

STFAL Supplementary guidance

CONTAMINANTS – ASSESS THE RISK

How ‘contaminants’ affect surfaces

People rarely slip on a clean, dry floor. Whenever there is ‘contamination’ – such as water, oil, litter, dust, metal shavings, plastic bags, off-cuts or anything else that ends up on a floor - the chance of having a slip significantly increases. A study from the USA found walking on a contaminated floor increased the risk of slips by almost 14 times.

Contaminants can be from work processes, cleaning processes, and from people tracking in contaminants from other areas (e.g. rainwater at building entrances). The greater the viscosity (or thickness) of the contaminants, the higher the risk of slips. Check if your workplace is at risk of slips and falls from contaminants and its recurrence after cleaning (indicates cleaning procedure not keeping up with amount of contamination.)

High risk areas for contamination

‘High risk’ work areas for contamination are:

- building entrances
- food service/eating areas
- bathroom/shower areas
- drinking fountains and hand washing areas
- areas with dusts and dry waste
- manufacturing and construction areas – powders, granules etc
- cold rooms with ice or water
- plant and equipment requiring oil or grease
- outdoor areas with wet vegetation

Decide on control measures

The most effective approach to eliminating and controlling contamination requires these 3 steps:

- **Stop contamination** from reaching the floor – fix leaks, provide bins for litter, channel overflow into drains, fit lids on containers, install splashguards, close doors leading from areas with dust etc.
- **Prevent** spreading – contain the spill (e.g. drip trays under plants/machines/water coolers), absorb liquids (e.g. place absorbent matting at building entrance), good drainage systems
- **Remove contamination quickly** (if contaminants cannot be stopped from reaching the floor, clean it up as quickly as possible) – spot clean spills, dry-mop large wet areas, vacuum or brush up dry materials, ensure responsive cleaning systems

Often the best control will be a combination of each of the above.

CLEANING

Assess the risk

While good cleaning reduces contamination, bad cleaning increases contamination. Check your workplace for any of the signs that indicate a poor cleaning system:

- floors are not fully dry and can be accessed
- spills and contaminants are left unattended
- a build-up of cleaning product residues (reduces slip resistance)
- cleaning equipment and cords left across walkways
- cleaning is ad hoc, unplanned and reactive
- poor, inappropriate or dirty cleaning equipment used
- incorrect cleaning products and procedures

Decide on control measures

There are a range of strategies that have been proven to control the risk of slips, trips and falls, while also leaving floors and other surfaces clean and free from contaminants. The best cleaning requires a combination of important elements, as listed below.

Cleaning methods:

- leave a clean and dry surface, free from moisture or dry waste – e.g. ‘clean-to-dry’
- do not leave a build-up of cleaning products
- maintain the slip resistant properties of the floor/surface (if non-slip flooring)
- are based on advice from the flooring supplier
- are tailored to the specific flooring and contaminants – i.e. type and concentration of chemicals. For example, the time detergent is on the floor has been shown to have a significant effect on cleanliness. It is also noted that flooring that is slip resistant can be cleaned to be as hygienic as other flooring.

Cleaning schedules:

- are systematic and well planned
- have routine daily cleaning conducted during quiet or slow periods
- include periodic deep/comprehensive cleaning
- provide a rapid or urgent response to spills
- include indoor and outdoor areas
- include customer/visitor areas
- accommodate for periods of bad weather

Cleaning equipment/products:

- suited to the task, environment and the users
- that don't spread the problem e.g. paper-towel instead of wet mop for small spill, or ‘spill-kit’ materials for oil leaks, spill stations where resources are kept etc
- includes barriers and signs to effectively keep people off contaminated areas and any wet areas if ‘clean-to-dry’ is not possible

Personnel responsible for cleaning:

- cleaners are trained, equipped and supervised to do routine cleaning
- all workers assist in spot cleaning/spills management
- supervisors are trained and able to oversee work practices
- workplace visitors and others encouraged to report hazards where appropriate

Details regarding the correct cleaning system may be provided in a Safe Work Method Statement or other procedural guidance.

Cleaning management

Correct and timely floor cleaning is a major part of reducing slips. Cleaning using the wrong methods and/or wrong chemical solutions can make surfaces slippery and can reduce the slip-resistance of some flooring. For example, polish can build up and some methods can leave excessive residues. Talk to your cleaning manager or contractor and/or flooring supplier to ensure that the cleaning methods are working well for all areas.

