

CONTAMINANTS

DESCRIPTION

Environmental contamination: The introduction into water, air and/or soil of microorganisms, chemicals, toxic substances, wastes or waste water in a concentration that makes the medium (water, air and/or soil) unfit for its next intended use (consumption, crop production, habitation).

PROJECT PLANNING

On a project site, where there is a possibility of water or ground pollution as a result of contaminants within the project site, information must be included in the [Project Risk Register \(Environmental\)](#). Project Risk Register information includes, but is not limited to:

- ▽ Details of contaminants which may result in an environmental impact.
- ▽ Details of work activities with contaminants which may have an environmental impact, locally or on the eco-system.
- ▽ Details of the potential risks of the work activities and required control measures. (This is commonly known as "Aspects and Impacts").
- ▽ Details of any management requirements noted in supporting documentation or consents (e.g. DA conditions, legislative requirements).

COMMON CONTAMINANTS

ASBESTOS

Asbestos is a term for a group of naturally occurring mineral fibres which were incorporated into building products due to their flexibility, tensile strength, insulation from heat and electricity, chemical inertness and affordability.

Both friable and non-friable asbestos pose significant health risks to humans if the materials are not properly maintained or removed.

Refer to [Procedure: Asbestos Management](#) for information on the identification and management of asbestos in the workplace.

For unexpected finds (e.g. asbestos which is located in a building / in the ground and which was not listed in an Asbestos Register or Geotech Report), refer to the Unexpected Finds General Requirements information sheet.



LEAD

Lead is a heavy metal that is toxic to the human body when inhaled, eaten or absorbed.

Lead contamination affects biological systems by affecting ecosystem productivity (inhibiting plant growth) and nutrient.

Lead was used as a base, drying agent, colouring and to protect steel and iron from rust and was found in domestic paint up to 1970 and commercial surface treatments up to 2010.

Lead contamination can be airborne (e.g. dust from sanding, blasting), in ground (soil from lead products or commercial activities) or in water (e.g. leaching from premises).

Site Management:

- ▽ Arrange for testing to be completed.

Small areas / test samples: can be done on site with a DIY test kit available from hardware and paint stores. These sample kits should give an indication which provides an indication of the presence of lead.

Large areas / metals etc.: to be completed by a competent person (e.g. Environmental Engineer, Hygienist) to determine the presence / level of lead in the product, soil, water.

- ▽ Arrange for development of / or develop a Lead Management Plan (LMP). As required (lead risk work), arrange for review of the LMP by a competent person.
- ▽ Incorporate the requirements of the LMP into the Project Risk Register.

Ensure that the LMP is provided to subcontractors completing the work for development of / inclusion in their SWMS.

- ▽ Where required: For lead risk work, provide written notification of removal to a Regulatory Authority at least 7 days prior to the work activity.
- ▽ Where required: Ensure that workers completing the activity have commenced health surveillance requirements. (Must be completed before and after the activity).
- ▽ Where required: Ensure that atmospheric monitoring is completed before, during and at completion of the activity.

Provide results of atmospheric monitoring to workers by posting on site noticeboard and including in consultation processes.

- ▽ Complete a [Risk Assessment](#) and an [ATWP](#) prior to the start of the work activity.

- ▽ Ensure that the work area is excluded from other work activities.

Ensure that contaminant removal is completed by competent persons and is transported to an approved waste facility by a licenced contractor.

Ensure that workers completing any work activity in the contamination area use required PPE and practice good personal hygiene (per LMP and SWMS).

- ▽ On completion of the work activity, obtain a clearance certificate (from a competent person) confirming that the contaminant has been removed and that there are no remaining risks to human health.
- ▽ Conduct regular visual inspections (so far as is practicable) to ensure compliance with LMP, Risk Register and ATWP controls.
- ▽ Provide information on lead contamination / management to workers during the site consultation processes.

Reference:

AS 4361.2 Guide to Lead Paint Management; Part 2 Residential and Commercial Buildings

ACID SULPHATE

Acid sulphate soil is the common name for soils that contain metal sulphides. In an undisturbed and waterlogged state, these soils may pose no or low risk. When disturbed or exposed to oxygen, acid sulphate soils undergo a chemical reaction known as oxidation which produces sulfuric acid.

Untreated acid sulphate has a significant detrimental impact to eco systems.

Acronyms:

ASS – Acid Sulphate Soil

PASS – potential Acid Sulphate Soil

AASS – actual Acid Sulphate Soil

ASSMP – Acid Sulphate Soil Management Plan

Site Management:

- ▽ Arrange for soil testing to be completed (e.g. Geotech Report) to confirm the location and concentration of ASS.
- ▽ Ensure that an ASSMP is developed by a competent person (e.g. Geotech or Environmental Engineer).
- ▽ Incorporate the requirements of the ASSMP into the Project Risk Register.
- ▽ Ensure that the ASSMP is provided to subcontractors completing the work and/or who will be working in the ASS area.
- ▽ Where required: Ensure that a competent person has been engaged to complete Level 1 Supervision.
- ▽ Determine whether ASS / leachate will be treated on site or disposed of an approved waste facility.
- ▽ Complete a [Risk Assessment](#) and an [ATWP](#) prior to the start of the work activity.
- ▽ Ensure the following:
 - Sufficient quantities of agricultural lime stored on site for treatment and/or emergency use (e.g. leaching).
 - Excavated material is treated / removed within 24 hours of exposure.
 - Stockpiled material is located > 30 metres from any surface water.
 - Stockpiles are limited to approved heights.
 - Stockpiles are banded with lime to prevent leaching.

- Soil sampling (by ADCO or others) is conducted at a rate of 1 test per 250m³. Sampling tests to be logged on a Register.
- Leachate is tested and neutralised prior to disposal / relocation.
- Dewatering is conducted in accordance with approved procedures.
- Exclusion zones are maintained around work and stockpile areas.

▽ ASS removed from the site:

- Must be loaded into bins lined with agricultural lime.
- Must be disposed of at an approved waste facility / location.
- Must be transported by a licenced contractor.

▽ Ensure that workers completing any work activity in the contamination area use required PPE and practice good personal hygiene (per ASSMP and SWMS).

▽ Ensure that Plant (e.g. excavators), machinery and vehicles are decontaminated prior to leaving the work area and the project site.

Note: Wash off areas to be banded. Water from wash off may also require neutralising prior to disposal.

▽ Conduct regular visual inspections (so far as is practicable) to ensure compliance with ASSMP, Risk Register and ATWP controls.

▽ Provide information on ASS contamination / management to workers during the site consultation processes.



OTHER CONTAMINANTS

Where any other contaminants which may affect human health or the ecosystem are confirmed / suspected in soil, water or buildings on a project site:

- ▽ Place a hold on all work activities in the immediate area.
- ▽ Contact the SHE Manager in your State or the National SHEQ Manager for advice and direction.