Adaptive Reuse Fact Sheets

ARCHI
Adaptive Reuse
City Housing Initiative

Managing Hazardous Materials & Contamination Risks

Introduction

Any site or building being considered for adaptive reuse may come with risks associated with hazardous materials and site contamination that can create significant health, safety and environmental harm. These risks vary depending on the age, historical use and location of the site. While these risks should be taken seriously, it is important to know that they can be managed and that there are processes and rules in place to facilitate this.

Hazardous Materials & Contamination Risks

There are a number of potential risks associated with hazardous materials and site contamination related to existing buildings. These include:

- Asbestos or asbestos containing materials
- Lead (used in paints, pipework, roofing, etc.)
- Refrigerants (used in air conditioning systems)
- Biological hazards (such as bird droppings)
- Soil contamination (chemical, heavy metals, Polycyclic Aromatic Hydrocarbons (PAHs), etc.)
- Ground water contamination.

Managing Asbestos

Asbestos was used extensively in building materials in Australia from the 1940s to the 1980s and was eventually banned from use in 2003. As such, many buildings from this time period contain materials made with asbestos. Some common past uses for asbestos in buildings include:

- Fibrous cement sheeting (used in cladding and linings)
- Electrical insulation (used for cabling, switchboards and meters)
- Vinyl floor tiles (with asbestos backing)
- Insulation
- Flue pipes
- Drains and gutters.

Obtaining advice from a Hazardous Material Consultant early in a project can assist in mitigating potential harm and costs associated with asbestos management.

Managing Other Hazardous Materials

Paint containing lead was commonly used in buildings up until the 1960s and can be harmful if paint dust, flakes or fumes are inhaled or swallowed. These risks can be managed with suitable work processes and protective equipment.

Refrigerants are chemicals used within air conditioning systems and require specialist installation and removal. Older refrigerants in particular can be harmful and require special care in how they are managed.

Biological hazards such as bird droppings that may build up in older buildings, particularly if they are unoccupied for a long period, can pose a risk to human health if not managed effectively. Biological hazards may require specialist removal.

Seek advice from a Hazardous Materials Consultant or relevant specialist if you think any hazardous materials may be present in your building.

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Checklist & Key Considerations

- [ ] Have you sought specialist advice regarding hazardous materials such as asbestos or lead paint?
- [ ] How old is the building being proposed for adaptive reuse?
- [ ] Is there an Asbestos or Hazardous Materials Register for the building?
- [ ] Does the project involve work that requires excavation? For example new footings, foundations or plumbing installations?
- [ ] Does the site have a history of use that may have caused contamination?
- [ ] Do you have a suitable contingency in your budget to manage the risk of potential additional costs associated with hazardous materials or site contamination?

Managing Site Contamination

Site contamination can arise from a variety of causes and can commonly include chemicals, heavy metals and PAHs. Risk factors for site contamination include the location of the site, the historical use of the site and activity on adjacent sites.

Under the current Planning & Design Code a Site Contamination Assessment can be required for new developments. For adaptive reuse projects within existing buildings, the requirements for a Site Contamination Assessment only apply in very specific circumstances where the building has an industrial use and the ground floor is being converted to residential accommodation. Most adaptive reuse projects won't automatically require a Site Contamination Assessment.

However, building works may still require excavation (for example for footings or new services) which may still require testing and management of contamination.

Obtaining advice from a Site Contamination or Environmental Consultant early in a project can assist in mitigating potential harm and costs associated with contamination.

ARCHI has been established by the City of Adelaide in partnership with the State Government of South Australia.

Version 1.3 – June 2025