



# **Public Safety at Construction Sites**

## **WC-OSH 129**

**Water Corporation,  
Safety and Health Procedure Manual**

<b>Copy Number:</b>	<b>Date Issued:</b>	<b>/</b>	<b>/</b>
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**AMENDMENT RECORD**

Rev	Date	Description	Prepared by	Review by	Approved by
B	9 May 2003	Draft Issued for Comment	MANAGER OSH	N/A	N/A
O	8 July 2003	First Issue	MANAGER OSH	MANAGER OSH	MANAGER OSH
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**DOCUMENT RECORD**

<b>Document Identification</b>	WC-OSH 129 Public Safety at Construction Sites
<b>Document Custodian</b>	WC MANAGER OSH
<b>Relates To</b>	WATER CORPORATION Safety and Health Procedure Manual
<b>Original Date Issued</b>	

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## **Public Safety at Construction Sites**

### **1. PURPOSE**

The aim of this procedure is to reduce as far as practicable the risks to the safety and health of members of the public at or adjacent construction work.

### **2. SCOPE**

This procedure applies to all construction work undertaken directly by the Corporation, and applies to the management of Contractors undertaking construction work for the Corporation.

### **3. REFERENCES**

- a) Occupational Safety & Health Act 1984
  - Section 22(1) Duties of employers and self-employed persons
- b) Occupational Safety & Health Regulations 1996, Regulation Nos –
  - 3.11 Warning signs
  - 3.75 Hoardings and barricades
  - 3.97 Protective screens (welding and allied works)
  - 3.109 Where persons at risk due to excavation
  - 3.127 Limited entry to area where demolition work being done

### **4. DEFINITIONS**

- 4.1 Public** Within this procedure, means a resident, bystander, pedestrian or other person in the immediate area of the construction site (but not employed, contracted or subcontracted in connection with the construction works).
- 4.2 Construction Site** Within this procedure means any location (whether segregated from the public or not) on Corporation, private or public property on which assets are being erected, modified or dismantled by the Corporation or its contractors.

### **5. PERFORMANCE REQUIREMENTS**

An assessment of risk to the public shall be conducted for all construction work undertaken by the Corporation and its contractors. In determining the overall risk posed to the public, the assessment shall consider –

- a) the location of the works (proximity to urban areas, schools etc)
- b) specific public hazards likely to be at the site.

Following the risk assessment, a clear strategy shall be established to either:

- 1. Prevent unauthorised persons from entering within the boundaries of a site by fencing, signs and other means, or
- 2. Where the above is not practicable (or not fully reliable), to as far as practicable make the site safe for public access by means such as –
  - the presence of site personnel at hazardous locations within the site
  - signs/fences around hazards within the site

- the securing of equipment and materials and covering of holes when unattended, and
3. Appropriate management, in the case of authorised public visitors having business at the site.

Means of excluding the public from site, or protecting the public who may enter the site shall be described in relevant Job Safety Analysis, Safe Work Procedures, or Safety & Health Management Plan (and in a Traffic Management Plan where applicable). In the case of construction work undertaken by contractors, intended precautions are to be either included in the Contract Specification, or in documents submitted by the tenderer/contractor (but in either event are to be agreed prior to work commencing).

The adequacy of existing precautions shall be reviewed if unauthorised public persons are barred from the site but have managed to enter.

Any incident at a Corporation construction site that causes injury to a member of the public that requires medical treatment shall be deemed a 'Notifiable OSH Incident'. Such incidents require rapid notification to relevant managers in accordance with procedure WC – OSH 17 (OSH Incident Notification).

Vehicles and pedestrian access in public areas shall be managed in accordance with procedure WC – OSH 111 (Traffic Management).

## **6. GUIDELINES**

### **6.1 General**

The Corporation and its contractors frequently undertake construction activities in areas accessible to the public. Children, local residents and other members of the public are often attracted to construction activities. These same persons are generally much less aware of hazards and necessary precautions on construction sites than are the construction workers and site personnel. The Corporation clearly has responsibilities to do all that is reasonably practicable to prevent public injury at our construction sites, even where access to the site by the public has been prohibited. In determining what is "reasonably practicable" it is necessary to assess risk (i.e. the likelihood and probable severity of an injury to the public).

