

Example risk assessment for cold storage warehousing

Setting the scene

Frozen Foods Ltd provide cold storage and distribution facilities (at temperatures between -18° and -30° C) at three locations. They serve customers of all sizes across a variety of sectors. Each location has 10 000 pallet spaces, uses fixed and mobile racking, and averages a throughput of 2500 pallets a week.

Twenty people are employed in the warehouses, working a variety of shifts. Three members of staff are from an Eastern European country; only one speaks good English. At busy times, temporary staff from an employment agency may also be employed.

The site manager did the risk assessment, which covers goods inward from the gate to the cold store, their storage and their despatch.

How was the risk assessment done?

The manager followed the guidance in *Five steps to risk assessment* (www.hse.gov.uk/pubns/indg163.pdf).

1 To identify the hazards, the manager:

- looked at HSE's web pages for free health and safety advice and guidance for the warehousing industry (www.hse.gov.uk/warehousing/index.htm), and at HSG76 *Warehousing and storage: A guide to health and safety* (available from HSE Books, www.hsebooks.com/ or 01787 881165), particularly the chapter on temperature controlled storage;

- walked around all the areas where the staff, contractors, customers and others may go, noting things that might pose a risk and taking HSE's guidance into account;
- talked through the issues with the safety representative, including how knowledge of risks and risk controls could effectively be communicated to the two staff members who did not speak good English, and on health and safety training for agency staff;
- talked to the two company first-aiders, to see if the health surveillance questionnaires they compile and distribute have thrown up any additional issues that need to be considered;
- talked to supervisors and other members of staff to learn from their detailed knowledge of particular jobs and areas and to discuss whether safe working procedures should be developed for certain jobs; and
- looked at the accident book to gather information on past problems.

2 The manager then wrote down who could be harmed by the hazards and how.

3 For each hazard, the manager wrote down what controls, if any, were in place to manage these hazards, and compared the controls to the good practice guidance on the HSE website. Where he did not consider existing controls good enough, he wrote down what else was needed to control the risk.

4 The manager discussed the findings with the safety representative. Then, to implement the findings of the risk assessment, the manager decided who was

responsible for each of the actions that were needed, and by when each action should be done. He wrote this down and, when each action was completed, ticked it off and recorded the date. The manager told staff about the risk assessment at a team meeting. The Eastern European member of staff who spoke good English translated for his countrymen, and checked that they understood it. The manager pinned up a copy of the risk assessment in the staff room, and made it part of the induction process for new staff.

5 The manager decided to review and update the assessment at least once a year or at any time when major changes to the workplace occurred, such as the introduction of a new plant or process.

Important reminder

This example risk assessment shows the kind of approach a small business might take. Use it as a guide to think through some of the hazards in your business and the steps you need to take to control the risks. Please note that it is not a generic risk assessment that you can just put your company name on and adopt wholesale without any thought. This would not satisfy the law – and would not be effective in protecting people.

Every business is different – you need to think through the hazards and controls required in your business for yourself.

Company name: Frozen Foods Ltd Date of risk assessment: 1/10/07

What are the hazards?	Who might be harmed and how?	What are you already doing?	What further action is necessary?	Action by whom?	Action by when?	Done
Extreme cold Accidental lock-in in the cold store	Employees and others may suffer death or serious injury from prolonged exposure to cold temperatures if accidentally locked in the cold store.	<ul style="list-style-type: none"> ■ Access to the store restricted to authorised, trained persons only. ■ 'No entry' signs clearly posted. ■ Emergency exit provided, door fitted with strip heaters to ensure it does not freeze. ■ Emergency lighting provided (mains powered, battery back-up). ■ Daily check on emergency exit door to ensure it is not frozen shut. ■ Emergency exit door instructions posted on illuminated board by exit. ■ Two trapped worker alarms (battery operated, mains back-up) next to both exits. ■ Supervisor ensures thorough check of building before it is locked. ■ Alarms and emergency lighting regularly tested/maintained by competent person. 	<ul style="list-style-type: none"> ■ Check instructions remain clearly visible. 	Supervisors	04/10/07	First check done 04/10/07
			<ul style="list-style-type: none"> ■ Periodic checks to ensure clear access to emergency exit maintained, and that door is operational. 	Supervisors	04/10/07	02/10/07
Extreme cold Working in a sub-zero environment	Employees may suffer ill health or injury (eg frostbite) from prolonged exposure to sub zero temperatures (particularly those with certain pre-existing medical conditions). Extreme cold may also lead to gradual loss of awareness of risk.	<ul style="list-style-type: none"> ■ Pre-employment health screening by a responsible person. ■ Regular health surveillance by trained, responsible persons. ■ System for referring to an occupational health professional staff whose health, following surveillance, is possibly being affected by cold work. ■ Staff trained in risks of cold store working and to recognise symptoms of cold stress. ■ The right personal protective equipment (according to advice in HSE guidance and suppliers' recommendations) issued and staff trained in its use. ■ Supervisors ensure PPE is worn. ■ Only authorised, trained staff allowed in the cold store. ■ Staff have regular warm-up breaks. ■ Drying facilities for wet PPE. 	<ul style="list-style-type: none"> ■ Staff reminded to regularly check their PPE for wear and tear, to ensure it remains effective. 	Manager	04/10/07	04/10/07

