GUIDELINE FOR THE MANAGEMENT OF CONTAMINATION

SEPTEMBER 2013

Contents

Supporting Documents

Table i: Fact Sheets	
No.	**Title**
FS1	Statutory Framework
FS2	Planning Context
FS3	Identification
FS4	Assessment
FS5	Health and Safety
FS6	Land-based Contamination
FS7	Estuarine and Marine Land
FS8	Duty to Report
FS9	Site Auditors
FS10	Records Management
FS11	Communication
FS12	Managing Contamination
FS13	Operational Management
FS14	Acquisition of Land Strips

Table ii: Management Tools	
Number	**Title**
MT1	Request for proposal for Environmental Site Investigation
MT2	Request for proposal for Remediation Action Plan
MT3	Request for proposal for Remediation and/or Monitoring
MT4	Letter of engagement to undertake Contaminated Land Investigation
MT5	Request for Proposal for a NSW EPA accredited site auditor

1. Introduction to the Guideline

Contamination is defined as: 'the condition of land or water where any chemical substance or waste has been added at above background level and represents, or potentially represents, an adverse health or environmental impact' (NEPM, 2013).

Contamination can cause detrimental effects to human health and the environment, reduce land values, impair operational functions and create financial risk. When Roads and Maritime Services (RMS) assets or projects might be affected by contamination, the risks must be well understood and appropriately managed.

RMS buys, sells, leases, develops and manages a diverse range of sites and on any given site there is always the potential for contamination to exist. RMS has a legal obligation to comply with contaminated land legislation. This Guideline has been developed to assist RMS and contractor staff in managing these obligations.

RMS must demonstrate appropriate management of contaminated land during the purchase, management and sale of property. RMS staff and contractors must proactively and continuously manage contamination to eliminate or minimise risks and liabilities to RMS. The RMS Environmental Policy Statement (see Table 1) underpins RMS's approach to the management of environmental issues.

Table 1: RMS Environmental Policy Statement

RMS is committed to undertaking its activities in an environmentally responsible manner and effectively managing any risks that may lead to an impact on the environment. RMS will do all that is reasonably practical to ensure that there is continuous improvement in environmental performance, including ongoing communication and awareness raising, active reporting of environmental incidents and continuous learning from experience. RMS is committed to environmental management being an essential element of effective road, traffic and maritime related infrastructure planning, construction, maintenance and operation that must be properly considered and integrated into all phases of RMS projects and operations.

2. Purpose

The purpose of this Guideline is to help RMS staff and contractors manage contaminated land to:

- Ensure legal compliance
- Appropriately manage potential risks to human health and the environment
- Reduce reputational and financial risks to RMS
- Minimise RMS liabilities relating to contamination.

This Guideline provides practical information to prevent, identify and manage contamination affecting RMS assets. It deals with contaminated soils, sediments, surface water and groundwater in land-based, estuarine and marine environments (described generically in this document as 'contaminated land') – both during the planning and approval of new developments and for the operation and maintenance of existing RMS assets. It outlines best practice principles and the contamination management processes to be followed.

This Guideline replaces the Roads and Traffic Authority (RTA) Contaminated Land Management Guideline (2005), reflects legislative changes and incorporates maritime aspects.

3. RMS Contaminated Land Management Principles

RMS staff and contractors will:

- Identify the potential for contamination of land that it purchases, manages and sells.
- Assess and manage contamination as appropriate for the zoned and intended land use.
- Actively respond to the identification of previously unknown contamination.
- Manage contamination to meet its statutory obligations, including reporting of potentially significantly contaminated land to NSW EPA.
- Openly disclose information relating to the contamination status of land and any contamination management works that have been completed.
- Ensure that any contamination investigation is of a standard that:
    - meets the requirements of regulatory authorities, including the EPA
    - Is written in a manner that provides clear understanding of the issue by inexperienced readers
- Would meet the technical requirements of a 3rd party audit, if required.

4. How to use this guide

This Guideline provides a series of flowcharts that present the key contamination management actions and considerations for RMS activities. These flowcharts are supported by a series of factsheets to provide specific technical detail. Management tools are provided to assist with briefing and contracting consultants. For ease, references and hyperlinks are provided throughout this document to refer users directly to the relevant factsheet (depicted by (FS) within the text) and management tool (depicted by (MT) within the text).

4.1 Contamination management flowcharts

The contamination management flowcharts are available in Section 6 of this Guideline and should be followed to ensure RMS staff and contractors take a consistent approach in managing contamination. The flowcharts cover common RMS activities that could encounter contamination, being:

- General Project Development (Concept Stage)
- Site Purchase
- Site Sale
- Leasing to or from a Third Party
- Managing an Existing RMS Site

4.2 Factsheets

The contamination management factsheets are attached to this Guideline and can be read with the contamination management flowcharts and are intended to provide more detailed information and direction on specific technical issues.

Table 2: Factsheet Summary

No.	Title	Description
FS1	Statutory Framework	Legislative drivers and guidance for the management of contamination.
FS2	Planning Context	Contaminated land within the context of the NSW planning regime.
FS3	Identification	How to identify potentially contaminated land.
FS4	Assessment	General stages of assessing contamination.
FS5	Health and Safety	Work health and safety considerations when managing contamination.
FS6	Land-based Contamination	Considerations for managing contamination in land-based environments.

