

Lead Smart guidelines for housing property owners

These guidelines have been developed by Country Health SA Local Health Network (CHSALHN) Port Pirie Environmental Health Centre. They are designed to assist housing property owners in Port Pirie to reduce lead exposure around the home, specifically where pregnant women, babies, infants, toddlers and children reside.

These guidelines support a best practice approach toward reducing children's blood lead levels to as low as possible, and will assist to maintain properties and minimise the risk of lead exposure to protect children, employees, contractors, volunteers and families who utilise these properties.

The National Health Medical Research Council recommends that if a person has a blood lead level greater than 5µg/dL the source of their lead exposure should be investigated and reduced, particularly if the person is a child or pregnant woman.

Those at most risk of harm from lead are children under five years of age and unborn babies for the following reasons:

- > The brain, nervous system and body are still developing and are highly vulnerable to environmental toxins such as lead.
- > Normal hand-to-mouth activity in young children exposes them to high risks of ingesting lead in contaminated environments.
- > Children absorb a much higher proportion of lead than juveniles or adults — up to 50% compared to 10% in adults.

Property Maintenance

- > All dust in the Port Pirie community is contaminated with lead and as such, caution is needed to minimise the risk of exposure.
- > General maintenance on your property will prolong the time between minor works and the need for major renovations.
- > If dust entry is minimised and barriers are maintained, exposure to lead for residents, especially children, will be reduced.
- > Therefore, **dust minimisation is a priority.**

Lead Smart properties

Areas to check

- > Hand washing and drying makes a significant difference to a child's intake of lead-contaminated dust. Properties must have access to adequate water facilities for handwashing, showering/bathing and washing clothes. It is important to note rainwater in Port Pirie is usually highly contaminated and not suitable for drinking or washing clothes. Contact the Environmental Health Centre (EHC) for further information regarding rainwater.
- > Fly screens on doors and windows should be easily removed for cleaning and in good condition with no holes or gaps.



- > Wall linings, both internally and externally, should be in good repair with no gaps, cracks or holes. Flat or smooth surfaces minimise trapping of dust, e.g. flat cement walls, smooth rendered walls, cement sheet walls. If noise-reduction is an issue options other than installing textured wall finishes should be considered because this type of surface easily trap dust and requires extra cleaning resources.
- > Minimising external / internal venting where possible will reduce dust entry.
- > Paintwork in and around the property should be checked for lead content (fences, house internal and external, sheds, pergolas, verandas etc.). Chipping, chalking and flaking of lead paint poses an exposure risk for residents. Contact EHC for further information regarding lead paint.
- > Dust entry points should be regularly assessed for gaps and resealed if necessary e.g. multi-surface joins, cornices, skirtings, framing of windows and doors.
- > Most Port Pirie homes have lead dust build up in the ceiling and wall cavities that can pose an exposure risk for residents. Disturbance of this lead dust occurs during renovations or maintenance. Dust can also leak into living areas of the house under normal living conditions if the house is not well sealed particularly during windy conditions.