The *likelihood* of an injury to the public is influenced by factors including:

- proximity of the construction works to public areas (eg. adjacent residences, shopping centres etc)
- proximity to children or others with little awareness of hazards (eg. adjacent schools, playgrounds etc)
- the number and nature of hazards on the site
- the duration of the construction work
- existing perimeter fencing or other features which may be a deterrent.

Similarly the *probable severity* of an injury to the public is mostly determined by the nature of hazards on site.

An assessment of risk (likelihood and probable severity of public injury) must be conducted for all construction work undertaken by the Corporation or its contractors.

Where practicable (determined by risk assessment), the public should be *prevented from entering the site* or approaching construction activities. Where this is not practicable (or to the extent that measures to keep the public off the site cannot be relied on) precautions must be taken within the site such that it is safe for the public to enter. Specific hazards within the site that should be considered include but are not limited to –

- open excavations
- holes and openings

- falls from height
- welding flash
- access to hazardous substances, flammable materials, plant and equipment when unattended
- operation of equipment such as mobile plant, nail guns, lasers
- disposal of site wastes (eg. hazardous substances containers; asbestos cement).

So far as practicable, at the end of each day's work the sites are to be made safe (in event of unauthorised access by the public) by means such as –

- backfilling excavations
- bunting/fencing of boring pits, open excavations and similar structures
- securing of plant and materials
- covering of holes
- warning signs
- locking of access gates (fenced sites)
- presence of a security guard if necessary

Attached to this procedure is a guide to appropriate controls for typical public hazards at construction sites, for 'low' and 'high' public risk areas. Frequently a site will not neatly fit either such description, or may have additional hazards. The guide should not be taken as a definitive or exhaustive list of necessary controls (as should be identified through an initial risk assessment and ongoing observation on site).

Hoardings or similar physical barricades are to be erected around construction work, where there is a risk from debris or other source of injury to persons not on the construction site.

Hessian or similar welding screens should be erected around arc welding locations generally, but particularly in areas where welding can be viewed by the public.

## **6.2 Authorised visitors**

Local residents or other members of the public may occasionally be authorised to temporarily access a construction site. The safety of authorised visitors to site should be managed by means including –

1. Visitors being directed to report to the site office (or site supervisor) on arrival (with an appropriate sign at site entrances where applicable)
2. The wearing of appropriate Personal Protective Equipment
3. Visitors from the public are to be accompanied by site personnel while on site
4. Visitors are to be precluded from areas of the site which require specific training to access safely (eg. Confined Spaces).

## **7. RECORDS**

Records of risk assessments shall be retained for a period of two years ordinarily, or a minimum of 6 years in event of an injury involving the public.

Job Safety Analysis, Safe Work Procedures or Safety & Health Management Plans (or Corporation Specifications or tender documents) nominating controls for public safety shall be retained for a period of two years ordinarily, or a minimum of 6 years in event of an injury involving the public.

