HSWA

The Absolutely Essential Health and Safety Toolkit

FOR MANUFACTURING

ACC
PREVENTION. CARE. RECOVERY.
Te Kaporeihana Āwhina Hunga Whara

WORKSAFE
NEW ZEALAND | MAHI HAUMARU AOTEAROA

About this toolkit

This toolkit[1] provides useful checklists for common health and safety issues on small construction sites. It will help you manage or avoid these issues to ensure the health and safety of everyone on and around your worksite, including workers, clients and members of the public. Links to more detailed advice are included where relevant.

DOING NOTHING IS NOT AN OPTION

Manufacturing is among the top four sectors for highest worker injury rates. The highest rate of serious harm is in food and beverage manufacturing, metal manufacturing and wood and paper manufacturing.

In manufacturing the main risks are from occupational health diseases, falling objects, vehicle related in accidents and manual handling. The top cause of death and hospitalisations are occupational diseases – workers are 25 times more likely to die from **exposure to dusts, welding fumes and other airborne substances** than from accidents.

> **Falling objects** caused 28% of fatal accidents in manufacturing.
> Vehicle related accidents made up 28% of fatal accidents (**forklifts and trucks**).
> **Machinery and tool use** was a major factor in severe (26%) and fatal (24%) accidents in manufacturing.
> **Manual handling** composed 43% of severe injuries.

Workers are often caught or trapped in machinery when they are working alone on cleaning, clearing and maintenance tasks.

Absolutely Essential toolkit online quick guide

HEALTH AND SAFETY LEGISLATION

The Health and Safety at Work Act 2015 (HSWA) is New Zealand's workplace health and safety law. It introduces new responsibilities for managing the work related risks that can cause serious injury, illness or even death.If you have good health and safety practices in place now, you are likely to be well on your way. However the new Act introduces some new features and it's important for you to review your approach to health and safety in your workplace.

HOW TO CONTACT WORKSAFE

For further advice on health and safety at work, contact the WorkSafe Response Team on (freephone) **0800 030 040**.

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[1] The content in this toolkit has been adapted from the Health and Safety Executive publication *The absolutely essential health and safety toolkit for the smaller construction contractor* published in 2008 and available at www.hse.gov.uk. It does not cover legal requirements and is a guide only; for information on how to comply with the law, see the relevant legislation at www.legislation.govt.nz

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GENERAL MANAGEMENT

MANAGING

When managing your business do you:

> Have set times to review hazard management systems you have in place (this can be included in a planned maintenance management programme)?

> Make sure specific times are scheduled to review existing hazards (in your register) and look for new hazards?

> Put in place a system that allows you to ensure hazard identification is undertaken before any new tool, plant or equipment is put into operation?

> Encourage workers to be involved with the identification, control and monitoring of hazards?

> Make sure workers are made aware of the hazards in the workplace?

REPORTING ACCIDENTS, UNSAFE SITUATIONS AND SERIOUS HARM

In an emergency: call the emergency services by dialling 111. Notify WorkSafe as soon as possible of any accidents, unsafe situations and serious harm and work-related illness:

> Call the WorkSafe Response Team on Freephone **0800 030 040** (24 hours) and choose option 1.

> Fill in and submit a notification form within 7 days at worksafe.govt.nz Reporting: Serious Harm.

Some types of work also require you to notify WorkSafe. These include where a worker could fall 5 m or more, some excavation work, work *using a lift appliance*, work involving asbestos or working underground. For a full list of notifiable work, read the Health and Safety in Employment Regulations 1995 at www.legislation.govt.nz. For a hazardous substances emergency: call the New Zealand Fire Service on 111 and then the WorkSafe Response Team directly on **0800 030 040**.

Don't disturb the scene.

EMPLOYING

As an employer do you make sure your workers:

> are trained, competent and fit to do the job safely and without putting their own or others' health and safety at risk

> are properly supervised and given clear instructions

> have access to eating, drinking, washing and toilet facilities

> have the right tools, equipment, plant and protective clothing

> are involved in discussions about health and safety issues?