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Accidental release of Group 2 refrigerant (ammonia)	Employees and others may suffer fatal respiratory irritation following exposure to ammonia. Exposure to even low concentrations can cause severe eye and throat irritation.	<ul style="list-style-type: none"> ■ Extraction and ventilation plant installed. ■ System designed as per industry practice. ■ Written scheme of examination for all refrigeration plant, including vapour detectors. ■ Only authorised persons allowed in plant room and room locked when not in use. ■ Plant examined as per written scheme by a competent person. ■ Plant maintained by a competent person. ■ High-hazard maintenance jobs (eg oil draining) are identified and done by competent people, such as qualified refrigeration specialists, following safe systems of work and using the correct equipment. ■ Staff trained in the risks of ammonia and its effect on health. ■ Emergency plan for ammonia release agreed, including victim rescue policy and policy for neighbouring properties, and discussed with local fire service. ■ Staff trained in emergency plan. ■ Vapour detectors near likely leakage points activate alarm and emergency extraction if workplace exposure limit (25 parts per million) reached. ■ Water shower nearby for those exposed to an ammonia spray. ■ Windsock to show wind direction in event of release (staff can gather upwind of leak). 	<ul style="list-style-type: none"> ■ Ensure that any work on the system where there is a potential for ammonia release is done by at least two people (second person to help in an emergency). 	Manager	04/10/07	04/10/07
			<ul style="list-style-type: none"> ■ Set date for rehearsal of procedures in the event of an emergency alarm going off. 	Manager	04/10/07	04/10/07
			<ul style="list-style-type: none"> ■ Monthly checks on vapour detectors and alarms. 	Supervisors	04/10/07	02/10/07
			<ul style="list-style-type: none"> ■ Shower to be checked weekly. 	Supervisors	04/10/07	04/10/07
Workplace transport Vehicle movement in the yard and the loading bay – deliveries and despatch.	Staff and visitors may suffer life-threatening injuries, such as fractures and internal damage, if they are struck by a vehicle.	<ul style="list-style-type: none"> ■ Pedestrians kept apart from moving vehicles by yellow lines, railings and marked walkways. ■ Road surfaces in good condition. ■ Measures in place to minimise reversing on site. ■ Reversing aids (mirrors) in place. ■ Hi-viz tabards and safety boots worn by all in yard/loading bay. ■ Drivers hand in keys when vehicle parked. ■ All visitors receive site rules and a site map. Sufficient number of trained banksmen on site, for each shift. ■ Any reversing on site that is necessary is directed by a trained banksman, working from a safe position. 	<ul style="list-style-type: none"> ■ Mark out 'safe area' for visiting drivers during loading and unloading of their vehicle. 	Manager to arrange with facilities team	15/11/07	25/10/07
			<ul style="list-style-type: none"> ■ Extra signage reminding staff/visitors not to enter site through the main gate, used by vehicles, but to use the marked pedestrian route. 	Manager to arrange with facilities team	15/11/07	25/10/07