## **8. ATTACHMENTS**

- A. Guideline to public safety standards at construction sites

**GUIDELINES FOR ENSURING PUBLIC SAFETY AT CONSTRUCTION SITES**

HAZARD	GUIDE TO PRECAUTIONS FOR PUBLIC SAFETY AT LOW PUBLIC RISK SITES (Note 1)		GUIDE TO PRECAUTIONS FOR PUBLIC SAFETY AT HIGH PUBLIC RISK SITES (Note 2)	
	During working hours	After working hours	During working hours	After working hours
General security for whole of work site	Preclude access to the public where practicable. Visitors must be required to report when on site, and sight-seers are not to be allowed to remain within the work area.  Display signs to warn of specific hazards (eg. Nail gun in use, deep excavation, safety helmet area)	Hazards to be made safe, or access to be precluded.  Display reflective signs and/or lighting as necessary.	Public access to be strictly controlled. Where practicable install perimeter fencing around the site, or around major hazards. (Note: fencing may be nominated within the Specification as a condition of contract). Visitors must be required to report when on site, and sight-seers are not to be allowed to remain within the work area. Display signs to warn of specific hazards (eg. Nail gun in use, deep excavation, safety helmet area). Erect hessian or similar screens where arc welding is visible to public.	Hazards to be made safe, or access to be precluded. Install perimeter fencing where practicable, and install rigid frame fencing around individual hazards where necessary (do note always rely on perimeter fencing).  Display reflective signs and/or lighting as necessary.  Provide distinct routes for pedestrians and traffic to safely pass.
Attended manhole opening	Attendance to be continual and watch maintained, otherwise pennant tape or better visual barrier to surround opening	N/A	Mesh cover to opening or 1200 high rigid fencing preferred, otherwise attendance must be continual and watch maintained	N/A
Unattended manhole openings	Pennant tape or better visual barrier.	Covers to be fitted to manholes after hours	Mesh cover to opening or 1200 high rigid frame fence.  If the manhole is within 5m of a pedestrian route, fit the mesh cover <u>and</u> a 1200 high rigid frame fence	Covers to be fitted to manholes after hours.
Excavation to 1m depth (Note 3)	Warn pedestrians, horse riders, etc by pennant tape or better visual barrier, and divert vehicles, if they may approach while excavation is unattended	Fill excavation where practicable, otherwise – a) warn pedestrians, horse riders etc with pennant tape or better, and b) divert vehicles if they may approach excavation	1200 rigid frame fence if – ♦ Job site does not have perimeter fencing and ♦ Excavation is unattended	Fill excavation where practicable. If not filled and there is no perimeter fencing to site, install 1200 rigid frame fencing to the excavation.
Excavation deeper than 1 metre (Note 3)	1200 rigid frame fence around excavation and divert traffic (if pedestrians, horse riders or vehicles etc may approach while excavation is unattended).	Fill excavation where practicable, otherwise – a) 1200 rigid frame fence around excavation and, b) divert vehicles if they may approach excavation.	Provide perimeter fencing to the site, or fit 1200 rigid frame fence around unattended excavations	Fill excavation where practicable. If not filled and there is no site perimeter fencing – a) install 1200 rigid frame fencing to the excavations to 3m deep b) 1800 high rigid frame fence to excavations deeper than 3m.
Structures with vertical edges 1 to 3m at or about ground level (eg retaining walls)	1200 rigid frame fence at approaches to edges, and divert traffic (if pedestrians or vehicles may approach while the edge is unattended).	1200 rigid frame fence at approaches to edges.	1800 rigid frame fence at approaches to edges, and divert traffic (if site is unfenced and pedestrians or vehicles may approach while the edge is unattended)	1800 rigid frame fence at approaches to edges, and divert traffic (if site is unfenced)
Structures with vertical edges more than 3m at or about ground level (eg below ground tanks; boring pits)	1800 rigid frame fence at approaches to the edge and divert traffic (if pedestrians or vehicles may approach while the edge is unattended).	1800 rigid frame fence at approaches to edges.	1800 rigid frame fence at approaches to edges, and divert traffic (if site is unfenced and pedestrians or vehicles may approach while the edge is unattended)	1800 rigid frame fence at approaches to edges, and divert traffic (if site is unfenced)
Plant, chemicals etc which may be hazardous in the hands of the public	To be secured (if public may approach items when unattended)	Secured to prevent public access or operation.	To be secured (if public may approach items when unattended)	Secured to prevent public access or operation.
Mobile plant in operation	Plant to be fitted with flashing lights and reverse 'beepers' if public may approach	N/A	Plant to be fitted with flashing lights and reverse 'beepers' if public may approach. Perimeter fencing may be necessary also.	N/A

**NOTE 1:** 'Low public risk sites' are those sites that are located where few members of the public (as pedestrians or traffic) would be expected to approach, for example

- Rural areas, not adjacent to housing or roads, or
- Within premises which are already secured with existing rigid perimeter fencing of minimum 1.8m height

**NOTE 2:** 'High public risk sites' are those sites that are located where members of the public (as pedestrians or traffic) would be expected to approach

**NOTE 3:** The guidelines shown for excavations may be relaxed in the case of very flat-sided excavations, if a situation-specific risk assessment indicates that lesser requirements will be sufficient

**NOTE 4:** Where referenced in this table, 'perimeter fencing' to be chain mesh security fencing in a 1.8m high rigid frame (or equivalent)

**NOTE 5:** Traffic on public roads to be managed in accordance with the Road Traffic Code and AS1742.3. These public safety guidelines do not address risks to livestock or other animals, which may require additional or alternative precautions at some work sites.