FS7	Estuarine and Marine Land	Responsibilities and considerations for estuarine and marine land
FS8	Duty to Report	When to notify NSW EPA of contamination
FS9	Site Auditors	When to appoint a NSW EPA accredited Site Auditor
FS10	Records Management	Maintaining contamination information on RMS assets or managed sites
FS11	Communication	Stakeholder engagement and risk communication
FS12	Managing Contamination	Managing contamination during RMS works
FS13	Operational Management	Site operations and activities that require specific management actions
FS14	Acquisition of Land Strips	Managing contamination on land subject to strip acquisitions.

4.3 Management tools

The following management tools have been developed for RMS staff and contractors to streamline the management of contamination where specialist consultants will be contracted.

Table 3: Management Tool Summary

MT1	Request for Proposal for Environmental Site Investigation
MT2	Request for Proposal for Remediation Action Plan
MT3	Request for Proposal for Remediation and/or Monitoring
MT4	Letter of Engagement to Undertake Contaminated Land Investigation
MT5	Request for Proposal for a NSW EPA Accredited Site Auditor

5. Specialist support

There is an established RMS system of internal and industry support to assess contamination risks and management plans. Managing contaminated land can be complex and risks may be difficult to identify. If in doubt, please seek assistance from the contacts below.

5.1 Internal RMS technical support

Table 4: Internal RMS Technical Support

Contacts	Assistance available	Details
Regional environment staff	Initial point of contact for most routine contamination enquiries	The environment managers by region are as follows: Hunter region (02) 4924 0440 Hunter Expressway (02) 4924 0281 Northern region (02) 6640 1072 Pacific Highway (02) 6640 1375 Road & Fleet: (02) 9598 7721 Southern region (02) 6492 9515 Southwest region (02) 6923 3419 Sydney region (02) 8849 2516 Western region (02) 6861 1628
Land Management Team, Environment Branch (Head Office).	Additional/high risk contamination enquiries or second opinion, or general contamination policy advice. Also administers the RMS Contaminated Site Assessment and Management Services Consultant Panel	Senior Environment Specialist, Land Management: (02) 8588 5738 Environment Officer, Land Management: (02) 8588 5741

5.2 Using RMS Panel Consultants

RMS staff and contractors will sometimes need to appoint the services of a specialised environmental consultant to help assess and manage a contamination issue. RMS has established the Contaminated Site Assessment and Management Services Consultant Panel (the Panel) to provide these services. The Panel was established to identify consultants that will provide consistency, quality and value for money.

If there are any contamination issues that require specialist or independent advice, RMS staff can contract a member of the Panel. Panel members can:

- provide technical advice on the need for site investigations
- do site inspections, site audits, and phase 1 (desktop) investigations

- provide cost estimates and scope of works for site investigation, remediation and/or site validation works
- do Phase 2 environmental site investigations, including intrusive investigation
- prepare Remedial Action Plans (RAPs)
- remediate soil/water/groundwater and write validation reports
- represent RMS in negotiations with landowners, lessors and lessees, accredited site auditors and regulatory authorities
- Provide NSW EPA accredited site auditors to do independent audits.

5.2.1 Consultant Panel contacts

There are five consultancies on the RMS Contaminated Site Assessment and Management Services Consultant Panel. Each consultancy has a nominated liaison officer who should be the first point of contact for each new enquiry or project. Contact details are provided in Table 3.

Table 5: Consultant Panel Contacts

Company	Liaison officer	Address	Contact details	
AECOM Australia	Anthony Davis	Level 21, 420 George Street, Sydney, 2000	Tel	(02) 8934 0200
			Fax	(02) 8934 0001
			Email	anthony.davis@aecom.com
GHD Australia	Helen Milne	Level 15, 133 Castlereagh St, Sydney, 2000	Tel	(02) 9239 7441
			Fax	(02) 9239 7199
			Email	helen.milne@ghd.com
JBS Environmental	Matt Bennett	128 O'Riordan Street. Mascot, 2020	Tel	(02) 8338 1011
			Fax	(02) 8338 1700
			Email	MBennett@jbsgroup.com.au
Parsons Brinckerhoff	Andrew Hill	Level 27, 680 George Street, 2001	Tel	(02) 9272 5195
			Fax	(02) 9272 5101
			Email	AHill@pb.com.au
Sinclair Knight Merz	Robert Gauthier	710 Hunter Street, Newcastle West, 2302	Tel	(02) 4979 2671
			Fax	(02) 4979 2666
			Email	RGauthier@skm.com.au

5.2.2 Appointing consultants

The RMS consultant panel has been established to provide consistent quality of advice and service to RMS, and to provide a streamlined process to appoint consultants for this work. The Panel deed is not exclusive and any suitably qualified consultant may be contracted by RMS staff to complete contamination investigations. The use of consultants who are not on the panel may be particularly relevant in regional areas where local consultants have developed a working relationship with regional staff, and where they may provide more cost effective proposals (due to lower travel and accommodation costs).

However, the use of the Panel consultants is recommended where feasible, as they are per-contracted to provide services to a high standard for RMS. The panel consultants are actively working on RMS projects and are familiar with the management objectives of RMS projects and RMS property management.

RMS staff should clearly describe the intended use of the site and the RMS site management objectives. It is important to clearly define the purpose of the work and the desired 'end point' that RMS needs to achieve. The consultant can then develop a proposed technical scope to respond to RMS needs. This proposal will consider statutory requirements and costs so as to achieve the best possible outcome and value for money for RMS.

Management tools 1-3 (MT1, MT2, MT3) in this Guideline provide letter templates to request proposals and services from the RMS Panel consultants.

RMS procedures for tendering still apply to contracting consultants from the RMS Panel. RMS staff and contractors may choose to seek a quote from one or more panel members. Members of the RMS Panel are already contracted under the Panel Deed, so can be quickly engaged through a simple exchange of letters. Management Tool 4 (MT4) provides a template for this exchange of letters. However, the panel is not exclusive, and any consultant in the market can be used.

