

BWSC GS UK Ltd – Safety Rules

Confined Space Training Package

Revision 1.0 – March 2019

Note:

This training package is intended only to provide training and familiarity with BWSC GS UK Ltd Procedures and will satisfy requirements for entry into low risk Confined Spaces only.

ALL personnel entering the higher classification Confined Spaces, or those with more complex requirements as determined by a BWSC GS UK Ltd Safety Controller, will be required to hold a valid, in date, externally recognised training certificate demonstrating competence in Confined Space entry and working.

This training is in 3 parts which covers all Confined Space Responsibilities:

1. Part 1 – Standby Man
2. Part 2 – Confined Space Entry Awareness

Confined Space Training

Part 1 – Standby Man

ALL Personnel associated with Confined Space Work must complete this part of the training and assessment.

The Standby Man shall:

- Remain outside the access/egress point at all times whilst the working party are within the Confined Space
- Under **NO** circumstances must the Standby Man enter the confined space
- Have established means of communication with person(s) within the Confined Space and with the Control Room in case of emergency
- Be competent in the use of the site radio and be aware of emergency contact numbers
- Keep a physical record of all persons inside the Confined Space at any one time
- Be aware of the **Gas Free Certificate** and when it is due to expire
- Ensure that all persons leave the Confined Space before it expires and inform the **Acceptor – Confined Space** in charge of the work

- Be aware of the Confined Space Notice(s) and check that the notice(s) are in place before allowing persons to enter the Confined Space
- If the site emergency alarm sounds, ensure all persons within the Confined Space leave immediately and report with them to the appropriate muster point
- Ensure good housekeeping - access and egress points to remain free of obstructions at all times
- Not allow himself to be distracted from his duties as the Standby Man

Confined Space Training

Part 2 – Confined Space Entry Awareness

ALL Personnel entering Confined Spaces must complete this part of the training and assessment.

Confined Space Regulations require that personnel access into **Confined Spaces** should only be permitted if there is no **Reasonably Practicable** way of performing the task from outside the **Confined Space**

From the Confined Spaces Regulations 1997:

"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 exists a reasonably foreseeable risk.