Effective systems also ensure that staff, contractors and others are aware of and follow their roles and responsibilities in slips and trips prevention.

As part of the risk assessment, check that:

- cleaning methods for all floors and paths are fully specified and recorded or updated
- cleaning contractors have been instructed on the required methods and standards
- cleaning is scheduled when there is minimum foot traffic in the area
- workers have been provided with training in the procedures for dealing with slip, trip and fall hazards
- accountability for floor quality and housekeeping is clearly specified and known by all staff
- supervisors have been adequately trained and are able to appropriately supervise work practices
- a reliable spot-cleaning system is in place and known by all staff

If any of the above are not in place, add these to your STF Control Plan for action.

FLOOR SURFACES

For safe walking workers need:

- Sufficient grip between floor/ground surface and feet
- Smooth even level surfaces

How flooring choice affects slip risks

There is a high risk of slips, trips and falls when the choice of flooring material and design does not suit the tasks and/ or there are possible contaminants combined with people using the area. The key issues to consider when assessing the suitability of the flooring are:

- smooth hard surfaces increase risk of slips
- contaminants on the floor further increases risk
- incorrect cleaning can make floors more slippery
- trips can occur when there is as little as 1cm change in the height of the flooring.
- slips, trips and falls also occur between areas with different types of flooring material
- a floor that is slip resistant when dry may not be slip resistant when wet
- floor roughness is more effective than slip resistant footwear in reducing slips

Checking existing flooring/surfacing

Essential factors to check for in existing flooring are:

- flooring that is uneven or in poor condition such as:
 - loose or curling matting, torn carpet, uneven or broken concrete, chipped/cracked tiles
- anti-slip paint, profile or tape that is worn, smooth or damaged
- areas of slipperiness under normal conditions:

- there may be sections of flooring that are more worn or contaminated than other areas of same flooring e.g. high traffic areas, for example, in front of a deep fryer – record this on a mud map of the area.
- some surfaces may look non-slip but become slippery when wet or otherwise contaminated - conversely some surfaces may look slippery or shiny, but are not slippery when contaminated.
- flooring may have been originally chosen for a different purpose to how it is being used presently, so may no longer be suitable for its current use.

Objective measures of floor slipperiness

There are a number of certified methods to [assess surfaces for slip resistance](#) as outlined in relevant [Australian Standards](#) as well as other testing methods that can also indicate slipperiness of flooring e.g. roughness testers or sled tests.

These tests indicate the relative slipperiness of surfaces under different conditions, with some results reported as the 'coefficient of friction'. For example:

- a coarse bitumen surface will have a high coefficient of friction and will not be slippery and is likely to be safe for rapid walking, while
- an icy surface will have a very low coefficient of friction and will be extremely slippery, requiring extreme caution

There is no one 'correct' or 'safe' level of slip resistance as it depends on the interaction of many factors including the type of floor surface, contaminants, work tasks, cleaning method, who is walking in the area, their footwear, their activity and environmental conditions. Safe work environments are achieved through use of a risk management approach.

Note Standards Australia (AS) and National Construction Code (NCC) only has limited categories that design specifications are outlined e.g. stairs. **Risk assessment of local situation** i.e. assessment to consider activity performed, expected contamination etc. is necessary rather than just following AS and NCC

Decide on control measures

Selecting the most appropriate flooring and keeping it well maintained will significantly reduce the risk of a STFAL. Check what you can do to further improve your flooring.

- Install the right flooring or surfacing
- Ask your supplier for data on suitable flooring for your workplace. For example, processes that use thick/high viscosity fluids will need flooring with significant grip, such as rough or highly profiled surfaces. Suppliers should be able to provide comparative data on slip resistant properties of a range of products under dry and wet/contaminated conditions. Please see www.worksafe.qld.gov.au for more information on [Flooring types - characteristics & applications](#).

When choosing flooring

- consider expected use, conditions and expected users.
- consider materials with grip when both wet and dry
- select materials for the tasks and typical wear. Handling activities e.g. pushing trolleys, carrying loads can require flooring with higher slip resistance.
- check the cleaning requirements of the flooring
- ensure floor heights and surfaces are consistent

The interactive online [HSE Slips Assessment Tool](#) can assist in selecting the best flooring for different applications

Maintain the flooring

As well as having flooring materials correctly installed or laid, ongoing maintenance is important. This may include repairing or replacing the surface.