The steps required to engage a consultant are as follows:

i. Prepare Request for Proposal (RFP)

ii. Review proposals

iii. Exchange letters to enact contract.

5.2.3 Reviewing consultants work

A detailed checklist of what to expect from a consultant investigation report is provided within Schedule B of the NEPM Guidelines for the Assessment of Site Contamination (see section 8) and the EPA 'Guidelines for Consultants Reporting on Contaminated Sites' (see section 8). RMS Environment Branch can also help review environmental reports. If a site auditor is involved in the project (FS9), they will review all reports and associated documents produced by the consultant.

5.2.4 Feedback on consultant performance

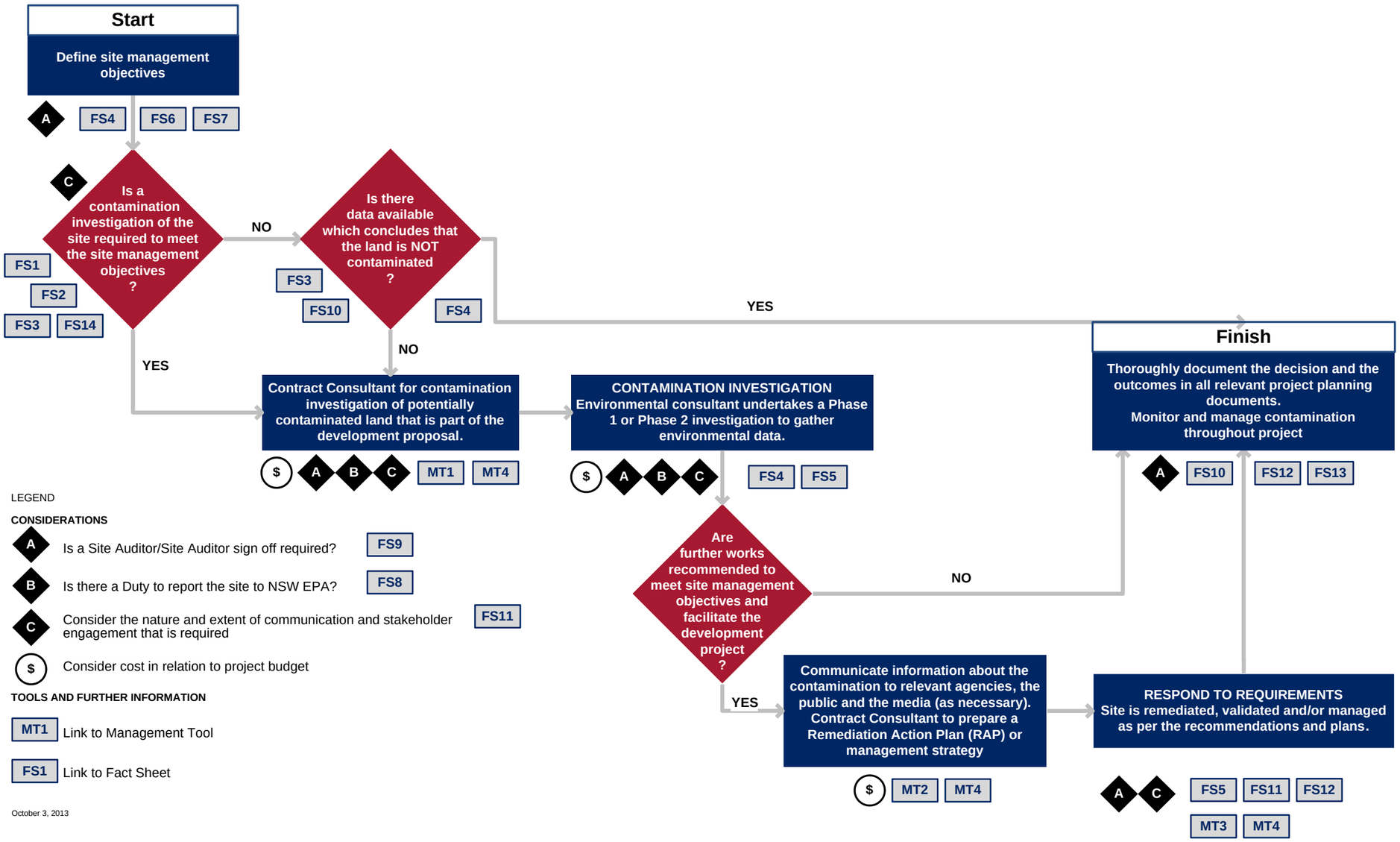
It is important to ensure members of the RMS Contaminated Site Assessment and Management Services Consultant Panel are performing well and providing a consistent and high quality service to RMS. Feedback can be provided to RMS Land Management Team in Environment Branch (see Table 3). Feedback provided will be used during incremental reviews of the Panel.