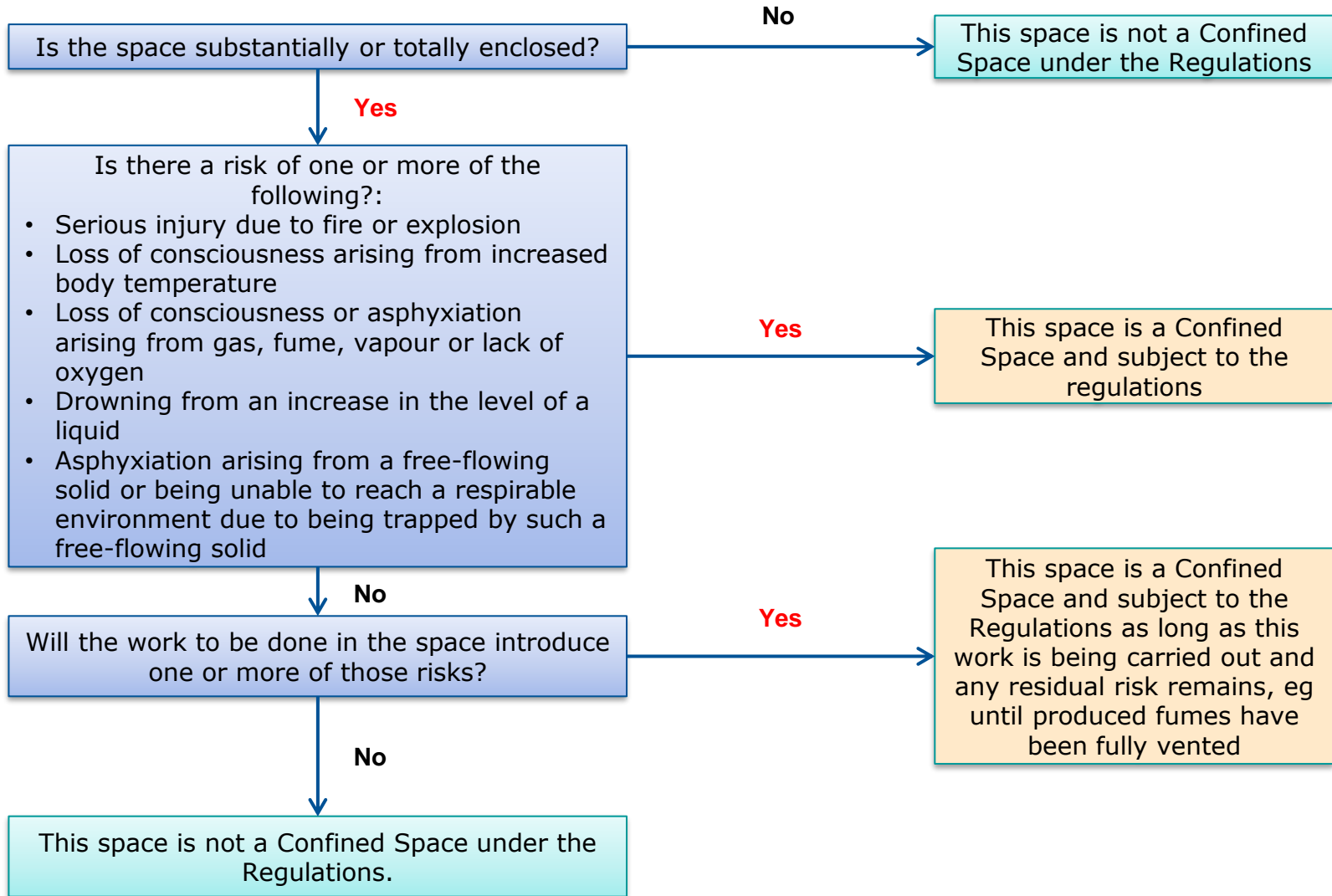
This means that a 'confined space' must have both of the following defining features:

- It must be a space which is substantially (though not always entirely) enclosed: and
- One or more of the specified risks must be present or reasonably foreseeable

“Specified Risk” means a risk of:

- Serious injury to any person from a Fire or explosion
- Loss of consciousness of any person arising from an increase in body temperature
- Loss of consciousness of any person arising from gas, fume, vapour or lack of oxygen
- The drowning of any person arising from the increase in the level of liquid
- The asphyxiation of any person arising from a free flowing solid or the inability to reach a respirable environment due to entrapment by a free flowing solid

Is the area a confined space?



An enclosed space may not be a Confined Space but could become one as a result of the type of work:

- Welding that would consume some of the oxygen
- A spray booth during paint spraying
- Using chemicals for cleaning which can add contaminants

Consideration shall also be given to Fire Protection systems (e.g. Inergen) which can affect oxygen levels if activated during the course of the work

In such cases, the space may become a Confined Space whilst the work is ongoing and until oxygen levels return to normal or contaminants disperse.

- Difficulty with access and egress – especially for rescue
- Restricted space could increase risk of other injuries (eg slips/trips/falls, impact with fixed objects)
- Heat stress
- Age, size and physical condition of persons carrying out the work
- Effect of respiration on the breathable atmosphere in restricted spaces

- 23% Flammable risk (alarm)
- 21% Normal air level (OK)
- 19% Minimum safe Access level (alarm)
- Below 19% Judgement is impaired & heart rate increases
- Personal Gas Monitors when issued will alarm at 19% and 23%

Explosive / Flammable

- Ammonia
- Butane
- Propane
- Acetylene
- Hydrogen

Toxic

- Carbon Monoxide
 - Engine Exhaust
- Carbon Dioxide
 - Engine Exhaust -
Fire Suppression
- Hydrogen Sulphide
 - Oil/Water Drains