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Workplace transport Vehicle activity in the cold store	Staff and visitors may suffer life-threatening injuries if they are struck by forklift trucks (FLT) or other materials handling equipment (MHE).	<ul style="list-style-type: none"> ■ Walkways clearly marked. ■ Good lighting throughout. ■ Mirrors at the end of aisles. ■ All drivers trained and follow safe systems of work. ■ Vehicles selected to minimise risk. ■ Drivers do daily pre-use vehicle checks. ■ FLT/MHE maintained to manufacturers' instructions and thoroughly examined every 6 months by competent person. ■ Supervisors monitor driver performance. 	<ul style="list-style-type: none"> ■ Instruct drivers not to leave keys in unattended vehicles (to prevent unauthorised use). 	Manager	04/10/07	02/10/07
Slips and trips	Staff and others may suffer injuries such as fractures if they slip, eg on water or oil or trip over objects such as stock protruding into gangways.	<ul style="list-style-type: none"> ■ Generally good housekeeping – shrinkwrap, pallet debris, strapping bands, spillages etc cleared away promptly. ■ Entrance/exit doors regularly checked for ice and ice deposits removed. ■ Floor in good condition, any damage quickly repaired. ■ Pallets stored in designated area. ■ Staff wear safety shoes with a good grip. 	<ul style="list-style-type: none"> ■ Shift managers to draw up and monitor 'planned cleaning' arrangements. 	Shift managers	14/10/07	14/10/07
			<ul style="list-style-type: none"> ■ Remind staff to keep doors closed to help prevent ice forming at entrances. 	Shift managers	14/10/07	14/10/07
Falls from height	Staff may suffer severe or fatal injuries if they fall from any height.	<ul style="list-style-type: none"> ■ All work at height (eg retrieving dislodged pallets, stock checking) is done by trained, authorised staff using personnel lifting equipment to a safe system of work. ■ Control and use of ladders policy, monitored by supervisors. ■ Climbing on racking strictly forbidden. 	<ul style="list-style-type: none"> ■ Reminder to supervisors to check that safe systems of work are followed for all work at height. 	Shift managers	14/10/07	14/10/07
			<ul style="list-style-type: none"> ■ Post signs reminding staff never to climb racking. 	Manager	15/11/07	25/10/07
Manual handling	Staff may get injuries or back pain from handling heavy objects such as pallets.	<ul style="list-style-type: none"> ■ All staff trained in safe manual handling techniques, particularly when 'picking' goods by hand. ■ All staff trained in safe use of roll cages. ■ Roll cages with defective wheels taken out of use until repaired. 	<ul style="list-style-type: none"> ■ Remind staff that roll cages with defective wheels must be taken out of use for repair. 	Shift managers	14/10/07	14/10/07

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Falling goods	Staff may suffer injuries such as fractures and bruising from falling stock.	<ul style="list-style-type: none"> ■ Shrinkwrap policy on all inbound pallets. ■ Policy to report broken or dislodged pallets in racking aisles. ■ Racking selected according to the operating temperature and is to SEMA standard. ■ Safe working load signage displayed. ■ All racking inspected to an agreed programme, by a competent person, and maintained as necessary. 	<ul style="list-style-type: none"> ■ Instruct staff to immediately report any concerns they have about the condition of racking to the manager or a supervisor. 	Shift managers	14/10/07	14/10/07
Machinery Conveyor belt for unloading	Staff using the machine may suffer injury from moving parts, particularly where belt meets rollers.	<ul style="list-style-type: none"> ■ Staff trained in use of machine. ■ Dangerous moving parts are guarded according to manufacturer's instructions, and staff do weekly check on guards. ■ Emergency stop buttons provided. 	<ul style="list-style-type: none"> ■ No further action needed at this stage. 			
Pallet inverter	Staff using the machine may be injured by moving parts.	<ul style="list-style-type: none"> ■ Machine maintained and inspected according to manufacturer's instructions. ■ Staff trained in use of machine, including a pre-use guard check. ■ When not in use, safety perimeter chain put up with a 'No unauthorised use' sign. 	<ul style="list-style-type: none"> ■ Draw up safe working procedure, including for clearing blockages, for use of pallet inverter. 	Supervisors	31/10/07	30/10/07
Recharging MHE batteries (potential for explosion)	Burns or fractures as material ejected could injure anyone nearby.	<ul style="list-style-type: none"> ■ Batteries charged in designated bay that is well ventilated. ■ Safe system of work used. ■ Job done by trained, authorised staff only. 	<ul style="list-style-type: none"> ■ No further action at this stage. 			
Noise	Staff may suffer discomfort and potential hearing damage if working in noisy areas, eg near refrigeration fans.	<ul style="list-style-type: none"> ■ Refrigeration system, including fans, maintained in good condition according to a planned system of work. ■ Current work practices minimise time spent in noisy areas. 	<ul style="list-style-type: none"> ■ No further action at this stage. 			
Electricity	Staff may suffer shock and burns injuries from faulty electrical equipment or installation.	<ul style="list-style-type: none"> ■ Electrical installation and all equipment is inspected according to a planned schedule. ■ Staff report any concerns to shift manager who will take appropriate action. 	<ul style="list-style-type: none"> ■ No further action at this stage. 			

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Unfamiliarity with site risks	Visitors, including contractors, may suffer injury or ill health through lack of awareness of risks on site.	<ul style="list-style-type: none"> ■ Visitors to the cold store must be given appropriate PPE and accompanied by an authorised person. ■ All work on site by contractors is done according to a permit-to-work system, monitored by supervisors. 	<ul style="list-style-type: none"> ■ Discuss with supervisors if the permit-to-work system is operating effectively and if there is scope to improve it. 	Manager	31/10/07	29/10/07
Fire	Staff trapped could suffer fatal injury from smoke inhalation/ burns.	<ul style="list-style-type: none"> ■ Fire risk assessment done as at www.communities.gov.uk/fire and necessary actions taken. 	<ul style="list-style-type: none"> ■ No further action at this stage. 			

Assessment review date: 1/10/08