SIP016 - GUIDANCE ON EMERGENCY PLANNING IN PORTS

















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SIP016

GUIDANCE ON EMERGENCY PLANNING IN PORTS

INTRODUCTION

The Health and Safety Executive provided support to Port Skills and Safety in producing this guidance, which is aimed at improvements within the Ports industry. This guidance may go further than the minimum you need to do to comply with the law with regard to health and safety.

It is for companies operating in the UK ports industry with responsibility for the safe design, construction, operation, management and maintenance of ports and terminal facilities and management of port and terminal activities. It will also be useful to employees and their representatives.

Following the guidance is not compulsory and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance. If the guidance goes beyond compliance, then this will be clearly identified.

Regulations in this document are referred to by title but not year, because they are amended from time to time and the reader should always seek the current version. Acts are given a year as they tend to change less frequently. The list of references at the end of this document however does include a year that was correct at the time of publication.

Guidance within these shaded areas of this document denotes that the contents go beyond statutory compliance and are industry recommended best practice. These guidelines are not mandatory, though the legislation referenced below is. Individual organisations have a duty of care to those who might be affected by their operations and are responsible for devising arrangements that meet their obligations.

This guidance has been developed to give advice on preparing and implementing port and marine emergency and contingency plans.

An emergency or adverse event is any unplanned or unforeseen event which can put employees, contractors, visitors, members of the public, and the environment at risk or additionally put at risk port infrastructure and equipment. Contingency planning is therefore any plan made in advance of such an event to mitigate, manage or control the event and its outcomes.

The environment needs to be considered twice, firstly when the event itself has a direct impact such as a major oil spill and secondly potential damage caused by measures used to contain the event such as contaminated water run-off from fighting a major fire.



1. REGULATORY FRAMEWORK AND GUIDANCE

- 1.1. The two principal relevant pieces of law are the Health and Safety at Work etc. Act (HSWA) 1974, and the Management of Health and Safety at Work Regulations (MHSWR), which set out the basic requirements to ensure, so far as is reasonably practicable, the health, safety and welfare of all involved.
- 1.2. Port specific, Merchant Shipping and other legislation applies and should be referred to.
- 1.3. Approved Code of Practice (ACOP) L148 'Safety in Docks' was introduced on 6 April 2014: www.hse.gov.uk/pubns/books/l148.
- 1.4. The PSS/HSE Safety in Ports guidance suite, available from the PSS website at: www.portskillsandsafety.co.uk/resources is an important supplement to Safety in Docks ACOP L148.
- 1.5. The guidance is aimed at routine operations and does not cover some of the specialised and high-risk activities associated with handling dangerous goods and hazardous cargoes, or major hazards sites which are subject to the Control of Major Accident Hazards Regulations for which specialist advice may be required. It is however intended to cover dangerous goods, hazardous events and any other life or infrastructure threatening event which may arise in a port.
- 1.6. Reference can also be made to the:
 - International Labour Organisation's (ILO) Code of Practice on Safety and Health in Ports (ILO 152): www.ilo.org/sector/activities/sectoralmeetings/WCMS_546257/lang--en.
- 1.7. The International Ship and Port Facilities Security Code places obligations on ports to have Security Plans in place and procedures for dealing with an emergency arising out of a terrorist related event. These are in many cases encompassed in Port Emergency Plans.
- 1.8. The HSE's regulatory responsibilities generally cover port plans, and the MCA's responsibilities generally cover marine plans. Where port staff are working a ship, an incident arising would be addressed under Port plans.
- 1.9. The Control of Major Accident Hazards Regulations 1999 (COMAH) requires operators of top tier sites to have formalised onsite and off-site emergency plans in place. These have to be regularly tested and Local Authority Emergency Planning Officers will conduct multi-agency exercises to ensure this takes place.
- 1.10. Lower tier COMAH sites do not have the same strict requirements but must have plans to deal with foreseeable emergencies.