CONTRACTING AND SUBCONTRACTING

If you are a principal who contracts or a contractor who subcontracts work to others, do you:

> check the health and safety performance of the people you plan to use

> give them the health and safety information they need for the work

> talk about the work with them

> hold regular discussions about how the work is going, including safety problems and concerns

> make sure that you have provided everything you agreed (eg raw materials etc)

> check their performance and remedy any shortcomings?

02/

HEALTH AND SAFETY CHECKLIST

FACILITIES AND GENERAL SAFETY

> Do you provide adequate facilities (eg kitchen, dining, toilet and washing facilities)?

> Is the site clean and tidy?

> Are materials and product safely stored and stacked?

> Do you provide the necessary ventilation?

Guidelines for the provision of facilities and general safety in commercial and industrial premises

ELECTRICAL SAFETY

> Are tools and equipment checked by users, visually examined on site and regularly inspected by a competent person?

> Are cables and leads protected from damage?

> Are RCD's regularly tested?

> Do you ensure only appropriately licensed or registered electricians carry out electrical work?

> Do you get electrical equipment that is used in 'hostile environments' regularly tested by a competent person?

(A hostile environment is one where electrical equipment is exposed to operating conditions that are likely to result in damage to the equipment or a reduction in its expected lifespan.)

CRITICAL HEALTH RISKS

NOISE

> Do you have a noisy working environment (eg is it difficult to hold a conversation with a person one metre away from you)?
> Have you identified the source of the noise?
> Can you control the noise at source using engineering, process or isolation controls?
> Are hearing protectors required?
> Do you have systems in place for workers to be trained and educated in the use and, cleaning and maintenance of hearing protectors?

Noise in the workplace approved code of practice

Noise in manufacturing fact sheet

ACC Noise control

PERSONAL PROTECTIVE EQUIPMENT

> Is suitable equipment provided to the head, eyes, hands and feet where appropriate?
> Do workers wear their protective equipment and do they wear it according to the manufacturer's instructions?
> Have workers been trained in the safe use, care and storage of the protective equipment.

WELDING

> What substances are in the fume and the risks associated with them? Detailed information can be found on the Safety Data Sheet.
> How concentrated is the fume?
> What are the relevant workplace exposure standards Workplace Exposure Standards (WES)?
> What welding process are used (arc, flame, resistance)?
> Are welding surfaces coated or painted?
> Which processes create fumes?
> Where will the welding be done (inside, outside or confined space)?
> Who is exposed to the fume and for how long?

- > Do you ensure exposure monitoring (including assessing air quality) is completed by a competent person?
- > Can you modify the process to eliminate or reduce the amount of hot work or fume?
- > Do you use effective local exhaust ventilation to extract fumes?

Welding and local exhaust ventilation

Toolbox talk 1:
Welding work health effects

Toolbox talk 2:
Welding work keeping safe

RESPIRATORY PROTECTION

- > What type of RPE will protect against the hazardous substance?
- > Is the RPE suitable for the form of the contaminant (eg is it a mist, a gas or solid)?
- > Is the RPE suitable for the type of work being done (light or heavy work, short or long duration, confined space, ventilation)?
- > The requirements for each of your employees (eg is the Respiratory Protective Equipment (RPE) the right size)? Is it compatible with other Personal Protective Equipment (PPE) that your employees need to wear?
- > What control measures are recommended on the Safety Data Sheet (SDS)?
- > Do you train your workers how to use and maintain their RPE properly?
- > Do you provide health monitoring for your workers exposed to solvents, fumes, dusts, radiation, noise, vibration and hazardous substances that can harm them?

A guide to respiratory protection

Respiratory equipment –
advice for employees

Respiratory protective equipment –
advice for employers

WORKING IN EXTREME TEMPERATURES

> Are your workers exposed to extreme temperatures at work?

> When assessing whether your workers are exposed to extreme temperatures do you take into account air temperature, humidity, radiant heat, air movement, physical activity and clothing?

> Do you take into account personal factors such as weight, health, level of fitness, age, use of prescribed substances and use of non- prescribed substances?

> Do you adequately train people who work in a hot or cold environment or who supervise the work, how to avoid heat or cold strain associated conditions?