Not a legal requirement. However, BWSC use classification in line with UK Water:

- **NC.1** – Low risk entry with adequate natural or mechanical ventilation, simple and unobstructed access.
- **NC.2** – Vertical direct unobstructed access with continuous access to man riding hoist or similar
- **NC.3** – Working without an attached rescue line and away from the point of entry.
- **NC.4** – Non standard entries involving complex operations which include additional risks and require specific controls and rescue arrangements

All personnel entering Confined Spaces shall have completed the following as a minimum:

	BWSC Confined Space Procedures Training	External Accredited Medium Risk Confined Space course in last 3 Years	External Accredited High Risk Confined Space course in last 3 Years
NC.1	Yes	Yes*	
NC.2	Yes	Yes*	
NC.3	Yes	Yes	
NC.4	Yes		Yes

*External Accredited Medium Risk Confined Space training required if Risk Assessment requires Escape BA and/or specialist confined space equipment (e.g. harness/tripod)

- BWSC staff, can enter Confined Spaces NC1, NC2 & NC3 subject to completion of training, as required, and assessment of fitness for such work.
- Under **NO** circumstances, will BWSC staff enter Confined Spaces NC4 – specialist companies will be contracted to carry out such work.

- All BWSC Generation Services UK Ltd locations have assessed the risks associated with access and egress into, and work within their known/identified **Confined Spaces**
- Rescue arrangements appropriate to a particular Confined Space and work have been identified and listed in a **Confined Space** Matrix unique to that location
- You do not always need to have a Rescue Team to enter a **Confined Space**. This is determined by discussions with the **Acceptor – Confined Space, Safety Controller** and the person requesting the work, with knowledge of site specifics from all parties (Risk Assessment).


- The **Safety Controller** has the authority to upgrade these arrangements to a higher level after assessing the work area and activity
- During major outages the location may decide to have a rescue team available for extended periods depending upon the level of **Confined Space** activity

- ALL NC4 Confined Space entries at BWSC sites shall require a fully qualified (externally provided) rescue team to be present at site for the duration of all entries.
- Where determined via Risk Assessment or required by the Safety Controller, a fully qualified (externally provided) rescue team shall be available at site for the duration of all entries to NC2 and NC3 Confined Spaces.

- After review of RAMS the **Safety Controller** identifies the required safety precautions and applies them to achieve **Safety From the System** if required.
- All/any tasks required for the final **Confined Space** Access are broken down into individual tasks and the correct **Safety Document** issued accordingly.
- The **Safety Controller** arranges, where reasonably practicable, for all Access points to be Locked & Safety Tagged in the open position
- The **Safety Controller**, with reference to the **Confined Space Matrix**, decides upon the required rescue arrangements

- When the **Safety Controller** has decided that an atmosphere test of the **Confined Space** is required it is carried out by an **Appointed Person**
- The **Appointed Person** must follow the same access/egress rules and procedures as everyone else if he needs to enter the **Confined Space** to carry out the Atmosphere test: - this means he must have a **Safety Document** permitting Access for the test and the rescue arrangements must be in place
- When an atmosphere test is required the **Appointed Person** will carry out the test and produce a **Gas Free Certificate** (GFC)

- The **Appointed Persons** signature on the **Gas Free Certificate** signifies the **Confined Space** has been found free of harmful gases/ vapour's
- The **Safety Controller** attaches a copy of the **Gas Free Certificate** to the **Safety Document**

