

Irish Water Guidance Document	Revision: Revision 1.0	Approved by: Claire Lyons Effective Date: <u>19/05/2017</u>
IW-HSQE-GL-006	IW HSQE Guidance Document on Site Safety Signage at Operational Facilities	

Irish Water

HSQE Guidance Document on Site Safety Signage at Operational Facilities

Revision History

Revision Number	Description of Change	Author(s)	Approved by	Date of approval
0.1	First Issue of document	Tom Quinlan	Nicola Cawley	29/03/2017
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1 Purpose

The objective of this guidance document is to provide standardised information to Irish Water internal and external stakeholders regarding the signage requirements for Water, Wastewater and all other associated operational facilities such as pump houses, reservoirs etc. In particular it is to inform HSQE Officer staff conducting HSQE Inspections of these assets to ensure that standardised information is provided to those operating the facility as to what site safety and security signage is required in order to meet legislative compliance and IW minimum acceptable standard. .

2 Scope

This guidance document applies to all Irish Water, Water and Wastewater operational facilities and their ancillary premises associated operational facilities such as pump houses, reservoirs etc. and that are being operated by the Local Authorities and/or Design Build Operate contracts.

This guidance document aims to provide guidance on the minimum requirements for safety and security signage but not for general asset identification signage. However reference is made to the latter type of signage and in the absence of any other guidance on the latter this document may be used as guidance for this category of signage also.

The Operators of Irish Water Facilities (LA or DBO) as operators have a responsibility to have conducted Operational Health and Safety Risk Assessments and to have identified hazards which require internal safety signage on site.

3 Legal Requirements for Safety Signage

Safety signs are a legal requirement and must be used where a hazard or danger has been identified and cannot be avoided or adequately reduced. The requirement for safety signs should be identified by means of a risk assessment of the facility. Signage is required where residual risk cannot be totally eliminated or controlled by collective or other measures. When designing or specifying signage the primary piece of legislation with respect to site safety signage is the the Safety Health and Welfare at Work (General Application) Regulations 2007 (Chapter 1 of Part 7: Safety Signs at Places of Work) should be consulted. Further

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detail in the application of this legislation is given in Schedule 9 where details of the types of signage and the requirements for the use and maintenance of permanent signage, signboards, signs for pipes and containers, signs for firefighting equipment, acoustic signs and illuminated signs. Attachment one contains an outline of the various categories of symbols used as part of signage and sign boards as taken from Schedule 9 of the General Application regulations.

Where signage is used on a site the Employer has a duty to ensure that employees are provided with information to clarify the meaning and requirements of a particular signboard.

4 Abbreviations

Term	Definition
IW	Irish Water
LA	Local Authority
Regulations	Safety Health and Welfare at Work (General Application) Regulations 2007
SHAWW 2005	Safety Health and Welfare at Work Act 2005
DBO	Design Build and Operate Facility
PPE	Personal Protective Equipment
SOP	Standard Operating Procedure

5 Types of Site Safety Signage

The requirements for site safety signage on Irish Water facilities are divided into two categories, external and internal safety signage. External safety signage is that which is required at 'front of house' at the entrances to Irish water facilities. Internal safety signage is that which is required for indicating residual risk from hazards within and throughout the site area and must be determined by risk assessment of the facility. The requirements for internal signage can vary from facility to facility.

The requirements for external safety signage will generally be the same except for where the site contains the hazardous gas Chlorine. Sites which contain Chlorine gas require additional information to be posted at the facility's entrance identifying this fact. point which if it leaks may have detrimental on and offsite effects and which

5.1 External Safety Signage

External safety signage is that required at 'front of house' at the entrances to Irish water facilities. These facilities should have the following types of signage:

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6 Irish Water Front of Site Signage (Asset Identification Signage)

This is specific to the facility location and should contain the Site Name one of the following examples as shown below and where available will further contain the Asset ID number. Asset Strategy should be consulted on this category of signage prior to commencing any programme of replacement or introduction of this type of signage.

