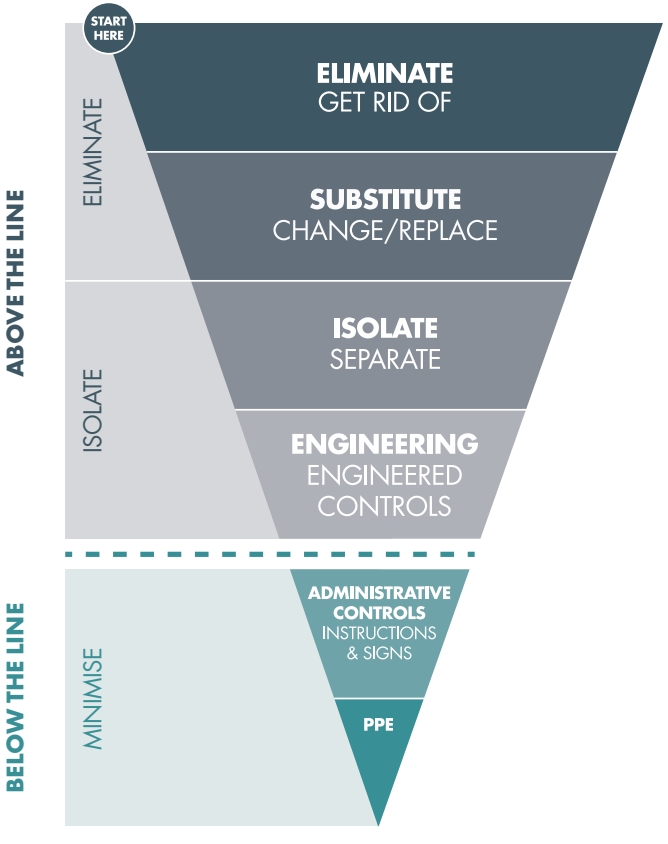
CPB CONTRACTORS

SAFETY ESSENTIALS

Above the Line



Foreword from the Managing Director

Our people are our most important asset. You are the foundation upon which our success is built.

Attracting, supporting and retaining the best people in the industry is critical to CPB Contractors remaining the number one construction company in the market.

People First is our commitment to better support, recognise and reward you across seven key areas. And the most important of these is our commitment to your safety and wellbeing.

Keeping people safe is our absolute priority.

We are committed to making sure everyone goes home safe every day, because every one of you is a member of the CPB family.

The CPB Contractors Safety Essentials have been established with family members in mind. They are the standards you would set if your brother, sister, son or daughter was coming to work on our projects.

They are the standards that our loved ones at home expect us to abide by, on every project, every day.

By following the Safety Essentials outlined in these pages at all times, we are protecting our most valuable asset - you.

Jason Spears

Managing Director
CPB Contractors

About this booklet

Introduction

The Safety Essentials set out the minimum requirements for all CPB Contractors' people to manage critical safety risks on our projects. They are the seven areas that give rise to serious injury if they are not clearly understood and managed. The Safety Essentials apply to contractors, subcontractors and their employees.

The Safety Essentials support and reinforce our systems and processes. Importantly, they do not represent every risk that potentially exists on a project. Nothing substitutes the need for everyone to proactively manage risk every day, and in every task they undertake.

This booklet provides fundamental information on the Safety Essentials and their use. Every person on a project should be aware of the safety hazards and issues specific to their work.

Along with posters, pocketcards and other material, the Safety Essentials booklet supports our aim of providing and maintaining a safe working environment for everyone.

Note: *This Safety Essentials booklet is not exhaustive; for more comprehensive information on the Safety Essentials, please see the management system.*

Assessment of risk

Any task involving a Safety Essential will:

- Be captured in the SHE Risk Register with a nominated owner.
- Be supported by an approved Safe Work Method Statement (SWMS).
- Have supervision present and overseeing those tasks.
- Have a monitoring and review schedule.

Hierarchy of Control

Every effort must be made to eliminate the need to perform a task involving one of the Safety Essentials – commencing from the safety in design processes to managing the Safety Essentials risk. Where a task involving one of the Safety Essentials cannot be eliminated, all options to use one or more identified Safety Essentials control(s) – 'Above the Line' controls – must be exhausted before relying on a 'Below the Line' control as the primary control.