> Do you take adequate measures manage the risk of working in cold or hot environments for example, work environment, equipment design, PPE, safe work practices?

> Do you plan for work carried out in cold or hot environments?

Working in extreme temperatures – guidelines for the management of work in extreme temperatures

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HAZARDOUS SUBSTANCES

> Have you identified all harmful substances and materials, such as asbestos, lead, solvents, paints, heavy metals and silica dust (eg from silica board, glass making etc)? Is protective clothing and respiratory equipment provided?
  - Do you need a location test certificate and if so is it current?
  - If required does your site need a person to hold a current approved handler certificate?

> Have you identified and put into place precautions to prevent or control exposure to hazardous substances, by:
  - doing the work in a different way, to remove the risk entirely
  - using a less hazardous material
  - using tools fitted with dust extraction
  - installing warning signs to show where work involving hazardous substances is taking place?

> Have workers had information and training so they know what the risks are from the hazardous substances used and produced on site, and what they need to do to avoid those risks? For example holding an approved handler certificate.

> Have you arranged health surveillance for employees exposed to hazardous substances (eg lead, silica, solvents, and sensitisers such as epoxy resins, isocyanates)?

Hazardous substances WorkSafe guidance

Working with hazardous substances approved code of practice

HSNO test certifiers

MACHINERY AND TOOLS

> Are the right tools or machinery being used for the job?
> Are guards secured and in good repair?
> Are tools and machinery maintained in good repair and are all safety devices operating correctly?
> Are all operators trained and competent?

MACHINERY HAZARDS

> Is machinery reviewed against AS/NZS 4024or machine specific standards for that piece of machinery (ie this includes all newly purchased/imported machinery, old machinery or retrofitted machinery)?
> Does the design and layout of the machinery protect the safety of workers?
> Have you identified operational hazards of machinery use (eg normal use, cleaning, clearing, unblocking and maintenance)?
> Do you have in place a machinery lock-out procedure for cleaning and maintenance?
> Are mechanical hazards identified and managed (eg trapping, entanglements and projectile hazards)?
> Have you considered electrical hazards such as fuse, shock, laser burn, earthing, lightening electromagnetic or EMF radiation
> Do you identify and monitor occupational health hazards (ie noise, dust, fumes radiation, extreme temperatures, vibration, biological and fibres etc)?
> Do you consider worker wellbeing (ie fatigue, shiftwork, workload) when planning work?

CHOOSING THE RIGHT GUARD

> Is access required by operators and maintenance staff or cleaners?
> Does opening the guard cause the hazard to stop before access?
> Is constant access required?
> Can presence sensing systems be used appropriately?
> Has a competent person verified that the machinery can’t be guarded?

SAFE SYSTEMS OF WORK

> Have you identified hazards that may occur by using a safe system of work?

> Do you ensure the correct use of tools and plant (eg safe operating procedures, job safety analysis and effective and safe maintenance and cleaning)?

> Have you provided a good work environment (eg safe layout, lighting, ventilation, and noise and fumes managed)?

> Do you have procedures, information, equipment and trained staff to manage emergencies?

Best practice guidelines for the safe use of machinery

Machine specific fact sheets

Fixed and hand-held grinders

TRAFFIC MANAGEMENT

SAFE SITE

> Do you keep vehicles and pedestrians separate (eg barriers, markings)?
> Do you manage the speed vehicles travel on your site (eg signage, speed bumps, on way systems)?
> Do you have safe loading and unloading procedures (eg spotters designated safe area for drivers whilst loading and unloading)?

SAFE VEHICLE

> Is it the right vehicle for the job?
> Is the vehicle maintained according to the manufacturers specifications?
> Do you do have procedures in place for pre-start checks, regular maintenance inspections and do you monitor and audit these?

SAFE DRIVER

> Are your drivers trained and competent to operate the vehicle safely (provide initial training, refresher courses and feedback from observations)?
> Do you regularly ensure drivers are medically fit to operate vehicles?
> Do you have drug and alcohol polices in place?