Key factors in looking after flooring are:

- maintain the slip resistance with the right cleaning method
- fix any changes in heights
- repair torn carpet, curling mats, uneven or broken concrete, chipped/cracked tiles
- where floor/surface cannot be fixed immediately, highlight any height or surface changes with contrast colours or strips (e.g. yellow paint or reflective tape)
- remove any loose matting
- improve slip resistance with surface treatments if required (see [Worksafe QLD website](#) for more information)

Specific references for slip resistance:
• AS 4586, 2013, Slip resistance classification of new pedestrian surface materials. This standard provides PCBU with a means of demonstrating compliance for the acceptance and rejection of new flooring and pedestrian surfaces for nominated criteria • SA HB 198, 2014, Guide to the specification and testing of slip resistance of pedestrian surfaces • HB 197, 1999, An introductory guide to the slip resistance of pedestrian surface materials. This guide provides background information on slip resistance and measuring resistance • AS 4663, 2013, Slip resistant measurement of existing pedestrian surfaces. This standard provides standardized methods of testing slip resistance of existing in situ pedestrian surface materials • AS 1428 series, Design for access and mobility

More information on typical types of flooring and surfaces and their characteristics can be found at [Worksafe QLD website](#)

EXTERNAL AREAS

Assess the risk

Identify the outside areas used by workers or visitors at your workplace. Workplaces often forget to consider their grounds and external areas in workplace surveys. Common hazards for slips and trips in outside areas are:

- paths – uneven paving, rough ground, changes in level, or affected by wet leaves, moss, sand or gravel
- steps – inconsistent sizes, uneven, lack of handrails
- ramps – too steep, slippery, lack of handrails
- tree roots and vegetation - that disrupt walkways and/or vision
- small holes or potholes
- surfaces that become slippery when wet – e.g. pebbles, tiles, some painted timbers, drain covers
- irregular surfaces – such as bushy/rocky areas, stone paths
- lawns and grasses especially when wet or concealing uneven ground
- curbs, gutters, around drains or grate covers
- car park areas
- exposed watering systems or hoses

Irregular ground surfaces cause the most problems, with just small changes in height (1cm) causing a trip hazard. Outside areas used or accessed in the darkness are high risk.

Decide on control measures

The best workplaces have well designed pathways and easy access to all work areas.

Ensure the outside areas are suitable for all users, and this includes:

- paths, steps and ramps suited to the tasks and users
- shelters or covered access where required
- surfaces providing a consistent, even pathway
- proper handrails are installed at steps or ramps
- suitable drainage is provided
- appropriate lighting is installed
- changes in curb or walkway elevation are highlighted e.g. with yellow paint
- watering systems are located away from pathways

Outside areas also require systems for repair and maintenance, with paths and walking surfaces being most important. This may include:

- a concrete path, road base/crusher dust
- provide drainage to eliminate pooled water and muddy areas
- patching or filling cracks in walkways greater than 1cm wide.
- patching, filling, or repaving outdoor areas that have deep grooves, cracks, or holes
- removing debris from walking surfaces
- keeping paths free from moss and other vegetation

Links / References

- AS 1657: 2013 Fixed platforms, walkways, stairways and ladders – design construction and installation
- AS 1428 series Design for access and mobility
- National Construction Code

OBSTACLES

Trips and falls from things on the floor/ground

Obstacles on walkways may be a sign of poor workplace design or poor housekeeping, and these are often the cause of accidents.

Hazards may be:

- temporary - rubbish, boxes, cables, tools, bags, pallets and temporary storage
- permanent - poorly located machines, furniture, shelving, ground fittings/fixtures, tree roots affecting a path, areas of uneven ground or flooring.

At some workplaces the 'obstacles' and trip hazards may be small children or small animals.

Decide on control measures

There are some simple methods of keeping obstacles and hazards away from walkways and work areas. Review your workplace and see what can be done.

The best workplace designs:

- recess or rebate common structural trip hazards – e.g. sliding door frames, shower hobs etc.
- provide clear and even surfaces for walkways, with plant, equipment and fittings and fixtures not extending into these areas and/or fenced off from the walkways
- position power sources to minimise cables across accessways

Cabling, cords and hoses are a common source of trips. To reduce risks with these, consider options such as:

- use cord/hose organizers to bundle them
- recess permanent cabling/hosing if on the floor
- use bevelled protective covers or tape to secure temporary cabling over the floor
- use retractable holders
- mount cords near or underneath the desk or work area where they are required
- consider wall-mounted storage hooks, shelves, hose spools
- suspend cords and cabling etc.