- 1.11. The requirements of the Dangerous Goods in Harbour Areas Regulations (DGHAR), the International Maritime Dangerous Goods Code, Dangerous Substance and Explosive Atmospheres Regulation and other relevant legislation, which may apply to the transport, storage or handling of the cargo, must be taken into account.
- 1.12. Civil Contingencies Act (CCA) and Local Resilience Forums provide frameworks for collaborating with local support services during emergencies. Some ports may be considered as Category 2 responders under the CCA and have a responsibility to cooperate with Category 1 organisations (such as emergency services, local authorities, the NHS, the Environment Agency and others) and to share relevant information with the Local Resilience Forums.
- 1.13. When preparing emergency plans the emergency services and the local resilience group or forum should be consulted to ensure the plan is compatible with their expectations:
 - Preparation and planning for emergencies web site:
 www.gov.uk/preparation-and-planning-for-emergencies-responsibilities-of-responder-agencies-and-others
 - Local Resilience Forums web site: www.gov.uk/local-resilience-forums-contact-details

2. HEALTH

- 2.1. When making emergency plan arrangements consideration should be given to health issues arising from the emergency. This includes but are not limited to:
 - Chemical release
 - Smoke inhalation
 - Dust
 - Fire water run-off
 - Heat
 - Radiation
 - Water borne diseases
- 2.2. While there is reference to some specific health risks in these guidance documents, it is not possible to cover all the issues. Further information and guidance on the identification, assessment and reduction or avoidance of such risks can be found on the HSE website at:
 - Ports web pages: www.hse.gov.uk/ports
 - Control of Substances Hazardous to Health: www.hse.gov.uk/coshh
 - Musculoskeletal disorders (MSDs): www.hse.gov.uk/msd
 - Personal Protective Equipment: www.hse.gov.uk/toolbox/ppe



3. RISK ASSESSMENT

- 3.1. Risk Assessments must be undertaken in accordance with the Management of Health and Safety at Work Regulations. A risk assessment must consider the risks, not only to permanent employees but also to others including non-permanent employees (NPE's), ship's crew, passengers and visitors as well as stakeholders that may be affected by the activity. The appropriate control measures must be introduced and should consider collective measures ahead of personal or individual measures.
- 3.2. The groundwork for a comprehensive emergency and contingency planning structure is formed by the completion of a Risk Register to identify those events that could potentially have a significant negative impact on any persons, the environment or area, for example: explosion, fire or pollution.
- 3.3. The appropriate control measures must be introduced and should consider collective measures ahead of personal or individual. Risks should be reduced to as low as is reasonably practicable by taking preventive measures.
- 3.4. The risk register and risk assessments must be reviewed regularly and immediately after any incident or exercise.
- 3.5. Cooperation and coordination between shipside and landside employers is required. Employers must therefore carry out risk assessments in consultation with the workers involved and develop safe systems of work that are agreed to by all parties.
- 3.6. Ships should have their own emergency plan and may deal with some situations on board vessels themselves. However, the terminal has a responsibility to provide assistance where safe to do so.
- 3.7. In case of emergencies on board vessel, employees should be made aware of emergency alarms and the actions to take. This will also apply to ship's crew in terms of shore-based alarms.

4. CONSULTATION, COOPERATION AND COORDINATION

- 4.1. **Consultation:** Employers have a duty to consult with their employees, or their representatives, on health and safety matters. By gaining worker involvement on health and safety through two-way communication, concerns can be raised and solved together, and views and information can be sought and exchanged in a timely manner.
 - See HSE pages: Consulting and involving your workers: www.hse.gov.uk/involvement.
- 4.2. **Cooperation and Coordination**: Cooperation and coordination between shipside and landside employers is required. Employers must therefore carry out risk assessments and develop safe systems of work (in consultation with the workers involved) that all parties agree to. So that the respective employers can co-operate effectively with each other.



5. EMERGENCY EVENT MANAGEMENT PRINCIPLES BY NON-EMERGENCY SERVICES ORGANISATIONS.

- 5.1. The aim of management during an emergency event is to:
 - Contain and control the incident and where possible to bring the situation back to its normal state.
 - Whilst ensuring that anyone affected is not put at unnecessary additional risk.
- 5.2. Consultation with employees, their representatives and other stakeholders is an important part of emergency planning.
- 5.3. Advice and further information could also be gained from:
 - Emergency Planning Society
 - Emergency Planning College

6. EMERGENCY PLANS

- 6.1. Vehicles and pedestrians should be separated where they share the same workspace. This may involve excluding pedestrians from certain areas or providing separate pedestrian routes.
- 6.2. **Overview:** Ports must develop plans for emergencies that are based on risk management. The plans should be suitable for dealing with emergencies or other unexpected situations which may arise. This plan may be linked to other plans for example: The Business Continuity Plan.
- 6.3. Ports are required to have plans covering but not limited to:
 - 6.3.1. **Emergency situations**: serious injury, explosion, flood, poisoning, electrocution, fire, release of hazardous substances, incidents involving plant & equipment and infrastructure.
 - 6.3.2. **Marine emergency:** vessel collision, contact or grounding, person overboard, mechanical failure, listing, capsize or sinking, marine casualties, vessel evacuation, medical emergency. Emergency plans which have been prepared by duty holders should take account of potential fire risks on board vessels, particularly those associated with hazardous cargoes. Ships are required to have such plans under Merchant Shipping Regulations.
 - 6.3.3. **Port security:** Depending on the Port Security Risk Assessment and Port Security Plan, plans can include but are not limited to terrorism, theft, arson, vandalism, protestors, cyber security and clandestines.
 - 6.3.4. **Oil spill contingency and Pollution:** covering land, in-land water ways and sea, to include pollutants other than oil.