FORKHOISTS

> Are your forklift drivers certified, and approved by you to drive; and is their certification renewed every three years?
> Do you ensure the operator does daily pre start checks and records them in the log book?
> Do you ensure weekly checks are carried out by a suitably trained person authorised for the job?
> Are forklifts fitted with operator restraint interlocks?
> Do you check floors for damage, wetness, greasy or oily surfaces or obstructions in aisles?
> Are forkhoists maintained, repaired, rebuilt or adjusted according to the manufacturers design criteria?
> Are areas where forklifts operate well ventilated?
> Are areas where forklifts operate well lit?
> Do you comply with the guidance for front loading, order pickers, side loaders, and straddle trucks?

Workplace traffic management

Forklifts approved code of practice

Forklifts – forklift truck operators – front loading forklift trucks (safety code no. 1)

Forklifts – forklift truck operators – order pickers (safety code no. 2)

Forklifts – forklift truck operators – side loaders (safety code no. 3)

Forklifts – forklift truck operators – straddle trucks (safety code no.4)

Rider operated lift trucks

Forklifts and carbon monoxide poisoning

Suppliers of forklifts – risk of carbon monoxide poisoning fact sheet

LOADING AND UNLOADING GOODS

> Have you checked that the load has not moved or destabilised during the journey to site?

> Is there an exclusion zone around the loading/unloading area to keep people who are not involved away from the work?

> Have you planned your method of unloading?

> Does your lifting equipment have a current annual certificate?

> Do you have to access the back of the truck at all, or can the preparation work be done from ground level? If not:

- do you have a safe way of getting up and down from the back of the vehicle
- what do you have in place to prevent workers from falling off the back of the vehicle
- are your employees provided with sensible safety footwear with a good grip?

FALL PREVENTION

LADDERS

> Choose the right tool for the job – can you buy or hire some alternative equipment that would provide a safer means of access?
> Are they in good condition?
> Do ladders rest against a solid surface and not on fragile or insecure materials?
> Are ladders secured at the top and bottom to prevent them slipping sideways and outwards?
> Do ladders rise at least a metre above the landing place? If not, are there other handholds available?
> Are the ladders positioned so that users don't have to overstretch?
> Do you have to use the top three rungs of a stepladder? If so your stepladder is too short.
> Is the user competent? Those using ladders should be trained to use the equipment safely.
> Can users maintain three points of contact at all times?
> Are materials being transported safely, ie not carried up a ladder? Carrying materials up a ladder increases the risk of falling.

Safe working with ladders and stepladders

Stepladder safety

TEMPORARY WORK PLATFORMS

> Does the temporary working platform have guardrails?
> Are workers trained and have suitable experience with the type being used?

Temporary working platforms

Best practice guideline for working at height

ELEVATED WORK PLATFORMS

> Have you identified hazards and put controls in place?
> Before starting work have you put a safety plan in place?
> Is the Mobile Elevated Work Platform (MEWP) designed using sound and accepted engineering practices and manufactured using best practices?
> Do you keep an up to date log book and register?
> Does a competent person complete the manufacturers prescribed maintenance schedule?
> Is the operator adequately trained by a competent person and can they demonstrate their competency before using the equipment?

Best practice guidelines mobile elevating working platforms

SLIPS AND TRIPS

> Are walkways in the right place, are they being used, are they available for use?
> Are walkways being clear?
> Is the floor suitable for the environment, fitted correctly and properly maintained?
> Are walkways wide enough?
> Are stairs suitable; are risers consistent and nosings highlighted where necessary; are usable handrails available?
> Is the lighting good enough for workers to see the hazards?

Slips and trips

MOVING MATERIAL

MANUAL HANDLING

> Are there heavy materials such as drums, pallets or bagged products that could cause injury if they have to be moved by hand?

> If so, can you:

- choose lighter materials?
- use trolleys, hoists, gantry cranes, lift trucks, vacuum lifters, tilters, and other plant or equipment so that manual lifting of heavy objects is kept to a minimum?
- order materials such as bags of granules in units that are a manageable weight (eg 25 kg bags)?

> Have people been instructed and trained how to use lifting aids and other handling equipment safely?

> Have people been trained how to lift safely?

> Are all frequently used components within easy reach?

> Has the gantry crane been certified by a chartered professional engineer with respect to design, construction and non-destructive testing, as relevant?