Indoor

- > The interior should be well-sealed around windows, doors, sliding doors, ceilings, floors, skirtings, cornices, architraves and wall linings to minimise dust entry from outside. Seals should be fitted to all doors and windows.
- > Window wells and sliding door/window tracks should be readily accessible for ease of cleaning.
- > Louvre windows allow dust entry and require frequent cleaning to prevent lead-dust build-up. Alternative window materials should be installed.
- > Cornices, skirtings, doors and window frames should be kept in good repair, with no gaps or cracks.
- > Select flooring and floor coverings that are easy to clean and maintain (e.g. low pile carpet, hardwood, vinyl, laminate, tiles).
- > Smooth, hard wearing surfaces should be used for all joinery for ease of cleaning and to minimise dust build-up.
- > Floor coverings should be in good condition and sealed at edges with no holes, cracks or gaps which may allow dust trapping or entry.
- > Washable covers on interior and exterior furnishings such as sofas, chairs, cushions, beds and mattresses allow cleaning to reduce lead dust build-up.
- > Curtain washing, wall cleaning, shampooing carpets, fabric lounges and mats should occur regularly, and when children and pregnant women are not present.
- > Vertical blinds are recommended, rather than horizontal venetian/roman blinds due to ease of cleaning.
- > Non-operational/ornamental open fireplaces and chimneys should be well-maintained and sealed.
- > Where possible and if not in use, chimneys and flues should be capped and sealed.
- > Solid fuel heaters (e.g. wood heaters and stoves) should meet the standards set by the South Australian Environmental Protection Authority.
- > Ceiling and portable fans should be cleaned regularly, as well as when visibly dirty.
- > Air-conditioning systems should be maintained to the manufacturer's specifications and regularly inspected and cleaned to reduce lead dust build up on filters and air inlets. Evaporative system dampers should be closed and the air intakes covered when not in use e.g. during winter. Wetting evaporative air cooling pads before use will reduce dust from blowing indoors.

- > Split-system air conditioners provide less opportunity for dust entry because they are most effective when the home is closed up and do not bring outdoor air and dust into homes.
- > Clean or replace air conditioning systems filter/s according to the manufacturer's recommendation, and more often in dusty seasons. This may be up to every month during the cooling season, although seek the manufacturer's advice on recommended filter cleaning intervals for dusty environments and the benefits of replaceable filters.

Outdoor

- > Landscaped gardens are a requirement for all new buildings in Port Pirie. This may include removal of contaminated soil, covering (vegetating with drought tolerant plants, shrubs or trees, mulching or gravel) or sealing with pavers or concrete.
- > Bare soil, particularly in areas where children play should be covered to provide a barrier between potentially lead-contaminated dirt and children e.g. mulch, bark chips, lawn, ground cover, plants, paving, gravel, concrete or low impact pervious or easily cleaned materials. Bark chips and mulch will need to be replenished to keep an adequate barrier in place.
- > Door mats should be located at all external door entrances to reduce the transfer of contaminated soil and dust inside.
- > Roof eaves should where possible be covered or enclosed to minimise dust entry and dust deposition.
- > Roof should be kept in good repair with no leaks, holes, or cracks to minimise dust entry into ceiling spaces and living areas.
- > Good drainage should be provided to ensure that potentially lead contaminated water run-off from buildings or play equipment does not pool. This is important where soft fall material is used under play equipment and where water tends to pool after hosing down equipment.
- > Sealed outdoor surfaces should be non-porous to enable effective cleaning by hosing off dust and soil.
- > Paths, driveways, outdoor meal areas and verandas should be sealed (e.g. porous cement should be painted or areas paved) to enable effective hosing, or a barrier installed such as gravel or crusher dust to minimise dust generation.
- > Outdoor areas (verandas, outdoor meal areas) should be well ventilated. Enclosing outdoor areas unless permanently sealed, could create a dust trap and a potential lead dust exposure risk.
- > Shade cloths/sails should be in good condition and able to be regularly cleaned with a high pressure cleaner to reduce dust deposition.
- > Sandpits should be covered with non-porous, water proof material (e.g. canvas) and should be secured on the pit; covered sandpits can be topped up with fresh sand as required. Sand should be replaced annually, if the sandpit is uncovered.
- > Wash the exterior of the building regularly with a high pressure cleaner to reduce dust deposition.
- > Any permanent outdoor play equipment and furniture should be able to be washed regularly and when visibly dirty.
- > Sweeping, dry dusting or using outdoor blower vacs should not occur in outside areas because they redistribute lead-contaminated dust and encourage entry of dust indoors.
- > Avoid storage of children's personal belongings outdoors, including prams. If this is unavoidable, the storage area should be sealed and kept free of dust.
- > All areas of the property should be regularly cleaned. Barrier material on bare soil should be regularly maintained and replaced.