Use of Above the Line controls within each of the Safety Essentials is expected as they eliminate, substitute, isolate or engineer out the risk from causing harm.

Safety Essentials Exceptions

In circumstances where an Above the Line solution cannot be implemented as a primary control for the task, a Safety Essentials Exception must be approved by the relevant Business Unit General Manager before the activity commences.

Where a Safety Essentials Exception is granted, increased supervision must also be given to the task while it is being performed.

Mandatory requirements

The Safety Essentials have a series of mandatory requirements – controls or actions that must be in place or present throughout any work involving one of the Safety Essentials. All mandatory requirements must be managed though the project Safety & Health Management Plan and the SHE Risk Register.

Working at heights

Working at heights applies to any work activity where there is a risk of a worker or an object falling more than two metres, or where a worker is required to work on a slope exceeding 45º, such as a roof batter or drain and there is no compliant fixed edge protection.

Every effort must be made to eliminate the need to work at heights, commencing with the safety in design process.

Working at heights can be eliminated by:

- Performing the work on ground level.
- Pre-fabrication or preparation of materials prior to arrival on site.

If this cannot be done, one or more of the following controls must be used:

- Performing work from a platform with suitable fixed handrails (temporary or permanent).
- Fixed or mobile scaffolding that is suitable for the activity and if 4 metres or higher, fitted with a valid Scaff-Tag signed by a competent person.
- Elevating work platforms.
- Work boxes or a platform ladder.

Horizontal or vertical openings must be fitted with fixed penetration covers signed with 'Penetration Below' and, where required, Safe Working Load (SWL) identified on the cover.

Harnesses must not be used as a primary means of control without a Safety Essentials Exception approved by the Business Unit General Manager.

The above is not exhaustive; for more comprehensive information on the Safety Essentials, please see the management system.

Working in and around mobile plant

Working in and around mobile plant means an activity that potentially exposes people (public or workers) to the Plant Operating Zone (POZ).

All plant movements must be managed to prevent contact and/or injury, particularly in relation to multiple plant movements, reversing plant and the presence of people (public or workers) on the ground.

Planning and scheduling work must be undertaken to eliminate the following:

- A need for workers to be inside the POZ.
- A need for workers to enter a POZ while the mobile plant is operating.
- A need for workers to be exposed to mobile plant while refuelling operations are undertaken.

If this cannot be done, one or more of the following controls must be used:

- Erecting appropriate barrier(s):
  - A vehicle barrier (e.g. modular concrete-/steel-/water-filled barriers or an earth berm) that prevents the mobile plant from accidently moving into an area where there are people (public or workers); or
  - A pedestrian barrier to prevent people (public or workers) from entering a POZ; or
- The mobile plant is temporarily halted prior to a worker entering the POZ.

Temporarily halted means:

- Positive communication has been made with the plant operator; and
- All ground engagement tools/implements have been lowered to the ground; and
- Plant controls are disengaged to ensure that inadvertent operation or movement cannot occur; and
- The plant operator's hands have been visibly removed from the controls; and
- Any motion of the plant has ceased.

All plant movements must be documented in a Vehicle Movement Plan (VMP), which must be kept current.

Any changes to a VMP must be communicated prior to a change being introduced. The VMP must take into account people (public or workers).

Physical separation between light vehicles and heavy vehicles must be considered in the VMP.

A reliable means of communication must be in place and in use to manage mobile plant movements and ensure people (public or workers) are kept safe.

Only mobile plant operators who are trained and evaluated as being competent are permitted to operate any mobile plant.

The above is not exhaustive; for more comprehensive information on the Safety Essentials, please see the management system.

Working with temporary works

Working with temporary works means an engineered solution used to:

- Support or protect an existing structure or permanent works during construction (i.e. formwork, scaffolding or temporary ramps).
- Support an item of plant or equipment.
- Support an excavation.

It applies to all temporary works classified in accordance with the temporary works classification matrix defined in the management system.