6. Contamination management flowcharts

Typical RMS operations and scenarios are described in the following contamination management flowcharts. Each of the tables and flowcharts have a number of considerations and actions to guide RMS staff and contractors responsible for managing RMS contaminated land requirements. Each contamination management flowchart lists the factsheets and management tools that will provide further information on detailed technical issues. For ease of reference, hyperlinks are provided within the matrix to take users directly to the relevant factsheets and management tools

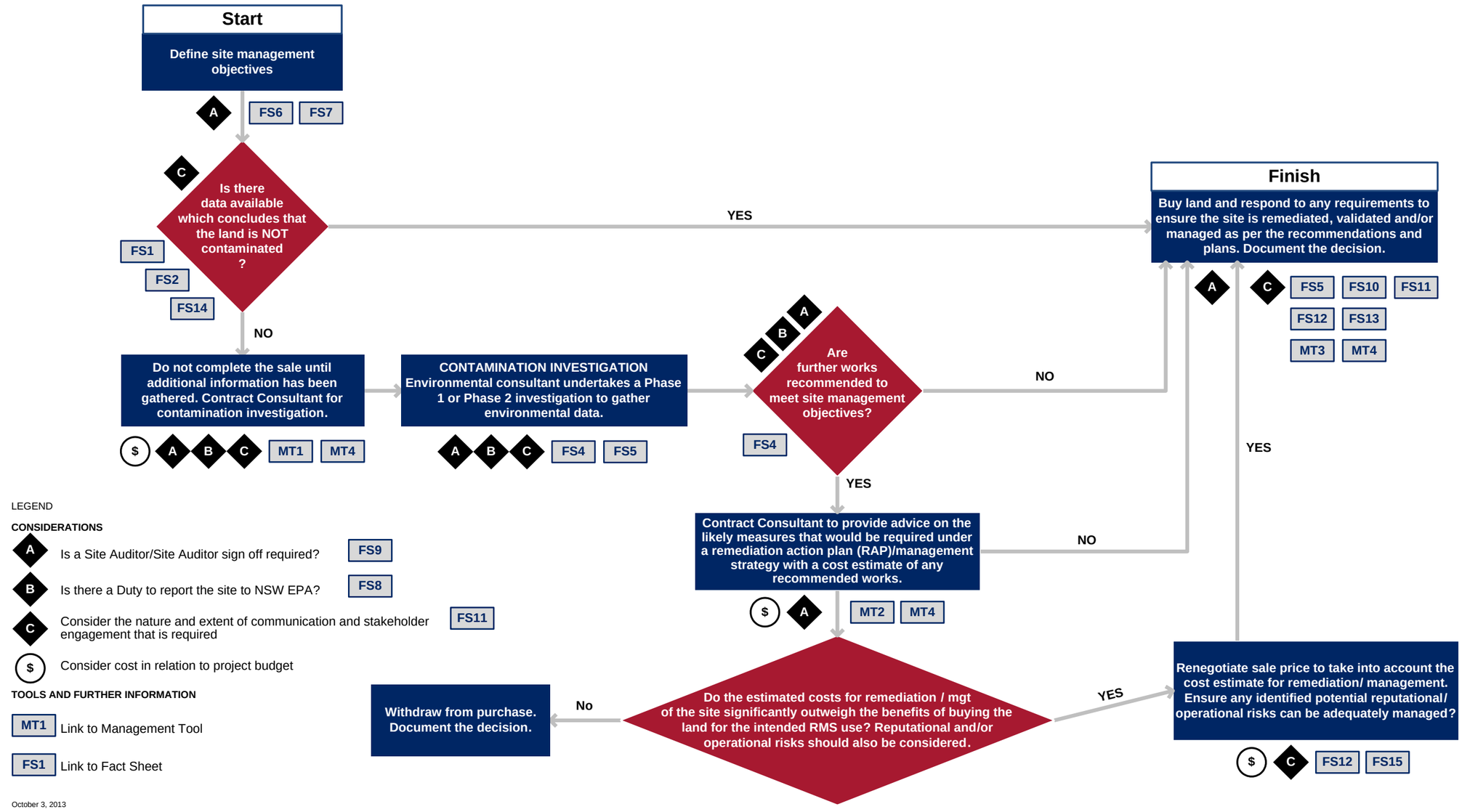
6.1 General project development process

Scenarios and objectives	Risks and strategies
Most RMS projects will require assessment under the Environmental Planning & Assessment Act, 1979. RMS projects may involve the purchase of land, all with the potential for contamination to exist. The presence of contamination may influence: ▪ route alignments ▪ environmental assessment requirements ▪ construction management of the project, ▪ construction costs including delays ▪ waste management opportunities and costs.	Failure to identify contamination at an early stage may result in high financial, legal and reputational risks. Complex contamination issues may result in long delays to a project. Contaminated site with the potential to delay projects development and delivery should be identified at route selection phase. During concept design and environmental assessment, potential contamination issues must be assessed on all properties that will be bought. The RMS Contaminated Site Assessment and Management Services Consultant Panel may be used for this purpose (Section 6.2). Management of contaminated sites may involve consultation with stakeholders including regulatory authorities, property owners and lessees and other adjoining landholders.



