Workplace Health and Safety Queensland

Hazard identification

Supplement 1

Risk Management Code of Practice 2007

Queensland Government
Department of Employment and Industrial Relations

Important information about the *Risk Management Code of Practice 2007* and supplement 1

- The code replaces the *Risk Management Advisory Standard Code of Practice 2000*.
- The code was made on 3 June 2007.
- The code first commenced on 15 June 2007.
- The code expires 10 years after it first commenced.

What is this supplement about?

Supplement 1 to the *Risk Management Code of Practice 2007* describes step 1, **how to identify hazards present in the workplace**, in the five step risk management process.
The risk management process is illustrated in Figure 1.

Note*:* There may be additional risks in the workplace, which have not been specifically addressed in this supplement. It is a requirement under the *Workplace Health and Safety Act 1995* and the *Electrical Safety Act* 2002 to assess these risks and control measures are implemented and reviewed to prevent or minimise exposure to these risks.

Supplement 1 should be read in conjunction with the *Risk Management Code of Practice 2007* and supplements 2 and 3 as well as the *Workplace Health and Safety Act 1995* (the Act) and the *Electrical Safety Act 2002* (the ES Act) and other relevant codes of practice. Where applicable, codes of practice are referred to in the text.

References to legislation, Australian Standards and other documents in this code of practice are current at the time of printing. It is the responsibility of the user to check whether these documents are current at the time of reading.

Hard copies of Workplace Health and Safety Queensland (WHSQ) and Electrical Safety Office (ESO) legislation and codes of practice are available from SDS Publications. To obtain copies, please call (07) 3118 6900.
Further information is available on the Department of Employment and Industrial Relations website www.deir.qld.gov.au or call Infoline on 1300 369 915.

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1. Step 1 Identify hazards

1.1 Introduction

This aim of this supplement is to give practical advice about how to identify hazards at a workplace for the purpose of managing exposure to risks at the workplace.

1.2 What is a hazard?

A hazard is something with the potential to cause harm.

This is the definition of 'hazard' for the purpose of the *Risk Management Code of Practice 2007* and the three supplements. This definition is consistent with the description used in general Australian industry standards, which define a hazard as:

> *A source or a situation with a potential for harm in terms of human injury or ill-health, damage to property, damage to the environment, or a combination of these*[1].

A source or situation can include substances (both hazardous and dangerous), plant, work processes and/or other aspects of the work environment.

1.3 How to identify hazards

The first step in the risk management process is to identify workplace hazards. This means looking for those things at the workplace that have the potential to cause harm.

To begin identifying hazards, simply ask the question, 'Does this task/activity/situation/event have the potential to harm a person?' Another way is to ask the question 'What if?' For example, when inspecting a construction site, ask 'What if children could walk unaccompanied onto the site?' These are proactive ways to identify hazards. Hazards can also be identified from records of past accidents and near misses.

1.4 Categorising hazards

Workplace hazards are not always obvious. Some hazards can result in long-term health effects rather than an immediate injury. For example, exposure to loud noise over a period of time can result in hearing loss; or contact with a solvent can cause dermatitis.

To assist in identifying hazards, they may be categorised as follows:

- **The obvious hazard** is apparent to the senses (e.g. unguarded machinery, building defects, faulty electrical equipment).
- **The concealed hazard** is not apparent to the senses (e.g. electricity, presence of toxic vapours, or high frequency noise).
- **The developing hazard** cannot be recognised immediately and will develop over time (e.g. a worn tyre on a mobile crane and frayed steel cables).
- **The transient hazard** is an intermittent or a temporary hazard (e.g. overload of machinery, when a confined space permit has expired, a sticking safety valve on a boiler, intermittent electrical or mechanical defect).

It is important to remember that a hazard may become more obvious and easily identifiable when a person actually performs a task. This is often the case with ergonomics or manual tasks.