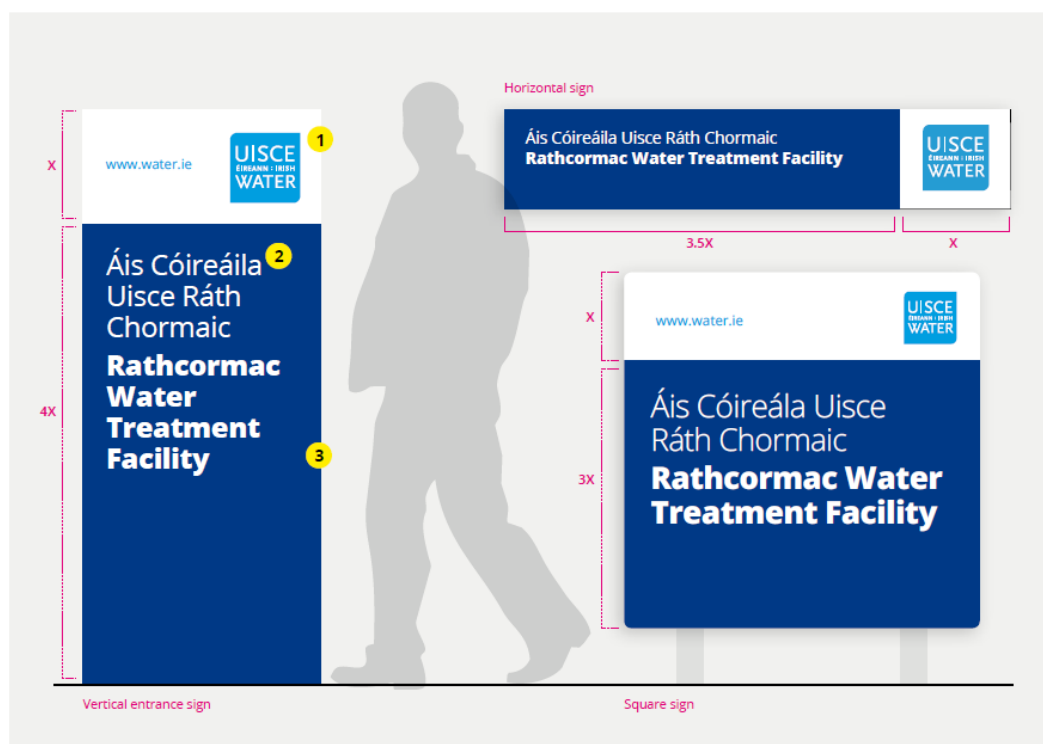


Figure 1. Example of Irish Standardised Asset Identification Signage

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Figure 2. Example of an acceptable existing Asset Identification Sign

6.1.1 Minimum Personal Protective Equipment Requirements

This signage should be located at the entrance of each facility. This signage should be pictorial and have additional supplementary signboards where deemed necessary. The sign board in Figure 3 below is based on the Mandatory minimum PPE requirements for Irish water Staff as laid out in section 6.1.3 of the Irish Water Site Visit Procedure SOP053. Note PPE requirements may change based on the tasks being carried and the specific risk assessment for that task. In addition the Operator of the facility (be that the LA or a DBO) may have additional PPE requirements such as gloves as part of their minimum PPE requirements for their operation of the facility. The signage at the front gate should reflect the operational requirements within the facility as prescribed by the operator.

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Figure 3 Example of an acceptable minimum PPE requirements sign board

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6.1.2 Occupiers Liability Signage –

This signage should be located at the entrance of each facility.



Figure 3. An example of an acceptable Occupiers Liability Sign at an existing Asset.

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6.1.3 Chlorine Gas Site Safety Sign Board.

This signage is required on Water Treatment plants that store and use Chlorine gas for disinfection of water as part of the treatment process. Emergency contact numbers for the local authority and Irish Water should be posted on a sign at the gate in conjunction with warnings re the hazards of Chlorine gas, i.e. it is a compressed gas and a toxic gas.