To ensure a robust design and construction process, the following controls must be implemented for all temporary works:

- **Certified design:** A detailed design must be developed and certified by a certified engineer. The certification must indicate compliance with the appropriate AS/NZS.
- **Design verification:** To verify the integrity of the detailed design, the design must be reviewed by a certified engineer.
- **Pre-load inspection report:** A report certifying that the temporary works have been erected/installed as per the approved design and are ready for use must be obtained from a certified engineer prior to initial loading or pouring concrete on any structural support system. The certifying engineer must be independent of the temporary works installer, but may include the designer or design verifier.

Further definition on the required level of independent review is provided in the management system.

Any temporary structural support system to be lifted by mobile plant must have an engineering certificate to ensure the lifting methods and lifting points are adequate and meet relevant standards.

All structural elements of the temporary support system must be physically protected from any potential sources of damage (e.g. collision from moving plant, vehicular traffic, materials hoisting).

Workers involved in the installation/erection of temporary works must hold the appropriate regulatory license and be evaluated as being competent.

The above is not exhaustive; for more comprehensive information on the Safety Essentials, please see the management system.

Working with live services

Working with live services (underground, embedded, concealed or overhead) can be eliminated by relocating or diverting services away from the work zone.

If this cannot be done, one or more of the following controls must be used:

- De-energising the service.
- Elevating the service out of the work zone.
- Concealing the service behind a physical barrier.
- Preventing work activities encroaching upon safe approach distances by installing physical barriers, selecting smaller equipment or using alternative work methods.

All services must be accurately located using the relevant services drawings and their location verified by a secondary means such as:

- Electronic detection of horizontal and vertical location (e.g. ground penetrating radar); and
- Positive identification using non-destructive excavation (hand potholing, hydro or vacuum excavation).

Ongoing verification of services must be undertaken at suitable intervals using non-destructive excavation.

Where services may be impacted by construction activities, they must be protected/isolated (as appropriate). All services must have visible identification signage, such as type of service, depth of service, line marking and/or demarcation.

Travelways under overhead powerlines that may be impacted by mobile plant or vehicles must have physical warning devices (e.g. height markers), and:

- High visibility warning signage that includes the surveyed safe clearance height (the height less the safe approach distance as set by the asset owner or network operator)and the relevant voltage.

The above is not exhaustive; for more comprehensive information on the Safety Essentials, please see the management system.

Working near live traffic

Working near live traffic means work activities where:

- Workers are working on or directly adjacent to public roadways and live traffic.
- Work activities have the potential to impact the public, including pedestrians or road users.

Every effort must be made to eliminate the need for people to work in close proximity or adjacent to live traffic. Elimination should be considered at the start of the work planning process.

Working near live traffic is to be eliminated by:

- Using road closures, detours and traffic staging to eliminate live traffic from the work area.
- Redesigning the work method or equipment so workers are not exposed to live traffic.

If this cannot be done, one or more of the following positive protection methods must be used according to the location and duration:

- On roads, approved interconnected road barriers to isolate the work area; or
- A Truck or Trailer Mounted Attenuator (TMA) used to provide cover for work tasks.

For both controls above, Minimum Deflection Zones must be maintained.

- On footpaths or road reserves, an appropriate de-lineation to prevent people (workers or public) from inadvertently stepping into live traffic areas.

A Traffic Management Plan (consistent with AS1742.3 or CoPTTM in New Zealand), approved by a person who meets the minimum regulatory requirements, must be in place before work near live traffic can commence.

Signage for temporary roadworks should include after-hours emergency numbers.

All project work area access and egress must be identified with clear signposting, traffic management and demarcation as required.

Negotiations with relevant authorities – including the client, local traffic authorities and police – must be undertaken on road projects to reduce speed limits to as low as reasonably practicable.

The above is not exhaustive; for more comprehensive information on the Safety Essentials, please see the management system.

Mobile cranes and lifting operations

Mobile cranes and lifting operations apply to all mobile plant that is used to lift, suspend, carry or lower a load.

Mobile plant used to lift suspended loads must not lift at 90% or greater of their rated capacity without a Safety Essentials Exception.