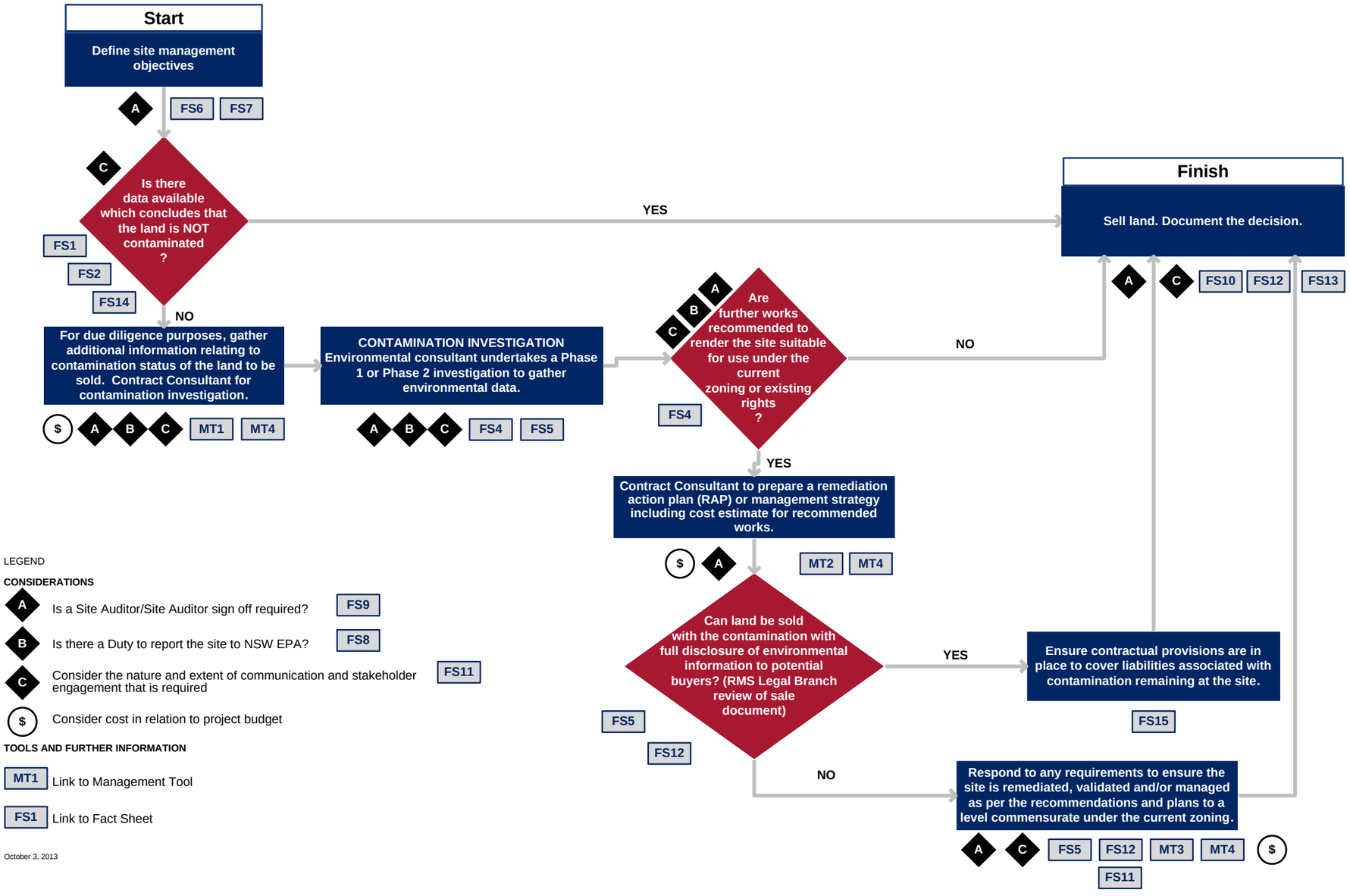
6.2 Buying land

Scenarios and objectives	Risks and strategies
Land must be purchased to develop projects and RMS facilities. This flowchart is relevant for any RMS acquisition of land, including both voluntary purchases and compulsory acquisitions. Before buying a site, project managers and property managers must determine the potential contamination liabilities associated with land. When buying land, the level of contamination must be considered in relation to the land use zoning and the proposed use. Where contamination has been identified or disclosed at an early stage, opportunities to negotiate a lower purchase price can be explored.	Once a site has been purchased, the current owner is generally liable for contamination unless the original polluter can be identified and made liable. As this can be difficult, RMS may be held responsible for managing contamination on sites it has bought, leading to financial, operational and reputational risk. Due to the short timeframes for buying property, often there will not be enough time to complete remediation before a sale is finalised. It is of benefit for RMS to know the condition of land before buying so a value estimate for possible remediation can be sought and factored into purchase negotiations. It may be necessary to hold off completing a sale while gathering additional information on the contamination status of the land.