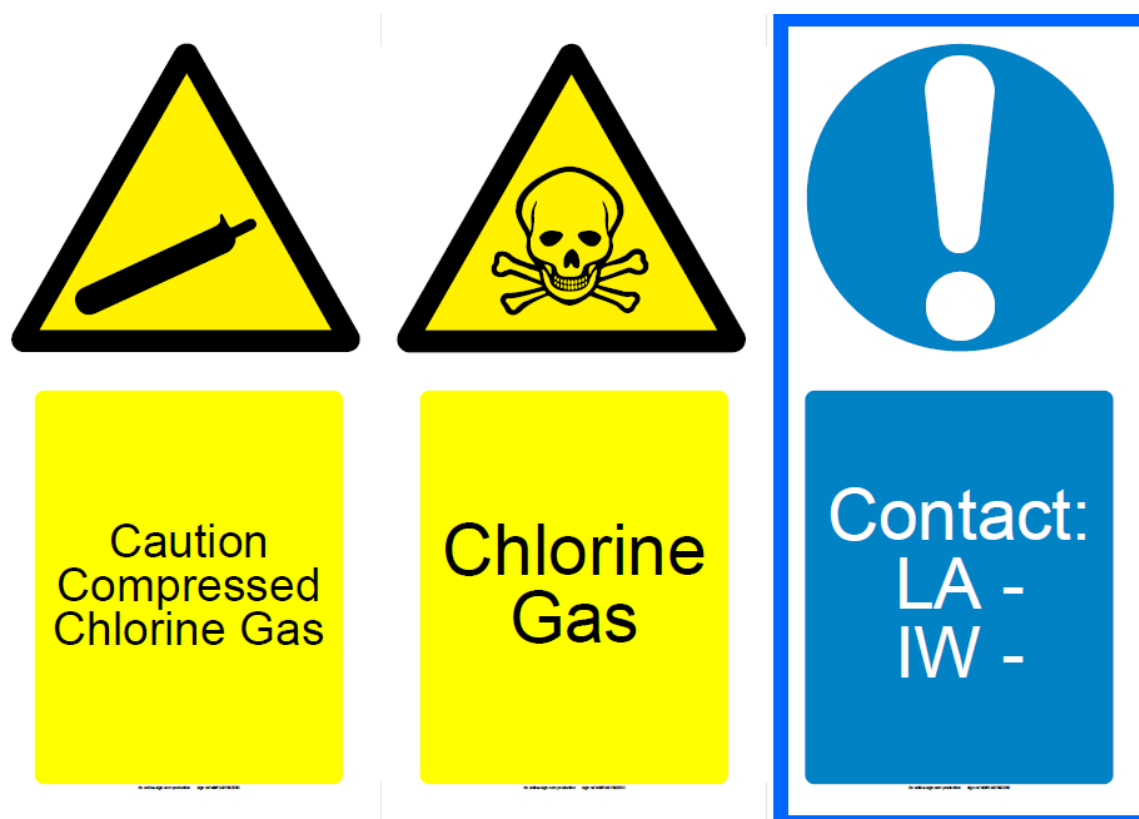



Figure 4 Chlorine Gas Site Safety Sign Board.

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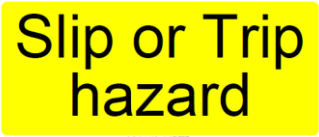



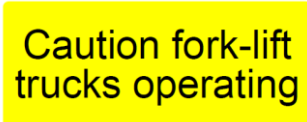
6.2 Internal Signage

This refers to the signage that is located within the different sections of the facility, e.g. confined space, chemical dosing room, sludge press plant room. As per section 5, internal safety signage is that which is required for indicating residual risk from hazards and indicating additional actions, control measures or precautionary measures that must be carried out to ensure safety throughout the site area. These signage requirements must be determined by risk assessment of the facility conducted by the operator of the facility. All of this signage must be developed in line with the requirements of the regulations. A non-exhaustive list of some standard examples are given from Water and Waste water Facilities in 5.2.1 below. These examples are also for reference by Irish Water HSQE or other staff that may be, visiting sites, conducting site safety management tours on sites, or safety inspections on sites as (i) guidance on the hazard types represented by the safety signs and (ii) as an indication of the type and location of required internal site safety signage.





6.2.1 Standard Examples of Internal Safety Signage

Type of Sign	Description	Sign
Sign Board: Caution: Confined Space Prohibition: No unauthorised entry into confined space Mandatory: Permit required for entry into confined space	Location: Typical confined space signage located beside space to identify it and detailing that a permit is required for entry.	







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Type of Sign	Description	Sign
Caution: Slip or Trip Hazard	Location: Adjacent areas where trip or slip hazards are present	 
Caution: Deep Water	Location - Near edges of rivers, impound reservoirs, aeration tanks, storm tanks etc.	 
	Location: Beside where fork trucks or other heavy plant is operating.	 







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Type of Sign	Description	Sign
Caution: Corrosive chemical in use the area	Location: Typically present adjacent to Acid/Alkali dosing rooms and chemical storage areas.	
Caution: Harmful or irritant material	Location - Where soda ash, poly and similar are in use/stored	
Caution/Danger: Asbestos	Location - Where Asbestos is stored or is known to be present. Note: Asbestos sign should never be drilled into place on the asbestos.	
Caution/Danger: Overhead cables present	Location – at entrance to a site where there overhead cables or also at an adequate distance at either side of lines, or on goalposts erected to warn of overhead cables	

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Type of Sign	Description	Sign
Caution/Danger: High Voltage present	Location – at entrance to electrical rooms on or on panel doors of electrical panels or transformers.	 
Caution/Danger: Hazardous Electrical energy present	Location – anywhere where hazardous electrical energy is present	 
Caution: Atex Area – explosive atmospheres may exist.	Location: Typically present adjacent to Zoned areas where explosive atmospheres can exist and where restrictions on the types of equipment that can be used are present.	 