Additional 'Lead Smart' practices

Lead based products

- > No lead-based products (e.g. marine or old lead-based paint, car batteries etc.) should be used or stored at the property or left within reach of a child.
 - o Check that furniture (especially cots), purchased new or second-hand, are free from lead-based paint.
 - o Check building and building products are free from lead (e.g. paint, roof flashing, lead pipes).

Food areas

- > Meal areas require chairs and tables to discourage children from eating on the ground. Outdoor meal areas should be in a well-ventilated area, away from direct smelter winds (avoid south side of building).
- > Food grown or produced in Port Pirie may contain lead. Pregnant women and young children should avoid eating home-grown/locally-grown produce, including eggs and honey, from Port Pirie. Contact the EHC for further information.

Rainwater

- > Although rainwater is a precious natural resource in our dry environment, it should be assumed to be contaminated by lead dust in Port Pirie. Lead dust from rooves and gutters settle in tanks and will contaminate the water.
- > In relation to domestic water conservation measures, plumb rainwater to toilets only and avoid plumbing rainwater to laundry taps. It is important to reduce the risk of consumption because rainwater collected in Port Pirie is highly likely to contain lead.
- > Rainwater should not to be used for preparation of food or for drinking in Port Pirie — including making baby formula, cordials or sterilising baby bottles.
- > **Note:** Boiling rainwater concentrates the lead within it.

Sleep and rest areas

- > Ensure cots, beds and rest areas are not located under or adjacent to a window to minimise potential exposure to lead-contaminated dust.
- > Mattresses should have sealed and washable covers.
- > Fresh bedding and linen should be stored in a dust free, well-sealed cupboard.

Toys

- > Toys and play equipment should be stored in sealed containers or cupboards away from dust after use.
- > Ensure outside toys remain outside and are wet-wiped before each use. Best practice is to use toys for outdoor OR indoor purposes—not both.
- > Well-sealed, dust free storage cupboards should be used to store toys and childrens belongings.

Health, welfare and safety

Property owners need to be aware of the risk of renovating and maintaining properties.

- > Young children and pregnant women should not be present while repairs or renovations are in progress.
- > Families should be relocated until the works and clean-up are completed.

- > Neighbours in the immediate area should be notified of the work to enable appropriate protective equipment, barriers and precautions to be taken to avoid exposure to dust generated by the work.
- > It is important to note that **unfinished maintenance works or renovations equates to ongoing and increased risk of lead exposure** for residents and those attending the property. Maintenance and renovations need to be well planned and completed in a timely manner.

Clean up

- > Appropriate preparation and thorough clean-up is required **after** maintenance and renovations and **before** children re-enter the property:
 - o sealing off the area from the rest of the facility by covering floors, doors and windows with plastic and tape,
 - o packing up toys,
 - o removing or covering soft furnishings, curtains, carpets and other household items,
 - o using a phosphate detergent such as liquid sugar soap and starting from the top and working to the bottom by damp dusting all surfaces,
 - o vacuuming carpets and hard floors, damp mopping floors and changing rinse water regularly.

Waste

- > Lead-contaminated waste has the potential to cause major environmental contamination if not properly managed.
- > All known lead-contaminated waste should be contained by wrapping in plastic or placing in heavy weight plastic bags and disposed of at a designated contaminated waste dump.

Property owners are encouraged to contact the EHC for further information on renovating and maintenance in accordance with Lead Smart practices.

The Environmental Health Centre (EHC)

- > Provides information and education about lead exposure pathways and exposure reduction strategies.
- > Assists to identify lead sources and develop exposure reduction strategies. The EHC can assist with property assessment and will provide with recommendations to assist property owners.
- > Assists organisations to develop Lead Smart policies, procedures and processes.
- > Assists property owners to plan and prepare for activities that have the potential to increase exposure to lead e.g. renovations, demolitions, landscaping, carpet removal.

For more information

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