[1] *AS 4801 – Occupational Health and Safety Systems – Specifications with guidance for use*

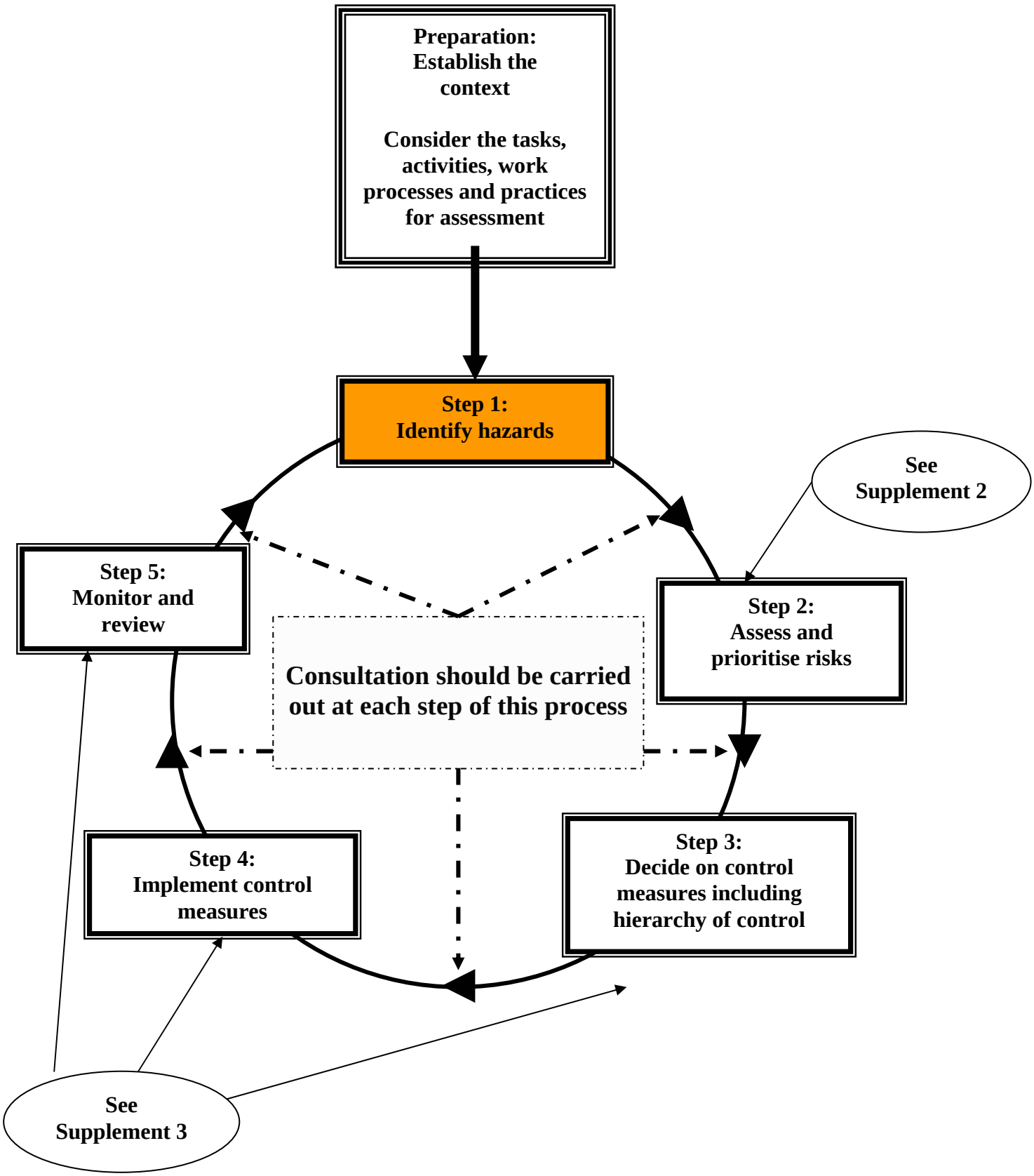
To make the job of identifying hazards in the workplace easier, prepare and establish the context for the risk management process. This involves identifying:

- all activities involved in work processes and tasks;
- who is involved in those activities; and
- items of plant or materials that are used.

Then make a list of all the hazards at the workplace.

Once this list of hazards is compiled, each hazard should be considered individually. Example forms to help with this process are attached in Appendix A: Sample forms.

Figure 1: Five step risk management process



1.5 What if. . .

Having a structured approach to identifying hazards improves the chances of identifying all of the hazards in the workplace. A person can ask themselves: 'Is this activity safe? What if this or that occurs - then - what will happen?' When identifying a hazard a person should ask: 'Is it possible that . . .?', or 'What would happen if . . .?' This is the 'What if' approach to what could happen.

Ask 'What if . . .?' rather than think 'that could not happen!'

Remember that a **hazard is something with the potential to cause harm**.

2. How to look for and identify hazards

2.1 Visual inspection and observation

The most common and simple way to begin to look for hazards is to conduct regular walk-through visual inspections of the workplace. Look at each task the workers do to see if any hazards are present, such as handling loads, using chemicals or equipment.

