



Byron Shire Council Development Factsheet

DEVELOPMENT APPLICATIONS - THE NEED FOR A SITE CONTAMINATION REPORT

The Environmental Planning and Assessment Act 1993 (EP&A Act) and State Environmental Protection Policy 55 (SEPP 55) require Council to consider the suitability of land for a proposed development. The risk to health and the environment from contamination must be included in this assessment. SEPP 55 requires that Council be satisfied that a site is suitable for its proposed use or can and will be made suitable.

Generally, a preliminary site assessment for contaminated land issues is required for all development applications and rezonings. This preliminary site assessment may be a thorough detail of the historical knowledge of the site, with a statutory declaration supplied covering the history of usage. Council must be completely satisfied that there is no risk from contamination issues. In most cases the preliminary site investigation will need to include soil sampling, as there are gaps in historical information and past land uses that cannot be sufficiently described. In a few cases the preliminary investigation will highlight a need for further investigative works through higher than anticipated soil analysis results or the use for an activity listed in Table 1 of the guidelines published by the Department of Urban Affairs and Planning (DUAP).

SCOPE OF THIS INFORMATION GUIDELINE

The major objectives of this information guideline are to provide:

- An overview of the investigation stages for contaminated land investigation; and
- Information on how to conduct a preliminary site investigation where the previous uses of the land which potentially has caused contamination is not known.

The guideline is not intended to provide specific details on:

- The conduct of detailed site investigations if the initial investigation highlights that further investigation is required;
- Procedures for remediation and ongoing monitoring; and
- The assessment of land where the likely contamination source is known (e.g. banana plantation sites, cattle dip sites, fuel storage sites etc).
- In these cases, attention is directed to the attached list of other useful references.

The guideline is a broad summary for use by professional environmental consultants. As the investigation of contaminated land is a scientific process, these guidelines provide a recommended course of action only. A consultant should be able to justify the choices he/she has made in the preparation of the report.

STAGE 1 – PRELIMINARY SITE INVESTIGATION

These guidelines represent the minimum standard of preliminary site investigation. The information provided also relates only to the most common format and type of preliminary investigation. It should be noted that the information contained in this guideline is not appropriate for all sites and in some cases Council may require further information or testing.

a) Summary

The preliminary site investigation report should:

- Identify all past and present potentially contaminating activities;
- Identify potential contamination types;
- Discuss the site condition;
- Provide a preliminary assessment of site contamination; and
- Assess the need for further investigations.

Where a complete site history demonstrates that the site activities were unlikely to contaminate the land, there may be no need for further investigation or site sampling. The preliminary site investigation report should include a statutory declaration/s relating to the history of usage of activities and any chemicals on the site. However, if there are gaps in the historical information, or the land uses are not described in sufficient detail to identify the presence or absence of potentially contaminating uses, a preliminary sampling and analysis program may be required.

In most cases preliminary sampling and analysis will be required.

With every site contamination report the author must supply a written summary of relevant experience and qualifications to demonstrate that he/she is a suitable person to undertake the report and work.

A copy of a current \$10 million public liability insurance cover which specifically includes contaminated land investigations must be provided to support the summary of competence.

b) Sampling Selection

When the previous use of the land is uncertain but there is enough information on the probable locations of contamination, the most common form of sampling pattern used is the Judgmental Sampling Pattern. For this method, sampling points are chosen based on the investigator's knowledge of the probable distribution of contaminants. The method makes use of the site history and the field observations of the site. The principal disadvantage of this method is the potential for bias or complete misrepresentation of site contamination.

Site History reviews may include (but should not be limited to):

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| <ul style="list-style-type: none"> • Zoning (previous, current & proposed) • Land Use (previous, current & proposed) • Rezoning, development and building approvals • List of Site Uses (including information gaps and unoccupied periods) • Aerial photo review | <ul style="list-style-type: none"> • Site photograph • List of Chemicals and wastes used and the storage location • Contaminant sources and off-site effects • Location of past and present industrial processes • Sewer and service plans etc |
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Field Observations may include (but should not be limited to):

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| <ul style="list-style-type: none"> • Topographical features • soil types, stability and erosion • visible signs of contamination such as discoloration, bare soil patches etc • signs of plant stress • presence of drums, fill or waste materials | <ul style="list-style-type: none"> • odours • presence of fill • Quality of surface waters. • Flood potential • relevant sensitive environments |
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Every care should be taken to ensure that the sampling locations are appropriate for the site. In the selection of sampling sites consideration should be given to the most probable uses of the site and their likely location and the accumulation of contaminants in drainage lines or gullies etc.

A Systematic Sampling Pattern is used where there is insufficient information about the site to indicate the probable location of contaminants. In this method sampling points are chosen at regular and even intervals across the site with the square grid being the most common form.

OTHER USEFUL REFERENCES

The purpose of this guideline was to present a broad overview only and the following publications provide a more comprehensive covering of the subject. If you are undertaking a site assessment you should ensure that you are familiar with the sampling procedure, sample preservation and interpretation of results etc that is required for the particular contaminant/s under consideration.

- ANZECC & NHMRC 1992 *The Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites*
- Australian Standard AS4482.1 - 1997, *Guide to Sampling and Investigation of Potentially Contaminated Soil Part 1 Non-Volatile and Semi-Volatile Compounds*
- Contaminated Land Management Act 1997
- Department of Urban Affairs and Planning and Environmental Protection Agency 1998 *Managing Land Contamination: Planning Guidelines SEPP 55 - Remediation of Land*
- Environmental Protection Agency 1992 *Draft Environmental Guidelines for Cattle-Tick Dip Sites*
- Environmental Protection Agency 1994a *Contaminated Sites: Guidelines for Assessing Service Station Sites.*
- Environmental Protection Agency 1994b *Guideline for the Management of Material Containing Polychlorinated Biphenyls (PCBs) below 50 Milligrams per Kilogram*
- Environmental Protection Agency 1995a *Contaminated Sites: Sampling Design Guidelines*
- Environmental Protection Agency 1995b *Contaminated Sites: Guidelines for the Vertical Mixing of Soil on Former Broad-Acre Agricultural Land*
- Environmental Protection Agency 1997a *Guidelines for Assessing Banana Plantation Sites*
- Environmental Protection Agency 1997b *Guidelines for Consultants Reporting on Contaminated Sites*
- Environmental Protection Agency 1998a *Guidelines for the NSW Auditor Scheme*
- Environmental Protection Agency 1998b *Guidelines on Significant Risk of Harm from Contamination of the Land and the Duty to Report*
- National Environment Protection Council *National Environmental Protection Measure for the Assessment of Site Contamination - Impact Statement and Draft Guidelines 1-10.*
- State Environmental Planning Policy No 55 - Remediation of Land 1998
- NSW Agriculture and CMPS&F 1996 *Guidelines for the Assessment and cleanup of cattle tick dip sites for residential purposes, Wollongbar*



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