- 6.4. Employers must consider emergency arrangements for situations involving:
 - Confined space work
 - Work at height
 - Isolated or lone working
- 6.5. Such arrangements are in many cases already a requirement under the relevant legislation. Further information and guidance can be found in:
 - ACOP L148 'work at height': www.hse.gov.uk/pubns/books/l148
 - SIP015 Confined Spaces in Ports
- 6.6. Emergency plans should be documented and readily available. They should be regularly reviewed, exercised and updated accordingly.
- 6.7. Industry best practice is that emergency plans should be suitably detailed but not over complicated.
- 6.8. Port emergency plans should not solely rely on the emergency services. They should include but are not limited to arrangements for:
 - Dealing with incidents prior to the emergency services arrival
 - Hand over to the emergency services
 - How the port will work with the emergency services throughout the incident response.
- 6.9. Work should not resume after an emergency, until the incident is made safe and return to work has been agreed by those in charge of the incident. It is advisable to treat any incident scene as a crime scene until advised otherwise. If there are any doubts, ask for guidance from the emergency services.
- 6.10. Plans may also be required to cover tenants, neighbouring sites and other potentially hazardous activities that may give rise to emergency situations.
- 6.11. In many cases Port emergency plans may cover the activities of many different stakeholders. It is important that in such cases the plans are understood by all concerned and do not conflict with any other plans made and introduced by duty holders of other terminals or operations. Duty holders developing emergency plans should ensure that such plans are integrated with those of other stakeholders and where the workplace is shared with others, emergency plans and procedures must be coordinated.
- 6.12. The Emergency Plan Framework typically considers but is not limited to the following:
 - Incident response
 - Incident control
 - Infrastructure
 - Communication
 - Resource Planning (people, equipment, material)



• Information, Instruction and Training

7. EMERGENCY PLAN FRAMEWORK: INCIDENT RESPONSE

- 7.1. Consider what might happen and how the alarm will be raised. Include night and shift working, weekends and times when the premises are closed, e.g. holidays.
- 7.2. Plan what to do including how to contact the emergency services.
- 7.3. Plan for loss of communication for example, mobile network failure.
- 7.4. Plan essential actions such as emergency plant shutdown, isolation or making processes safe. Clearly identify important items such as shut-off valves and electrical isolators.
- 7.5. Plan where appropriate for: rescuing people from the scene, evacuation, treating injuries, provision of shelter and comfort.
- 7.6. Plan any arrangements for people with disabilities.
- 7.7. Consider establishing containment areas for personnel and their welfare needs.
- 7.8. Plan for ensuring security of scene and surrounding areas.
- 7.9. Plan for meeting and handing over to the emergency services.
- 7.10. Plan for making an orderly return to the scene when it is safe.

8. EMERGENCY PLAN FRAMEWORK: INCIDENT CONTROL

- 8.1. Consider categorised levels of response depending on emergency type and severity.
- 8.2. Establish who is in charge of the emergency response.
- 8.3. Ensure the response is managed so that rescuers are not put at unnecessary risk.
- 8.4. Identify the location of the (mobile or fixed) control centre(s).
- 8.5. Establish liaison arrangements with emergency services, rendezvous points.
- 8.6. Consider media management arrangements.

9. EMERGENCY PLAN FRAMEWORK: INFRASTRUCTURE

9.1. Identify muster/assembly points and places of safety (these may depend on the incident).



- 9.2. Devise evacuation routes and procedures for evacuation and rescue from all areas. Including where appropriate for ships holds/decks, isolated areas, confined spaces, areas at height (e.g. cranes, lighting pylons, container tops etc.) and areas where dangerous goods may be stored or handled. Plans should consider how rescue can be achieved where the person to be rescued may be injured, unconscious, trapped or unable to help themselves.
- 9.3. Identify where the emergency equipment is located.
- 9.4. Identify where services (e.g. hydrants) and utilities are located.
- 9.5. If practicable consider drawing up a simple plan showing the location of hazardous items.
- 9.6. Help the emergency services by clearly marking your premises from the road.