It may also be helpful to observe workers performing their tasks and the activities involved, such as set-up, operation, cleaning, maintenance and inspection, as more hazards may become apparent. This will provide the opportunity to see whether the documented procedure for performing the task is being followed by the workers, or whether workers are taking short cuts or speeding up work (e.g. by removing guards).

2.2 Structured approach

To improve the chances of identifying all of the hazards in the workplace, it will help to take an additional structured approach.

One way is to divide the workplace into groupings such as:

- locations, such as offices, grounds, warehouse or wet areas;
- functions or production processes, such as administration, cooking, washing, cleaning, receiving, forming, or finishing;
- roles, such as electricians, office workers or drivers; and
- tasks, such as working on the lathe, loading the truck, decanting a substance or data processing.

Another way to identify hazards in the workplace is to make a list itemising equipment, tools, substances and known processes. From this list, determine whether there are any existing regulations or other codes of practice that apply which specify restrictions or control measures. The list will also provide a useful checklist to work from.

Other ways to help identify hazards include:

- consulting workers about;
  - problems they have encountered in doing their work;

  - any near misses[2] or events that have not been reported;
  - unreported minor injuries;
  - symptom experience, such as pain and discomfort in body parts, or changes to vision, hearing, and skin conditions;
- conducting a health and safety audit;
- seeking information by;
  - undertaking worker surveys (e.g. body maps and discomfort surveys);
  - consulting with Workplace Health and Safety Representatives (WHSRs) and workplace health and safety committees;
  - knowing the industry's experience of common potential hazards;
  - acquiring information from designers, manufacturers, suppliers, and other organisations, such as unions, employer bodies and health and safety consultancies;
- testing, measuring and sampling by means of;
  - scientific or technical evaluation, including simulation;
  - practice runs and tests in applied conditions;
  - environmental and medical monitoring;
- analysing;
  - records and data covering incidents and near misses, worker complaints, sick leave and staff turnover;
  - maintenance records, results of surveys, audits or inspections.

2.3 Some other points to keep in mind

When collecting information to identify hazards, consider the following:

- competency and level of training of workers and whether it is adequate;
- how people actually use, clean, service or repair equipment and materials;
- how suitable the things used for the task are, and how well they are located;
- how people could be hurt directly and indirectly by the various workplace aspects;
- how waste materials are or should be disposed of; and
- the lifecycles of substances, plant, materials and premises, which may affect their safety.

Do not think:
"Nothing has happened in the past, therefore it must be safe."

Important*:* There may be additional hazards in the workplace which have not been specifically addressed in the code of practice or in this supplement. In 2005, an Industrial Court decision in Queensland stated the obligations imposed by the Act 'verge on the absolute'[3]. The Act states there is an obligation to **prevent** injury to workers, not to take reasonable steps to prevent injury. Therefore, the decision of the court states that to fulfil statutory obligations you may need to do more than what is reasonable.

3. What to look for – examples of hazards

Look at each task the workers do to determine whether any hazards are present. For example, are workers doing manual tasks such as the handling loads, using chemicals or plant or equipment?

[2] Near misses should be investigated immediately after they occur to ascertain their cause. Also, workers should be encouraged to report all injury incidents even those resulting in very minor injuries.
[3] In *Twigg v Hughes and Hessey* (C/2005/66).

There are a number of general workplace hazards including:

- work environment (e.g. confined spaces, slippery floors or electrical cords across floors);
- energy (e.g. electricity);
- manual tasks (e.g. lifting a load overhead or repetition of work);
- noise (e.g. loud music in enclosed small areas);
- pressure systems (e.g. steam boilers with piping and compressed air systems);
- substances (e.g. chemicals and flammable or explosive materials);
- vehicles, equipment or plant (e.g. machinery, tools and office equipment);
- moving parts of machinery, tools and equipment (e.g. pinch and nip points);
- work at height (e.g. work done on scaffolds or ladders);
- falling objects (e.g. from a height, rolling, shifting or caving-in);
- ejection of material (e.g. from moulding operations);
- systems of work (e.g. processes, procedures or actions);
- exposure to violence (e.g. in prisons or working in police services);
- working alone or in isolated workplaces (e.g. petrol stations or night watch in storage areas); and
- personal hygiene (e.g. contaminated hands while preparing food).

