued by the relevant Confined Space Trained Line Manager or Supervisor who must be familiar with the conditions of work.**
17. The operative entering the vessel will take the portable gas detector with him into the vessel along with the emergency breathing apparatus.
18. In the event of an audible alarm signal from the portable gas detector he will don the emergency breathing apparatus and leave the vessel.
19. In the event of the operative inside the vessel not responding to radio contact or not appearing after the alarm from the portable gas detector has sounded, a rescue attempt will be made by the standby man after the alarm has been raised using the pre-programmed mobile phone to summon the emergency services.
20. On completion of the work, the operative will leave the vessel.
21. The work completion section of the confined spaces permit to work will be filled in and the permit handed back to the supervisor for cancellation.
22. The drain will be closed, the entry manhole closed and all isolations removed ready for the vessel to be put on line.

NOTE: In the event that the work is not completed within the time identified by the Permit to work, the operative will leave the vessel and the means of access/egress will be secured to prevent any unauthorised entry until a new permit has been issued.

Appendix 5:

White Board Information

Company working in duct	Names of operatives in Confined Space	Mobile Number	Time	
			IN	OUT

Equipment Taken into Confined Space

Torches Head Hand	Radios	Gas Detector	Safety Harness	Emergency B A	Safety Line	

Permit Number

Emergency Number /Radio

Location of and number of Escape points