Further information and guidance can be found in: SIP015 Confined Spaces in Ports.

10. EMERGENCY PLAN FRAMEWORK: RESOURCE PLANNING (PEOPLE, EQUIPMENT, MATERIAL)

- 10.1. Pre-determine the competent people needed to take control of emergency situations and document their duties, roles and responsibilities. The employer may need to address a range of roles. Ensure those identified are aware of their roles and responsibilities and capable of carrying them out.
- 10.2. Consider allocation of expertise across shifts, call-in arrangements, reserve team(s). Identify the type of emergency equipment and material required, and material stock control arrangements.
- 10.3. Where equipment is needed for rescue, this should be:
 - located in a prominent position or stored in an appropriate place
 - readily available for use
- 10.4. All relevant personnel should be made aware of the storage location(s).
- 10.5. where equipment is provided for use in an emergency, it must be:
 - suitable
 - properly maintained
 - inspected
 - available at all times
 - staff trained in its use



11. INFORMATION, INSTRUCTION, TRAINING AND SUPERVISION

- 11.1. Those with responsibilities in the plan should be appropriately trained in advance. In most cases it will be appropriate for the emergency plan instructions to be documented and readily available.
- 11.2. Quick and effective action may help to control the situation and reduce the consequences. In emergencies people are more likely to respond reliably if they:
 - 11.2.1. Are well trained and competent
 - 11.2.2. Have rehearsed plans, actions and responsibilities
 - 11.2.3. Take part in regular and realistic practice
- 11.3. When designing emergency response plans and training:
 - 11.3.1. Consider the needs of people with disabilities and vulnerable workers.
 - 11.3.2. Appropriate awareness should be provided for people such as visiting drivers, contractors, non-permanent employees, ship's crew, passengers and other stakeholders. Ways of conducting this awareness include but is not limited to: inductions, visitor instructions, signage and vessel information packs.
 - 11.3.3. Nominate competent people with clearly defined roles and functions to take control.
 - 11.3.4. Decide which other key people are needed, for example a nominated incident controller or someone who is able to provide technical and other site-specific information.
- 11.4. Regular exercises are vital, and plans should be reviewed following feedback from exercises. Exercises may be a mix of 'live' or 'desktop' and their frequency should be determined by risk assessment. Whenever possible and appropriate, exercises should include the emergency services and other agencies such as relevant Category 1 & 2 responders under the Civil Contingencies Act.
- **11.5. Communication:** The plan for communication during emergencies will typically include arrangements for:
 - 11.5.1. Providing suitable information about what to do in an emergency, including information to visitors, members of the public, masters, crew, contractors, non-permanent employees and other stakeholders who may be affected.
 - 11.5.2. Summoning the emergency services.
 - 11.5.3. How communications will operate during an emergency, for example, how the port will communicate with the emergency services, media and stakeholders throughout the response to an incident.
 - 11.5.4. Ensuring that information meets the needs of people who are disabled or vulnerable.



- 11.6. Communication plans may need to account for mobile phone networks being unreliable or even switched off in a major.
- 11.7. Ports are advised to consider a wide range of methods for communicating with port users including but not limited to:
 - Signs
 - Notices
 - Radios
 - Information leaflets
 - Public address broadcasts
 - Web site
 - E-mail
 - Local radio
 - Text alerts
 - Social media
- 11.8. Design of procedures and instructions should recognise that not all persons at the port may speak English as their first language.

12. LIAISON WITH EMERGENCY SERVICES

- 12.1. Liaison with the emergency services is desirable to ensure that they are aware of the likely problems they may encounter in the event of a fire or other emergency. Arrangements such as access for emergency service vehicles and clear signposting to enable emergency service vehicles to locate areas of the site should be considered. Ports should endeavour to establish a good working relationship with the emergency services locally. This is not a legal requirement but may help you to ensure effective coordination with other parties.
- 12.2. Local emergency services will generally welcome the opportunity to familiarise themselves with and/or train on port infrastructure. Such cooperation enables the Local emergency services to better understand port activities and the layout of the port and could save valuable time in an emergency.
- 12.3. Industry experience has shown that the emergency services may not necessarily be willing to use duty holder provided emergency equipment. Therefore:
 - 12.3.1. It is important that the duty holder engages with emergency services in advance, to establish agreements on what equipment might be appropriately used.
 - 12.3.2. The duty holder should make provision for the recovery of the casualty to a suitable transfer point.