Some workplace activities or arrangements may create or increase hazards, if they are not properly managed. These include:

- purchasing policies (e.g. if the products, plant, materials and personal protective equipment that are selected are the cheapest option and are not safely designed, not suitable for the job or suited to the worker using it or are of inadequate quality);
- roles, responsibilities, and accountabilities (e.g. if they are not clearly defined, people will not know what they have to do, when or how to do it);
- excessive physical and mental tasks and job demands which may lead to an inability to keep the worker's mind on the job;
- organisational arrangements, such as shiftwork and rosters, may lead to fatigue and human error where workers are working long hours, or are working more than one job; shiftwork may interfere with medication requirements;
- levels of supervision and ratios of supervisors to workers (e.g. greater levels of supervision are appropriate in some areas, particularly in child care employment and special safety requirements);
- key performance indicators (e.g. when set too high they create unrealistic performance targets, which can increase the workers' tendency to take short cuts and increase risks while trying to achieve the targets);
- maintenance and servicing programs for plant to cover wear and tear; and
- training programs, where risk management of property is emphasised over the risk management of people and safety.

3.1 Workplace safety culture

From a very broad perspective, the organisational environment and culture in the workplace, and how it contributes to hazards, may form a framework for hazard identification.

Workplaces **do not** have a strong safety culture where:

- workers are encouraged to have a 'can do' attitude;
- management overlooks workers who cut corners to achieve targets; or
- skylarking, pranks or other practical jokes that increase the likelihood of an accident, are tolerated by supervisors or managers.

In these workplaces, the worker's way of thinking is in itself a hazard – it has the potential to cause them or others harm.

On the other hand, organisations with a strong safety culture promote risk awareness and mindfulness. In such organisations, safety comes first in the minds of the workers, who will be less likely to cut corners or engage in unsafe behaviour, and are encouraged by management to speak up when they identify hazards in the workplace.

4. When hazards are identified

Once the hazards in the workplace have been identified, it is good practice in a risk management system to enter them into a hazard register (See Form A1 in Appendix A). A register of all hazards in a workplace is an important reference tool, as it can assist in identifying 'new' hazards in other tasks in the workplace, and provides a record of actions taken to control the hazards.

The best results in hazard identification are obtained when the workers are consulted in the process [4].

Actions for step 1: Identify hazards

1. Copy a risk management form from either Set A or Set B, provided at the back of this code (from page 12).
2. Complete the hazard identification section on the chosen forms. These sections identify hazards as either: minor (that can be fixed straight away); relating to a regulation, standard or guide (regulation, standard or guide provides advice on control); or others that require completion of the risk management process.
3. Transfer the description of the hazard and the perceived associated risk to the risk register (Form A2) which is available in supplement 2 to the *Risk Management Code of Practice 2007*.

5. Summary

Identifying hazards is the first step in controlling risks at a workplace. A hazard is anything with the potential to cause harm. Hazards can take a number of forms, and are not always obvious.

There are a number of things that can be done to identify all of the hazards at a workplace. These include:

- conducting a walk-through visual inspection;
- consulting with workers and other staff;
- conducting health and safety audits;
- seeking information from many sources; and
- testing, measuring and taking samples .

[4] Workers participation in consultative arrangements are prescribed in the Act.

A list of examples of general workplace hazards (examples of hazards) is included with other factors that may create hazards (e.g. workplace culture).

6. Applied case study - context

The following case study is an example of how to use the risk management code.

At the end of each supplement, the case study will apply the information from that step to the hypothetical situation.

6.1 Case information to set the context

The workplace is a retail grocery store, one of many operated by a large national company. The shop is large enough to have a permanent WHSO (Charles Blogg). Charles has been working in the role of WHSO for 12 months now, and has realised that during this time he has not been through the steps of the risk management process. In preparation for this review, Charles spent some time thinking about what he needed to focus on. As it is a large workplace, he divided the workplace into sections (bakery, deli, checkouts, produce, general shelving and receiving bay and storerooms) to make it easier for him to think about. Starting with the bakery, he identified the different activities and tasks that are carried out by the workers.
These include:

- preparing a number of different products such as breads, cakes, slices and doughnuts;
- cleaning items used in product preparation; and
- general housekeeping.

When analysing the steps involved in preparing the baked products, Charles identified activities such as:

- moving the ingredients from their storage locations, including the freezer, to the area of use;
- mixing the ingredients together using specialised mixers;
- transferring the mixture to the container for baking;
- putting them in the oven, removing them from the oven, slicing or decorating; and
- packaging.