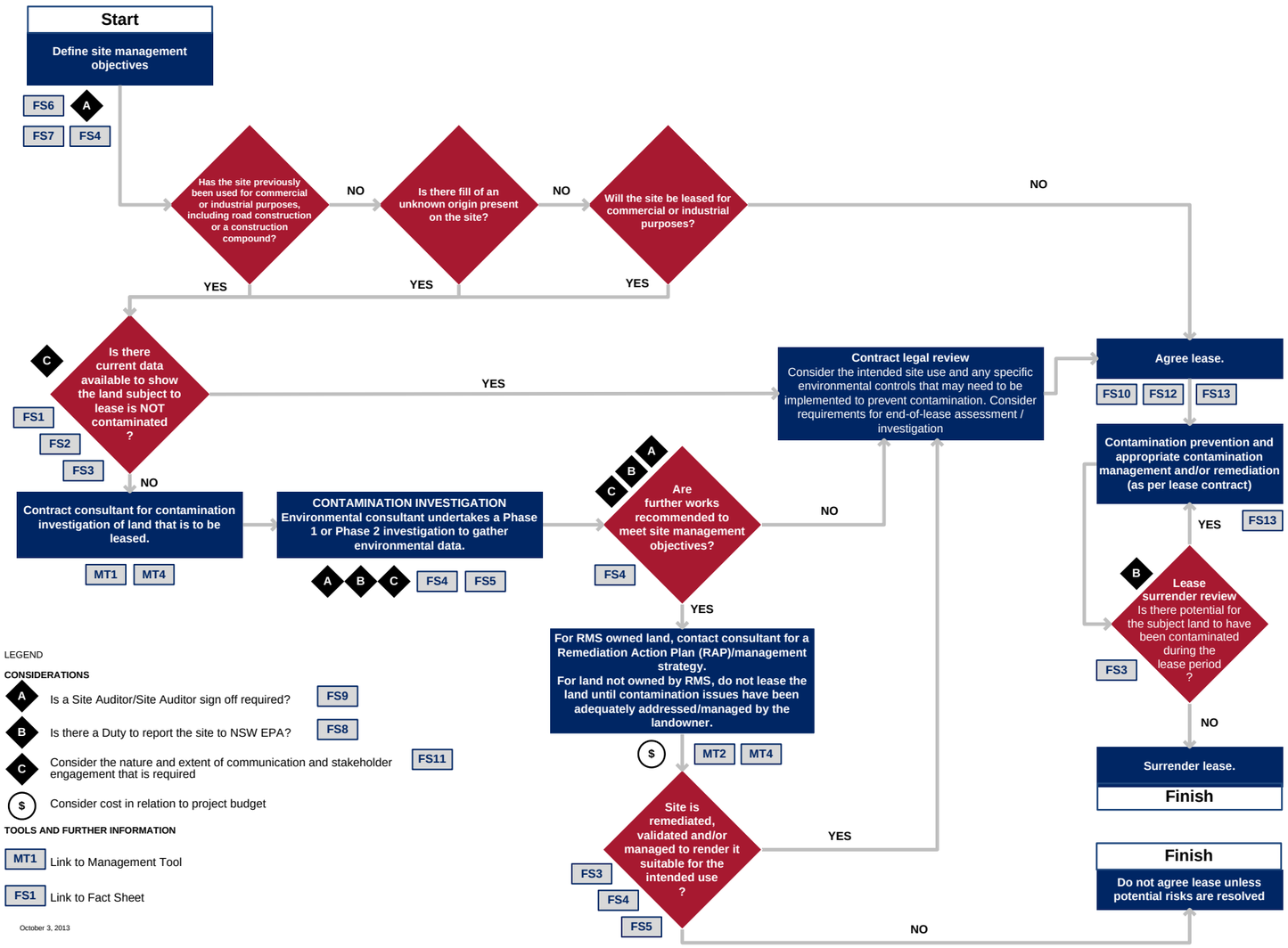
6.3 Selling land

Scenarios and objectives	Risks and strategies
RMS frequently sells land that is surplus to requirements. Contamination may influence the sale price, the potential for rezoning and the buyer's intended land use. Residual contamination may pose a potential liability to RMS after sale. Careful consideration of potential contamination issues is essential before approving sites for sale.	By failing to assess potential contamination, RMS may unknowingly sell assets that are contaminated and could incur future liabilities associated with environmental or human health impacts. RMS has a responsibility to the community of NSW to ensure that land sold is either fit for purpose or that its contamination status is properly assessed and disclosed. Reports about the environmental condition of a property must be made available to prospective purchasers to demonstrate due diligence. In some cases, a site may be sold where contamination exceeds the criteria for the zoned land use with full disclosure of information. In this instance, legal branch must be consulted for a legal assessment of any residual risk and to address this risk within the contract of sale