Where mobile plant is used in pick-and-carry activities, a level monitoring system must be in place to monitor for cross falls. In these instances, the Original Equipment Manufacturer (OEM) specification regarding de-rating the capacity of the mobile plant must be complied with.

Articulated Pick and Carry Cranes must be fitted with a dynamic de-rating system (Dynamic Load Moment Indicator). Of note, utilisation must still be less than 75% of the rated Crane capacity based on the OEM load chart (including when de-rating is applied).

Every effort must be made to eliminate the need to lift or suspend loads over people (public or workers).

All lifts must be assessed according to the Crane Lift Matrix, which includes:

- Gross Load is over 50Te OR 90% or greater of the rated crane capacity – A Lift Study must be developed. (Note: a Safety Essentials Exception must be approved by the Business Unit General Manager for all lifts 90% or greater).
- Gross load under 50Te and between 75% and 90% of the rated crane capacity, a Lift Plan must be developed.
- Gross load between 15Te – 50Te and under 90% of the rated crane capacity, a Lift Plan must be developed.
- Gross load under 15Te and under 75% crane capacity, a Lift Start Card must be developed.

The 90% rule does not apply:

- When setting or packing up a mobile crane.
- When the crane is fixing its own counterweights as per Original Equipment Manufacturer (OEM) instructions.
- Lifting an unladen boom from the ground.

Ground conditions must have been appropriately assessed and, if required, geotechnical advice obtained before setting up and performing lifts.

All outriggers must be packed/supported as per the recommendations of the manufacturer and/or engineer, and protected from traffic/disturbance by physical barriers.

Only equipment that is marked with the SWL and designed for the purpose and use on the specific mobile crane will be used (this includes the use of extensions, such as fly jibs).

The accuracy of load indicators must be tested before the mobile crane is put into operation and evidence of the test must be available.

A Pre-Lift Start Card must be developed for each lift or a series of similar lifts during a particular period i.e. one shift, and based on maximum load and maximum radius and any gradient or cross fall.

Prior to any lift, a competent person must check that all crane safety devices are operational, inspect all rigging equipment (e.g. slings, chains, spreader bars) and ensure that the load is safely rigged and secure.

The above is not exhaustive; for more comprehensive information on the Safety Essentials, please see the management system.

Electrical work

Electrical work applies to any task where there is a risk of workers coming into contact with live electrical equipment, resulting in an electric shock. It applies to work:

- For supply wiring systems – connection or disconnection work.
- For electrical equipment or installations – installation, testing, modification, commissioning, repairs, removal or maintenance work.

Only equipment that complies with the equivalent of Australian Electrical Standards AS/NZS3000 Australian Wiring Rules and AS/NZS3012 Electrical Installations – Construction and Demolition is to be allowed on sites.

Electrical work required to be performed live including for testing, commissioning, fault finding may only be undertaken in an energised state after all reasonable alternative methods of carrying out the live work have been exhausted.

Work is permitted on energised electrical equipment or live electrical parts and a Safety Essentials Exception is not required where the voltages are:

- High Voltage - greater than 1000V (ac) or 1500V (dc) is specialized electrical work and must be performed by specialized electrical subcontractors using appropriately licensed, trained and experienced electrical workers; or
- Low Voltage - greater than 50V (ac) but not exceeding 1000V (ac), or greater than 120V (dc) but not exceeding 1500V (dc), where the work is performed by licensed electrical workers, for the purposes of commissioning, fault finding or testing (where non-contact testing equipment is used); and
- The requirements of the management system are met.

Isolation tags and master and individual locks must be provided and used for all electrical isolations. All isolation points must be clearly identified.

A test for dead (not live) must be completed:

- Prior to or re-commencing work on any electrical equipment.
- Following any time away from the work.
- Following changed conditions.

Approved Residual Current Device (RCD) protection must be provided for all circuits and must be tested in accordance with AS/NZS3760.

All temporary distribution boards must have appropriate signage, and be fixed to the ground, lockable (for isolation purposes) and weatherproof. All mains boards must include a system circuit map.

No electrical equipment is to be used or in place ready for use without a current test and tag. Testing and tagging must be conducted by competent personnel.

All temporary electrical leads must be secured off the ground by insulated hooks and/or lead stands.

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