 <small>Generation Services UK LTD Sleaford Renewable Energy Plant</small>	<u>SLEAFORD RENEWABLE ENERGY PLANT - GAS FREE CERTIFICATE</u> <small>(SMI/HSE/SR/019/SL)</small> Cert No.....
Confined Space Identification	
Hazards Anticipated	
Tests carried out and results	
Precautions to be carried out	
This Certificate is valid Until _____	
THE ABOVE CONFINED SPACE HAS BEEN TESTED AS DESCRIBED ABOVE. THE ATMOSPHERE WITHIN IS FREE OF HARMFUL GASES AND VAPOURS AND WILL SUPPORT RESPIRATION WITHOUT THE USE OF BREATHING EQUIPMENT, SUBJECT TO THE PRECAUTIONS LISTED ABOVE BEING TAKEN	
SIGNED _____ BEING AN NOMINATED PERSON . DATE _____ TIME _____	

- The **Safety Controller** prepares a **Safety Document** for access/egress and details on the **Safety Document** the rescue arrangements to be in place
- The **Safety Controller** completes Part A of the **Confined Space Notice**
- The **Appointed Person** completes Part B of the **Confined Space Notice**
- The **Safety Controller** arranges for a **Confined Space Notice** to be posted at **ALL** points that access and egress will be allowed and controlled



Confined Space Notice



WARNING CONFINED SPACE



DO NOT ENTER WITHOUT PERMISSION OF THE ACCEPTOR – CONFINED SPACE IN CHARGE OF WORK



DO NOT INTERFERE WITH THIS ACCESS WAY

Part A

Confined Space ID		Key Safe No		
			Yes	No
Is a Gas Free Certificate Required for this space?				
Safety from the System has been achieved and Plant / Apparatus Locked & Safety Tagged?				
Suitable and Sufficient Access / Egress established?				
Venting and / or Purging Required?				
If required Venting and / or Purging undertaken?				
Temperature suitable to allow entry?				

Safety Controller _____ Signature _____ Time & Date _____

Part B

Gas Free Cert. N ^o	Tested (Time/Date)	Appointed Person	Valid Until (Time/Date)

(SMI/HSE/SR/019/SL)

- Persons shall not enter the **Confined Space** until : -
 - They have the permission of the **Acceptor – Confined Space** in charge of the work who holds a valid Safety Document for the work
 - They are trained and have been assessed in the BWSC Generation Services UK Ltd **Confined Space** procedures
 - A **Confined Space Notice** is posted at the access point confirming that a valid Gas Free Certificate (GFC) is in force.
 - A **Confined Space** trained **Standby Man** must be outside the space with the knowledge of how to raise the alarm.
 - Adequate lighting is available within the Confined Space.
- The **Acceptor – Confined Space** in charge of the working party must ensure that a record of all persons in the **Confined Space** is maintained

- Work processes that create hazards such as the generation of fumes or depleting of oxygen must be detailed on the Risk Assessment / Method Statement along with the controls to be in place for dealing with them
- Gas cylinders or electric welding generators shall never be taken into a **Confined Space**
- Welding hoses must be routed carefully to avoid damage
 - Short breaks - < 30 minutes gas off at bottles
 - Longer breaks >30 minutes – torch/hoses to be removed or disconnected at bottles

Working within a Confined Space Continued.....

- Except in an emergency only enter or leave the **Confined Space** by the dedicated access/egress point where the Standby Man is in attendance
- In an emergency: -
 - Leave the **Confined Space** by the most appropriate egress point
 - Report your egress from the **Confined Space** immediately to the Standby Man
- Forced ventilation arrangements, when employed, shall be alarmed on failure or continually monitored by persons who can immediately contact the Standby Man to withdraw all personnel
- If the **Gas Free Certificate** (GFC) expires, everyone must leave the **Confined Space**.

- Adequate access, egress and lighting must be provided: -
 - Torches must be carried by the working party in case of primary lighting failure.
- It is the responsibility of the **Standby Man** to ensure that the access and egress remains free from obstruction at all times.
- Final Closure of the Confined Space will be completed by a suitably trained person to ensure no persons, tools or equipment remain inside.

Please now complete
the Standby Man/
Confined Space
Awareness
Questionnaire.