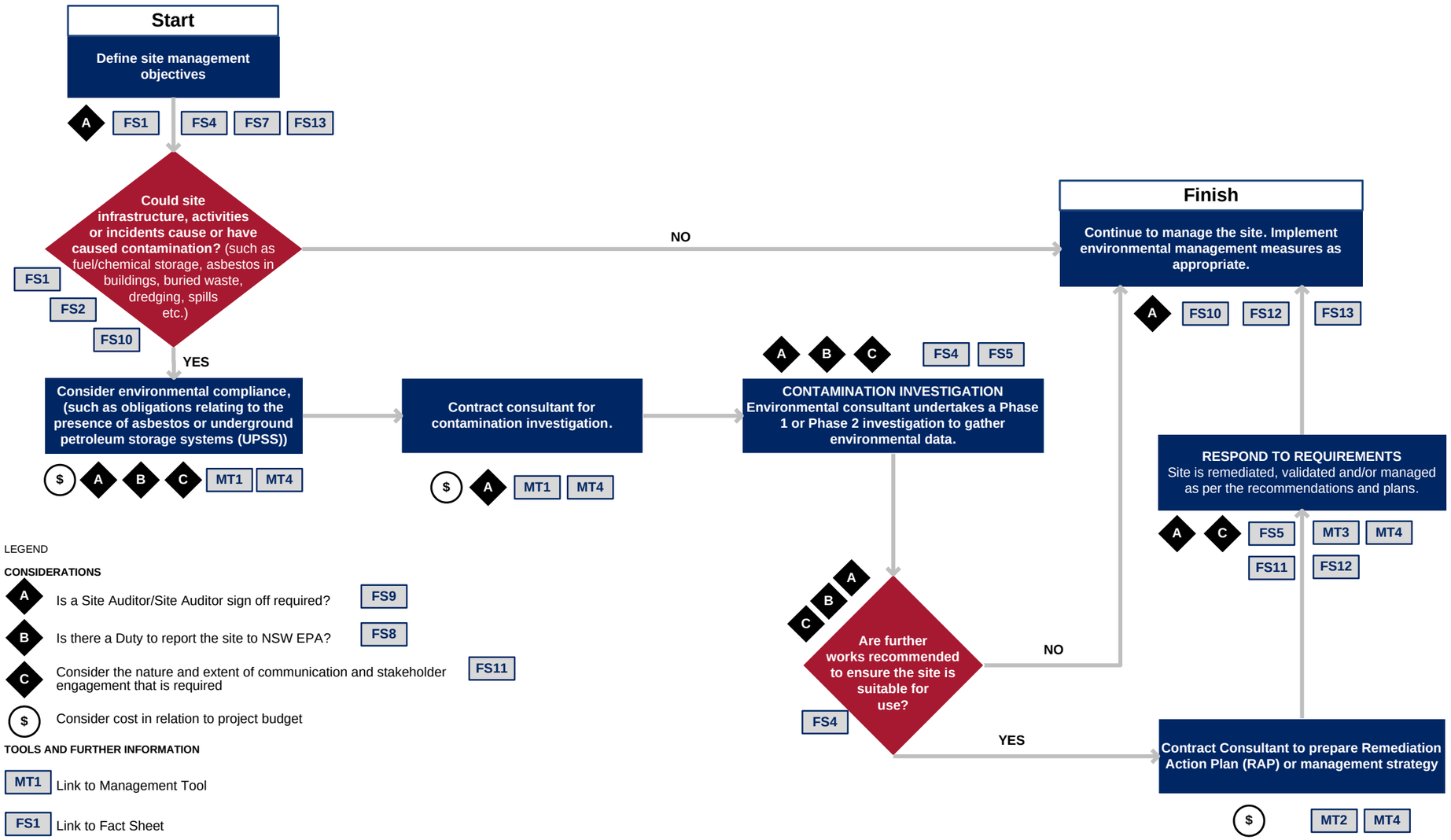
6.4 Leasing to or from a third party

Scenarios and objectives	Risks and strategies
RMS leases sites to and from third parties under various lease agreements. Any land that RMS leases must be suitable for use under the current zoning or existing use rights. Before agreeing a lease, RMS should consider the contamination status of the land. The environmental benchmarking investigation serves to identify contamination (existing or caused during the lease period) so that responsibilities and liabilities can be recognised, determined and addressed by the relevant party.	When RMS leases land to a third party, that land might be contaminated by activities of the lessee. Similarly, when RMS leases a site from a third party, contamination may already exist that may pose work health risks or environmental harm. If no benchmark is established at the beginning of a lease, RMS may be held accountable for residual contamination. In some circumstances, a benchmark investigation is required to establish the pre-lease condition of any site leased to RMS or by RMS. Responsibility for completing the investigation should be mutually agreed between the parties involved. Give forethought to lease surrender and agree upfront and document in the contract which party is responsible for assessing the site's environmental condition at the end of the lease. Requesting lessees to detail the proposed use of the site may also help RMS anticipate the potential for contamination to occur during the lease and then implement control measures as required (such as requesting an environmental management plan).



6.5 Ongoing management of an existing RMS site

Scenarios and objectives	Risks and strategies
The condition of RMS owned or managed land (including waterways) should be considered to make sure it is suitable for use and complies with legislative requirements. It is beneficial to identify contamination early to avoid ongoing impacts. By proactively managing contamination issues, the risk of harm to RMS staff, the community or the environment can be appropriately managed. Where there are concerns that contamination could be present, or where underground petroleum storage tanks are present, site investigations should be done so associated risks and liabilities can be recognised and minimised. Decisions can then be made on any requirements to remediate or otherwise manage any contamination on the site.	Land contamination has the potential to cause off-site pollution and/or the exposure of site workers or the community to contamination. If sites are not managed appropriately, and the condition of the site and surrounds is left to degrade, they may become difficult or expensive to resolve. The operating practices for both RMS and lessee activities should not cause pollution or contaminate the site. Where there is potential for activities to cause contamination, the activity must be managed and controlled to prevent contamination of the site. Report any environmental incidents to RMS Environment Branch immediately (see "RMS Environmental Incident Classification and Reporting Procedure") so impacts can be appropriately managed.



7. Definitions and Acronyms

Table 6: Definitions and Acronyms

Word / Acronym	Definition / Full text
AMP	Asbestos Management Plan
ANZECC	Australian and New Zealand Environment and Conservation Council
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ASS/ASM	Acid Sulfate Soils/ Materials
ASSMP	Acid Sulfate Soils Management Plan
BTEX	Benzene, toluene, ethylbenzene and xylenes
CEMP	Construction (or Contractor) Environmental Management Plan
Contamination	The condition of land or water where any chemical substance or waste has been added at above background level and represents, or potentially represents, an adverse health or environmental impact (NEPM, 1999).
DCP	Development Control Plan
EMP	Environmental Management Plan
EPA	Environmental Protection Authority
EPL	Environment Protection Licence
EPP	Environment Protection Plan
FS	Factsheet
MT	Management Tool
NEPC	National Environmental Protection Council
NEPM	National Environmental Protection Measure
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
Purchase	Buying land including compulsory acquisition and land transfers
RAP	Remediation Action Plan
RFP	Request for proposal
RMS	Roads and Maritime Services
SEPP	State Environmental Planning Policy
UPSS	Underground Petroleum Storage System
WHS	Work, Health and Safety

8. References

References are provided below for all documents listed within this Guideline and attached Factsheets.