Manual handling in the manufacturing industry

Make the best use of lifting and handling aids

Cranes approved code of practice

STACKING AND STORAGE

> Do you have a safe system of work that integrates people, materials and machinery?

> Have you checked the safety load of the floor and supporting surfaces?

> Are the shelves, bins, hoppers and other structures for storage of materials adequately designed to support and contain materials for which they are used?

> Are the stacks of articles placed a safe distance from walls and rail tracks?

> Does the stacking size and shape of the stack take into account the bulk weight, rigidity or fragility of the articles stored?

> Are fire instruction notices prominently displayed in all storage areas?

> Are your workers trained to operate firefighting equipment and trained to deal with small fires?

Safe stacking and storage

CONFINED SPACE

- Has a risk assessment been undertaken by a competent person before the work begins?
- Do you ensure that a stand by person is posted at the entrance of the confined space to make sure that communication is constantly maintained?
- Do you have an effective communication system for workers in the confined space (eg voice, tugging, tapping or especially designed battery operated communication system for working in confined spaces)?
- Have you put in robust retrieval system for both workers and equipment (eg heavy duty lifeline, tripod or personnel winch)?
- Have you provided training for supervisors, stand by person, worker in the confined space and rescue personal?

Confined space – safe working in a confined space (11 fact sheets)

WORKER WELLBEING

STRESS AND FATIGUE

> Do workers take regular, quality rest breaks in their working day?
> Are working hours reasonable and not too long? If longer working days are required, are start and finish times staggered, and/or are longer rest breaks and periods off work allowed?
> Are tasks scheduled suitably throughout a work period (eg critical jobs are avoided during the low body clock period of 3 pm to 5 pm)?
> Is work scheduled to allow enough time for completion?
> Are monitoring and limitations in place for overtime worked, consecutive night shifts, shift swapping and on-call duties?
> Are jobs rotated to minimise exposure to extreme temperature and excessive mental or physical demands?
> Are fit-for-purpose plant, machinery and equipment used?
> Are workloads practical and manageable, with consideration given to any work flow changes (eg machinery breakdowns or unplanned absences)?

Shift work – managing shift work to minimise workplace fatigue (a guide for employers)

Stress and fatigue – advice for employers and employees on reducing the impact of stress and fatigue

ALCOHOL AND DRUGS

> Is there a policy and procedure in place to constructively manage alcohol- and other drug-related hazards?
> Are workers monitored for signs of alcohol and drug use (eg dizziness, slurred speech, drowsiness, sudden aggressive or violent behaviour, lack of or impaired coordination/reflexes)?

NZ Drug Foundation

Alcohol and Drug Helpline	**0800 787 797**
Pasifika Helpline	**0800 787 799**

EMERGENCY SITUATIONS

EMERGENCIES

> Are there emergency procedures (eg for evacuating the site in case of fire)?
> Do people on site know what the procedures are and where the nearest emergency centre is?
> Is there a means of raising the alarm, and does it work?
> Is there a way to contact the emergency services from site?
> Are there enough suitable escape routes and are these kept clear?
> Are first aid arrangements good enough for the site, and is there someone available who can administer first aid if needed?

Good practice guidelines first aid for workplaces

FIRE

> Is the quantity of flammable materials, liquids and gases kept to a minimum?
> Are they properly stored (eg isocyanates)?
> Are **flammable gas cylinders** returned to a ventilated store at the end of the shift?
> Are smoking and other ignition sources banned in areas where gases or flammable liquids are stored or used?
> Are gas **cylinders**, **associated hoses** and equipment properly maintained and in good condition?
> When **gas cylinders** are not in use, are the valves fully closed?
> Is flammable and combustible waste removed regularly and stored in suitable bins or skips?
> Are suitable fire extinguishers provided?

03/

SPECIFIC INDUSTRY GUIDANCE

Timber processing

Guide to health and safety in the timber processing industry

Metal manufacturing

Metal manufacturing

Metal casting health and safety guidelines

Metal casting health and safety guidelines

Meat processing

Meat industry health and safety guidelines

Print

Printing and related industries – health, safety and environment guide

DISCLAIMER

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