HOUSEKEEPING

Assess the risk

Many slips and trips are the results of poor housekeeping, and this is often a sign of a lack of clear systems and responsibilities for storage, maintenance and cleaning. For example:

- things spilt and left on the floor
- items left out or extending onto walkways or work areas
- ground surface, flooring, carpet or mats in a poor state of repair or uneven
- poor or broken lighting in work areas and accessways

Decide on control measures

To achieve a tidy workplace that is free from slip, trip and fall hazards you need:

- designated and suitable storage areas/systems
- spill management systems
- routine and spot cleaning
- maintenance schedules
- repairing or replacing carpet flooring that is uneven, buckling, peeling or curled
- repairing or replacing hard surfaces that are uneven, cracked, blistered or with height irregularities
- well marked accessways and work areas

All walkways should be kept clear and suitably illuminated, keeping all items off the floor through storage or cable management systems etc. Where objects cannot be moved, highlight them (e.g. yellow paint on edges of large equipment).

DESIGN CONSIDERATIONS

Assess the risk

The areas that have the highest injury rates from slips, trips and falls, and those that require particular assessment are:

- entrances from outside and foyer areas
- wet areas or walking surfaces with high levels of contaminants
- steps, stairs and ramps
- thresholds between areas
- areas used by people who are at highest risk of slips, trips and falls given their age, health, mobility restrictions etc

Some of the key design features to assess in these high-risk areas are provided below:

Poorly designed steps and stairs

- stair riser (height) and stair going (depth of tread) measurements are not consistent or sufficient
- step nosing (leading edge or front of step) hard to see, rounded, damaged or slippery
- insufficient or poor lighting
- lack of handrails or handrails that are hard to reach or use

Poorly designed ramps

- ramps that are too steep
- ramps with no handrails
- lighting that is insufficient to see edges clearly
- no edging or toe boards

Poor flooring/ground surface selection

- floor surfaces that lack slip resistance, especially if wet

Decide on control measures

The design features that have been found to reduce slips, trips and falls are listed below, and detailed guidance is provided in the relevant Australian Standards (e.g. AS 1657 & AS 1428).

Well-designed steps and stairs

- steps have consistent and sufficient depth and height for secure use
- step nosings (leading edge or front of steps) are clear to see and non-slip
- rails and balustrades are a suitable design and height
- rails are continuous, with sufficient hand clearance
- rails continue past the steps, parallel to the ground or floor surface

Well-designed ramps

- have a gentle slope
- clearly marked start and finish
- fitted with handrail
- handrails are continuous with sufficient hand clearance
- fitted with toe board or kickboard where required
- suited to the users (e.g. walking unaided, using a wheelchair etc)

Where ramps may be used by people with mobility restrictions, there is more specific guidance regarding design features including:

- landings at the top and bottom
- unobstructed widths
- no steeper than 1 in 8 for short ramps (up to 1520mm)
- no steeper than 1 in 14 for longer ramps
- fitted with toe board or edging to provide a barrier to wheeled devices

Well designed and selected flooring

When selecting flooring and ground surfaces, ensure the most appropriate surface is installed, with particular attention to wet areas and those areas likely to be exposed to contaminants. Assistance can be obtained from:

- flooring suppliers - request comparative data on the slip resistant properties of the flooring options suited to the work tasks, with consideration of wear characteristics; and
- guidance from Standards Australia, such as the 'Handbook 198:2014 Guide to the specification and testing of slip resistance of pedestrian surfaces'

For example, when selecting flooring products, the above guide advises that in addition to slip resistance, people who specify or select flooring should consider these product characteristics:

- trip avoidance
- abrasion resistance
- ability to be cleaned and maintained
- permeability
- susceptibility to pooling water
- structural integrity of the material

Other important design features

Studies have identified that some additional and often simple design changes will further lower slips, trips and falls risk. These include:

- recessing or rebating structural trip hazards such as door frames on sliding doors, shower hobs, and shower door frames
- designing work flows to be logical and streamlined, as this minimises exposure to potential slips, trips and falls hazards
- providing workstation space that is suited to the typical tasks
- providing storage for all items for workers and others at the workplace (e.g. patients, customers, etc.) to keep items off the floor