The workers who carry out these tasks are Tim, the head baker who has 25 years experience; Tina, the baker's assistant (one year out of her apprenticeship) and John, a young apprentice (first year and not yet at apprenticeship college). Charles has met with all workers to tell them that he is going to be reviewing the safety of their workplace and has asked them to all think about things they think are unsafe or dangerous.

The forms used through this case study are forms from Appendix A
Set A: Form A1
Set B: Form B1

6.2 Applied case study – Hazard identification

A walk-through survey (audit) of the bakery and consultation with the workers has identified the following hazards. This example uses Form A1.

Hazard identification and register
XYZ Retail Pty Ltd

Workplace area or grouping: Bakery, XYZ Retail Pty Ltd Reference no:_____
Form completed by: C Bloggs (print name) _____ (sign)
Date form completed: 26/06/06

Ref. no.	Identified hazards	Date	Initials
1	Doughnut mixer is not guarded – access to mixing bowl when machine is operating.	25/06/06	CB
2	Slippery floors in the mixing room – flour spilt on concrete flooring in area where staff walk.	25/06/06	CB
3	Lighting very sparse at flour storage area.	25/06/06	CB
4	36 kg bags of flour stored on a pallet on concrete floor in storage area. Narrow access and restricted movement.	26/06/06 reported by Tina	CB
5	Access from courtyard at the back of the bakery is half closed by cardboard boxes.	26/06/06 reported by Tina	CB
6	Plug in electrical equipment toaster– shock hazard.	25/06/06	CB
7	Lamp replacement and cleaning by staff - shock hazard.	26/06/06 reported by Tina	CB
8	Overhead electric line to front of shop (outside) - shock hazard if contacted by delivery trucks or other activities.	26/06/06 reported by Tina	CB
9	Hose down cleaning work may expose electrical equipment to water damage – shock hazard.	25/06/06	CB

References and sources of further information

- ANSI/AIHA Z10-2005, American National Standard - Occupational Health and Safety Management Systems. Released September 5, 2005 through the American Industrial Hygiene Association (AIHA).
- AS 3806:2006 – Compliance programs. Standards Australia
- AS/NZS 4360: 2004 – Risk Management. Australian/New Zealand Standard
- AS/NZS 4581:1999 – Management system integration – Guidance to business, government and community organizations.
- AS/NZS 4836:2001 – Safe working on low voltage electrical installations. Australian/New Zealand Standard.
- AS/NZS 4804:2001 – Occupational Health and Safety Management Systems. Australian/New Zealand Standard.
- Australian Minerals Industry (2002). Safety & health: Self evaluation tool. Dickson, ACT 2602.
- CCH Australia Limited: The hands on guide – OHS Manager
- CCH Australia Limited: The hands on guide – Risk management
- Hillson, D. & Murray-Webster, R. (2005). Understanding and managing risk attitude. Gower: Hants England.
- Hopkins, Anthony (2005). Safety, culture and risk. CCH Australia Limited: Sydney.
- HB 139:2003. Guidance on integrating the requirements of Quality, Environment and Health and Safety Management System Standards. Australian/New Zealand Standard.
- HB 205: 2004 OHS Risk Management Handbook. Australian/New Zealand Standard
- HB 436: 2004. Guidelines to AS/NZ 4360:2004
- OECD (2006). OECD studies in risk management: Denmark: Assessing societal risks and vulnerabilities. OECD Publications, Paris. France.
- Reason, J. (1990). Human error. Cambridge University Press: New York.
- Reason, J. (1997). Managing the risks of organizational accidents. Ashgate: Aldershot.
- Weick, K. E. (1987). Organizational culture as a source of high reliability. Calif. Management Rev, 29: 112-127.
- Weick, K. E., Sutcliffe, K. M., Obstfeld, D. (1999). Organizing for high reliability: processes of collective mindfulness. Res Organizational Behav, 21: 23-81.

Appendix A: Sample forms

Form A1: Hazard identification and register

Workplace area or grouping: Ref. no:_____
Form completed by: _____ (print name) _____ (sign)
Date form completed: / /

Ref. no.	Identified hazards	Date	Initials
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Form B1: Hazard identification

Fill in one form for each workplace area or grouping.

Workplace area or grouping:	Form completed by: _____(print name) _____(sign)	Date form completed: / /

Identify the task or activity	What are the hazards for each activity? (and Ref. no.)	Date	Initials