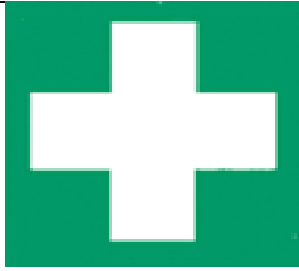
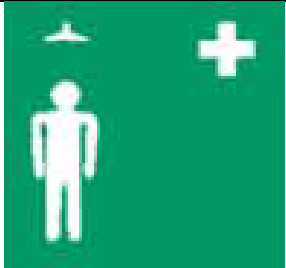
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Type of Sign	Description	Sign
Caution: UV Light	Location – Near areas where UV lamps are in operation	 
Caution: Biological Risk	Location - Near areas where contact with sewage is likely - aeration tanks, clarifiers, sludge tanks, sludge press rooms etc.	
Caution/Danger: Automatic start up of equipment	Location - Near Clarifier Bridges etc	 
Caution/Danger: Moving Parts/Crush hazards	Location - Near Clarifier Bridges etc	

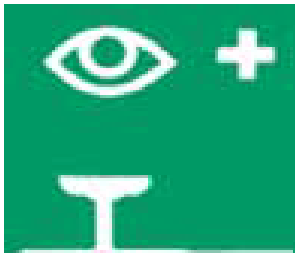





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Type of Sign	Description	Sign
Caution/Danger: Danger Bull or other livestock.	Location – remote facilities at access points to fields where livestock may be present and where personnel traverse.	 
Mandatory: Hearing protection is required	Location - Areas where noise exceeds 85 decibels	
Mandatory: Safety Gloves must be worn	Location - Areas where chemical or biological substances may come in contact when handling. Note: Glove must be resistant to substance.	
Mandatory: Full Face Protection required	Location - Areas where chemical is being handled or dosed.	

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Type of Sign	Description	Sign
Activate Personal Gas Detection Monitors Prior To Entering.	Location: At the entrance to any areas that require gas monitors to be worn to monitor for hazardous gases e.g. Sludge Press Rooms/ Dewatering etc.	 
Mandatory: Pedestrians must use this route.	Location – Next to designated pedestrian walkways.	 
Emergency Escape/First Aid Signs -First aid	Location - At area where First Aid Box is stored.	
Emergency Escape/First Aid Signs - Safety shower	Location - over Safety Shower so that it easily can be located.	

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Type of Sign	Description	Sign
Emergency Escape/First Aid Signs - Eye wash station	Location - over Eye Wash Station so that it easily can be located.	
Fire Fighting Signs - Fire Extinguisher	Location - over Extinguisher so that it easily can be located	
Prohibition Sign - No Swimming	Location - at banks of impound reservoirs and intakes where public may access.	 
Prohibition Sign – No smoking	Location – non smoking areas of a facility.	 

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Type of Sign	Description	Sign
Prohibition Sign – No Unauthorised Entry	Location – non authorised entry areas – also at entrance to facility.	 
Prohibition Sign – Not Drinking	Location: Where process or non potable water is in place for cleaning etc.	 
Prohibition Sign – No Entry When Gas Alarm is sounding.	Location: outside area where permanent gas alarms are fitted.	 

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7 Revisions of this Guidance Document

In the event that there are changes to legislation, approved codes of practice or to IW standard operating procedures, guidance notes or work instructions this document will be amended to reflect these changes

8 Referenced Legislation

The Safety Health and Welfare at Work (General Application) Regulations 2007 (Chapter 1 of Part 7: Safety Signs at Places of Work)

Guide to The Safety Health and Welfare at Work (General Application) Regulations 2007 (Chapter 1 of Part 7: Safety Signs at Places of Work)

The Safety Health and Welfare at Work Act 2005

Occupiers Liability Act 1995

9 Referenced Documents

Irish Water Site Visit Procedure IW-HSQE-SOP-053

[Document Name] IW-HSQE-SOP-XYZ

[Document Name] IW-HSQE-SOP-XYZ

10 Generated Documents

[Document Name] IW-HSQE-FM-XYZ

[Document Name] IW-HSQE-FM-XYZ

[Document Name] IW-HSQE-FM-XYZ

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Appendix A

Examples of sign types as taken from Schedule 9 of The Regulations:

Examples of Prohibition Signboards



Examples of Mandatory Signboards



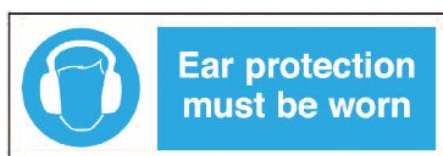
Examples of Warning Signboards



Examples of Information Signboards



Example of a Supplementary Signboard



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