Links / References

- WHSQ [Managing the work environment and facilities Code of Practice 2011](#)
- Australian Standards and Handbooks:
 - HB 198: 2014 Guide to the specification and testing of slip resistance of pedestrian surfaces
 - AS 1428 Series Design for access and mobility
 - AS 1657: 2013 Fixed platforms, walkways, stairways and ladders – design construction and installation
 - AS 4586: 2013 Slip resistance classification of new pedestrian surface materials
 - AS 4663: 2013 Slip resistance classification of existing pedestrian surfaces
 - AS/NZS 1680 Series Interior and workplace lighting

VISIBILITY/DETECTABILITY OF HAZARD

The most hazardous obstacles are those that:

- are unexpected
- cannot be easily seen or detected
- blend into the background

Poor lighting and inability to see hazard

When people can't see the hazard, they can't avoid it. Check your workplace for areas with:

- low light levels
- dark shadows
- changes in lighting (e.g. moving from brightness to darkness)
- glare or reflections
- substantial amount of dust/particles in the air
- 'blind' corners

The most important areas to assess are:

- steps and stairways
- where flooring changes
- where spills and contaminants are possible
- areas used during the night/minimal daylight
- any area with known slip, trip, fall hazards

Some occupational groups work with some restricted vision, and these people are at higher risk of having a slip, trip or fall accident. This includes people working and moving at workplaces with any of the following characteristics:

- darkened or smoky conditions
- unfamiliar environments
- inconsistent flooring/surfaces
- outdoor environments
- need to wear personal protective equipment such as goggles, face masks or helmets

Where vision on a task is reduced, the need for good hearing and other senses is increased.

Effect of restricted hearing

When people can't hear clearly, they can also miss warnings. At your workplace, consider peoples' ability to hear:

- other people or plant coming around a hidden corner
- things splashing or falling on the floor
- things coming up from behind
- verbal or auditory signals or instructions

The use of headphones or ear buds will reduce perception of these potential hazards. Loud noises can also be a distraction, by taking people's attention away from where they are walking.

Effect of extremes of temperature or humidity

In more extreme environments, ice and water or condensation will add to slips accidents. This includes when people are:

- working in freezers and cold rooms;
- using ice and iced products; or
- moving in areas with high humidity and condensation (e.g. kitchens, indoor pools, laundries)

DECIDE ON CONTROL MEASURES

Lighting improvements

The best lighting provides an even distribution of light both within and between areas so that people can clearly see the path of travel and safely undertake work activities. Glare, shadowing and/or reflections are prevented. [Managing the work environment and facilities Code of Practice 2011](#) provides some guidance for suitable lighting. Maintenance and cleaning of light fixtures is also needed.

Hearing considerations

Where hearing will be restricted, other modes of gaining attention are required – e.g. visual signals, movement, touch etc. Wearing headphones and ear buds (e.g. for music, etc.) should be avoided in high risk areas where all attention needs to be on the job.

Managing extreme temperatures

The best strategies to reduce risk in the more extreme environmental conditions include to:

- remove ice build-ups
- check door seals
- prevent/reduce humidity
- provide slip-resistant flooring
- wear slip-resistant footwear

Links / References

- AS/NZS 1680 Series Interior and workplace lighting
- WHSQ [Managing the work environment and facilities Code of Practice 2011](#)

WORK ACTIVITY

Jobs that pose high risks

Work that requires the following actions and behaviours will increase slips and trips risks

Load handling (carrying, pushing, pulling)

- workers unable to clearly see the path of travel along with potentially tall loads or bulky personal protective equipment can increase risks.
- carrying tasks (especially with two hands) doesn't allow for normal trunk movement and balance reactions
- pushing/pulling trolley requires greater slip resistance for safe walking
- not having a hand free to grasp a rail or break a fall when on stairs

Pace of work/time pressure/scheduling

- rushing and increased speed of movement requires greater slip resistance for safe walking
- contributes to reduced attention from safe walking and potential hazards

Attentional demands distracts attention from safe walking and contributes to error in performing a task. Common sources are:

- mobile phones and loud noises
- long shifts with inadequate rest breaks
- moving in crowded/ busy areas

Interaction of other workers/other activities

- Potential to change risks and increased physical demands and attention e.g. busy café, walking patients, multiple workers in one work area.