- 12.4. Where appropriate and in conjunction with the emergency services exclusion zones may be established around an incident site. In some cases, such zones may be extensive and can cause major disruption to the port, local communities and other businesses.
- 12.5. Emergency services may use post codes to find incident locations. However, post codes do not always accurately reflect the reality on the ground at some ports. Identifying such discrepancies and communicating them to emergency services is not a legal requirement but may help to save valuable time in an emergency.

RELEVANT LEGISLATION AND GUIDANCE

Relevant legislation and guidance include the following. Please note that these are the correct versions at the time of publishing, but the reader should always seek out the most current version.

The current versions of other PSS Safety in Ports Guidance documents can be found at: www.portskillsandsafety.co.uk/resources.

- Code of Safe Working Practices for Merchant Seafarers (COSWP): www.gov.uk/government/publications/code-of-safe-working-practices-for-merchant-seafarers
- Civil Contingencies Act 2004: www.legislation.gov.uk/ukpga/2004/36/contents
- Code of Safe Working Practices for Merchant Seafarers (COSWP): www.gov.uk/government/publications/code-of-safe-working-practices-for-merchant-seafarers
- Confined Spaces Regulations 1997: www.hse.gov.uk/confinedspace
- Consulting and involving your workers: www.hse.gov.uk/involvement
- Control of Major Accident Hazards Regulations (COMAH) 2015: www.hse.gov.uk/comah
- Control of Substances Hazardous to Health Regulations (COSHH) 2002: www.hse.gov.uk/coshh
- Dangerous Goods in Harbour Areas Regulations 2016: www.hse.gov.uk/pubns/books/l155
- Dangerous Substances and Explosive Atmospheres Regulations (DSEAR) 2002: www.hse.gov.uk/fireandexplosion/dsear
- Emergency Planning College: www.epcresilience.com
- Emergency Planning Society: www.the-eps.org
- Health and Safety (Safety Signs and Signals) Regulations 1996: www.hse.gov.uk/pubns/books/l64
- Health and Safety at Work etc. Act (HSWA) 1974: www.hse.gov.uk/legislation/hswa
- International Labour Organisation's (ILO) Code of Practice on Safety and Health in Ports (ILO 152): www.ilo.org/sector/activities/sectoral-meetings/WCMS_546257/lang--en
- International Maritime Dangerous Goods Code (IMDG): www.imo.org/en/Publications/IMDGCode

- Lifting Operations and Lifting Equipment Regulations (LOLER) 1998: www.hse.gov.uk/work-equipment-machinery/loler
- Management of Health and Safety at Work Regulations 1999: www.hse.gov.uk/managing
- Managing Health and Safety in Dockwork HS(G) 177: www.hse.gov.uk/pubns/books/hsg177
- Merchant Shipping (Means of Access) Regulations 1988: www.legislation.gov.uk/uksi/1988/1637/contents/made
- Merchant Shipping (Safety at Work) (non-UK Ships) Regulations 1988:
 www.opsi.gov.uk/si/si1988/Uksi 19882274 en 1
- Merchant Shipping and Fishing Vessel (Lifting Operations and Lifting Equipment)
 Regulations (LOLER) 2006: www.opsi.gov.uk/si/si2006/20062184
- Merchant Shipping and Fishing Vessel (Provision and Use of Work Equipment) Regulations (PUWER) 2006: www.gov.uk/government/publications/guidance-applying-vessel-equipment-regulations-loler-and-puwer
- Musculoskeletal disorders (MSDs): www.hse.gov.uk/msd
- Personal Protective Equipment: www.hse.gov.uk/toolbox/ppe
- Ports web pages: www.hse.gov.uk/ports
- Provision and Use of Work Equipment Regulations (PUWER) 1998:
 www.hse.gov.uk/work-equipment-machinery/puwer
- Radiation (Emergency Preparedness and Public Information) Regulations 2001: www.hse.gov.uk/radiation/ionising/reppir
- Regulatory Reform (Fire Safety) Order 2005: www.legislation.gov.uk/uksi/2005/1541/contents/made
- Safety in Docks ACOP L148: www.hse.gov.uk/pubns/books/l148
- The Dangerous Substances (Notification and Marking of Sites) Regulations 1990 (NAMOS)
 INDG467: www.hse.gov.uk/pubns/indg467
- The Electricity at Work Regulations 1989 and guidance on electrical safety: www.hse.gov.uk/electricity
- Work at Height Regulations 2005: www.hse.gov.uk/work-at-height



Raising Standards in UK Ports

FURTHER INFORMATION

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