DECIDE ON CONTROL MEASURES

Features of well-designed systems of work

Look at how jobs and tasks are designed and organised at your workplace. Check if they increase or reduce risks of slips and trips. A well-designed work system, for example:

- reduces the need for staff to manually handle very heavy or bulky loads particularly over distance or uneven surfaces
- keeps one hand free when using steps and stairs
- minimises pushing loads up inclines
- minimises transporting or handling loads in wet weather
- removes or reduces the need for people to rush,
- allows focus on a task with minimal distractions
- provides a suitable work-rest schedule to minimise impacts of fatigue
- Includes early reporting of hazards or problems so incidents can be avoided

Where any aspects of the job design cannot be fixed, the work environment needs extra attention (e.g. the flooring, lighting, removal of contaminants and obstacles etc.).

Work planning (for current & future work activities)

- Co-ordinate delivery and storage of material close to the area of use, to reduce distance required to manually handle items
- Designated and sufficient storage areas for materials, tools and equipment
- Minimise people traffic through high risk areas,
- Manage staffing level (e.g. peak times), skill mix, shift arrangements
- Workers control/input into how work is done
- Production demands/ incentives may encourage an increased pace (finish & go, per piece payment)

EXTERNAL FACTORS (THAT IMPACT ON STFAL RISKS)

There are many other parties who interact with the workplace and can directly influence STFAL risks:

- Landlords are often responsible for fittings, fixtures and plant at the workplace e.g. flooring, cold room, and refrigeration. Check lease agreements.
- other tenants can create hazards e.g. leakage onto common area
- body corporate - responsible for common area e.g. lighting, cleaning
- designers/specifiers - specifying flooring or designing out trip hazards
- manufacturers/suppliers/installers e.g. through flooring that meets slip resistance criteria, products/equipment that do not contaminant
- supply chain/customers can contribute to STFAL e.g. timeframes for work to be completed can increase, STFAL hazards when working at customer site
- project managers/principal contractors e.g. having high number of workers present on site at same time, insufficient waste bins
- sub-contractors' activities can create STFAL hazards e.g. truck washing sub-contractor floods access areas
- within their role, each party has a duty or responsibility in working with employers to ensure the workplace and work activities does not contribute to injury to workers.

Work Health and Safety Act 2011**Decide on control measures**

- Clear expectations and agreement of responsibilities between parties
- Communication and consultation between all parties

FOOTWEAR**Assess the risk**

Slip resistant footwear reduces slips, while other footwear can increase risk. To assess shoes, you need to check that they suit the tasks and the flooring or ground surfaces, providing adequate friction between the footwear and the surface.

Signs that shoes are placing wearers at risk of slips, trips and falls include shoes with:

- treads that are regularly clogged with contaminants (tread not suited to the contaminant)
- soles that are very smooth, but tasks and environment require moving across smooth, polished floors that may have contaminants

- high heels with small contact areas when tasks require walking over uneven ground, sloped surfaces, handling heavy loads or rapid movements on contaminated floors
- loose fittings such as sandals or rubber thongs that are not well fastened around the foot
- worn out treads or soles that no longer provide grip

Decide on control measures

Ensure the shoes you choose for work suit the environment, the tasks, and the types of potential contaminants. Some jobs may require a few different types of shoes. To encourage workers and others at the workplace to avoid slips, trips and falls, the following strategies can help:

- have a Footwear Policy, e.g. for 'sensible' and/or 'slip resistant' footwear and the requirement to clean and maintain the footwear
- provide clear advice to workers about design features to look for in their footwear suited to their work environments and tasks
- provide cleaning stations where contaminants can be removed from the tread
- remind workers to repair or dispose of footwear when the sole or tread is worn or damaged
- provide footwear guidance or requirements for workplace visitors, contractors etc

The best footwear for work

'Sensible' footwear for most work tasks has these features:

- flat and enclosed shoes
- well fastened and firmly grip the foot
- flexible and cushioned sole
- support and grip around the heel
- comfortable to wear all shift
- sole tread suited to likely 'contaminants' and without the tread becoming clogged
- tread kept clean and in good condition

'Slip-resistant' footwear for workers more exposed to slip risks have these additional features:

- specifically chosen to suit the workplace and tasks ('trial before you buy' recommended for larger orders)
- non-slip performance on both wet and dry floors if required – they may differ
- well-defined tread pattern – the more edges, the firmer the grip
- bevelled or rounded heel edge
- rubber soles offer more slip resistance on wet floors than polyurethane soles
- tread patterns suited to the size and type of likely contaminants (e.g. indoor work on smooth floors with thin liquid contaminants may have very flexible soles with fine tread, while shoes used in rough outdoor areas require deeper, larger treads, and/or the addition of special cleats or studs to provide extra traction)

Links / References

- ASNZS 2210.1: 2010 Occupational protective Footwear – Part 1: guide to selection, care and use and Appendix A - Selection guide based on the slip resistance characteristics of soling materials)

INDIVIDUAL CHARACTERISTICS OF PEDESTRIANS

Consider who will be walking through the area and characteristics that can influence their ability to safely walk through the area e.g. workers, public, patients etc.

The people at most risk of slips and trips include those who:

- have reduced mobility, strength and/ or balance
- have reduced visual ability, impaired hearing, reduced cognitive ability
- are unwell or affected by medication, drugs or alcohol
- are fatigued
- are handling loads such as trolleys, prams, children, boxes etc.
- are distracted, e.g. by looking at their 'smart-phone' while walking
- are unable to look at the floor/ground surface while they are walking

Some of these people may not notice slip or trip hazards and/or may not have the agility, speed or strength to regain their balance after a small slip or trip. People most at risk are those who are least familiar with the workplace, such as visitors and new or part-time workers.

Improving workplaces that are used by the public

Simple and inexpensive devices that assist all workplaces, and particularly those that are also used by the public, include:

- bagging systems for wet umbrellas
- lids or bags for takeaway drinks or food or other potential contaminants
- paper towels or napkins (e.g. at food services)
- dripless soap dispensers
- provide sufficient rubbish bins especially close to areas of high rubbish generation e.g. eating areas

EXPERIENCE

Experience/familiarity with work task & work area e.g. know area near back stairs prone to poor drainage

Training workers in how to reduce slips and trips

Have systems to train, inform and supervise workers on:

- the significance and impact of slips and trips risks
- cleaning procedures relevant to their job
- the importance of thoroughly cleaning and drying floors
- reporting slips and trips incidents as soon as they happen
- reporting spills or contaminants and/or tidying them up ('cleaning as you go')
- reporting damaged or otherwise hazardous walkways as well as equipment defects
- using and caring for safety equipment e.g. spill kits, barriers
- wearing and maintaining appropriate footwear
- restrictions such as bringing food or drinks to certain areas

Supervision:

Ensure STFAL controls are used properly and cleaning procedures are followed.

Falls from vehicles

For information refer to [preventing falls from trucks](#) at www.worksafe.qld.gov.au

STFAL RELEVANT LEGISLATION

WHS Act 2011

- Section 19 Primary duty of care
- Section 21 Management or control of fixtures, fitting or plant at workplace
- Section 19 Training & supervision with WHS Regulations 39 & WHS Act,
- Section 22-25 Designers/importers/suppliers/installers

WHS Regulations 2011

S40 Duty in relation to general workplace facilities

A person conducting a business or undertaking at a workplace must ensure, so far as is reasonably practicable, the following—

- (a) the layout of the workplace allows, and the workplace is maintained so as to allow, for persons to enter and exit and to move about without risk to health and safety, both under normal working conditions and in an emergency;
- (b) work areas have space for work to be carried out without risk to health and safety;
- (c) floors and other surfaces are designed, installed and maintained to allow work to be carried out without risk to health and safety;
- (d) lighting enables—
 - (i) each worker to carry out work without risk to health and safety; and
 - (ii) persons to move within the workplace without risk to health and safety; and
- (e) Maximum penalty—60 penalty units.

S315 Further health and safety duties — specific risks

The principal contractor for a construction project must in accordance with Part 3.1 manage risks to health and safety associated with the following:

- the storage, movement and disposal of construction materials and waste at the workplace;
- the storage at the workplace of plant that is not in use;
- traffic in the vicinity of the workplace that may be affected by construction work carried out in connection with the construction project;
- essential services at the workplace.

Note WHS Act 2011— section 20 (see regulation 9).

Managing the work environment and facilities 2011 COP

Especially Section 2 The work environment

- access ways, housekeeping, work areas, floors and other surfaces, workstations, lighting

Version	Date	Author
1	30/06/2018	WHSQ