8.1 Legislation

All of the following legislation can be found at: www.legislation.nsw.gov.au

- *Contaminated Land Management Act, 1997* (CLM Act)
- Contaminated Land Management Regulation 2008
- *Environmental Planning and Assessment Act 1979* (EP&A Act)
- Environmental Planning and Assessment Regulation 2000
- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
- *Maritime Services Act 1935*
- *National Environment Protection Council (NSW) Act 1995*
- *Ports and Maritime Administration Act 1995* (PMA Act) and Amendment Regulation 2011
- *Protection of the Environment Operations Act 1997* (POEO Act)
- Protection of the Environment Operations Act (Underground Petroleum Storage Systems) Regulation 2008
- *Threatened Species Conservation Act 1995*
- *Work Health and Safety Act 2011* (WHS)
- Work Health and Safety Regulation 2011

8.2 NSW Environmental Protection Authority (EPA) Guidelines

All of the following EPA Guidelines are available at: www.environment.nsw.gov.au/clm/guidelines.htm

- Guidelines for Assessing Service Station Sites, 1994
- Sampling Design Guidelines, 1995
- Guidelines for the Vertical Mixing of Soil on Former Broad-acre Agricultural Land, 1995
- Guidelines for Assessing Banana Plantation Sites, 1997
- Guidelines for the NSW Site Auditor Scheme, 1998.
- Guidelines for Assessing Former Orchards and Market Gardens, 2005/195
- Guidelines on the Duty to Report Contamination under the CLM Act, 2011
- Guidelines for the Assessment and Management of Groundwater Contamination, 2007
- Guidelines for Consultants Reporting on Contaminated Sites, 1995 (reprinted 2011)

8.3 Other environmental guidelines

- Australian and New Zealand Environment Conservation Council (ANZECC) 2000 *Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 2000.*
- ANZECC/NHMRC 1992 *Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites.*
- Australian Government Department of Sustainability, Environment, Water, Population and Communities 2009 *National Assessment Guidelines for Dredging (Commonwealth of Australia, 2009).*
- National Environment Protection Council 2013 *National Environment Protection (Assessment of Site Contamination) Measure 2013.*

- National Health and Medical Research Council (NHMRC) 2011 *Australian Drinking Water Guidelines (ADWG), 2011.*
- NSW Acid Sulfate Soil Management Advisory Committee 1998 *NSW Acid Sulfate Soils Manual*
- Simpson, SL, Batley et al, WA 2005 *Handbook for Sediment Quality Assessment* (CSIRO; Bangor NSW).

8.4 Planning guidance and documents

- Department of Urban Affairs and Planning 1998 *Managing Land Contamination: Planning Guidelines – SEPP 55 – Remediation of Land, 1998)*
- NSW Regulation 2005 *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (SREP 2005)*
- NSW Government Department of Planning 2005 *Sydney Harbour Foreshore and Waterways Area Development Control Plan (2005)*

8.5 Standards Australia

- Guide to Sampling and Investigation of Potentially Contaminated Soil Part 1: Non-Volatile and Semi-Volatile Compounds AS4482.1-2005.
- Guide to Sampling and Investigation of Potentially Contaminated Soil. Part 2: Volatile substances. AS4482.2-1999
- Guidance on the design, installation operation and removal of underground tanks AS 4897-2008
- Water Quality Sampling, Part 11: Guidance on Sampling of Groundwater AS/NZS 5667.11:1998

8.6 Useful websites

- Australian Standards – www.standards.org.au
- Australian Government Legislative Instruments – www.comlaw.gov.au
- Dept of Sustainability, Environment, Water, Population & Communities – www.environment.gov.au
- Environment Protection and Heritage Council – www.ephc.gov.au
- National Environment Protection Measures (NEPMs) – www.ephc.gov.au/nepms
- National Health and Medical Research Council (NHMRC) – www.nhmrc.gov.au
- NSW Environment Protection Authority – www.environment.nsw.gov.au/clm
- NSW Government Department of Planning and Infrastructure – www.planning.nsw.gov.au
- WorkCover Authority of NSW – www.workcover.nsw.gov.au

8.7 Roads and Maritime Services policies and documents

- Code of Practice for Water Management, 1999
- Community Engagement Manual, 2012
- Environmental Direction No. 3 Purchase of land for compensatory habitat
- Environmental Impact Assessment Guidelines
- Environmental Incident Classification and Reporting Procedure, 2012
- Environment Policy, 2012
- Guide for Construction Water Quality Monitoring, 2005
- Guidelines for the Management of Acid Sulfate Materials; Acid sulfate soils, acid sulfate rock and monosulfidic black ooze, 2005

- Heritage and conservation register
- Procedure for Aboriginal Cultural Heritage Consultation and Investigation
- Procedures for tendering
- RMS Unexpected Archaeological Finds Procedure
- Water Policy

Factsheet 1
Statutory framework

Transport Roads & Maritime Services

RMS Guideline for the Management of Contamination | Last updated:

Legislative drivers and guidance for managing contamination

There are a number of legislated Acts and Regulations that establish the requirements for contaminated land management. The flowcharts in the RMS Guideline for the Management of Contamination are designed to identify where statutory requirements need to be considered.

Key legislation

Contaminated Land Management Act, 1997 (CLM Act)

The CLM Act allows the EPA to respond to contamination of soil, groundwater and surface water and specifies the level of responsibilities for managing contamination. It also provides the regime for the accreditation of site auditors (FS9). Section 60 of the Act introduces a mandatory obligation for a person whose activities have contaminated land or owns land that is contaminated (whether before or during the owner's ownership) to report contamination in writing to the EPA, known as 'Duty to Report' (FS8).

Environmental Planning and Assessment Act, 1979 (EP&A Act)

RMS has a statutory responsibility under the Act to consider the impacts of its activities on the environment. RMS fulfils this responsibility using the environmental impact assessment (EIA) process. The likely environmental impacts of a proposed activity are assessed to inform the decision to proceed. The Act establishes a model that regulates land use planning (FS2) and environmental assessment and contains important provisions relating to community involvement and environmental protection. State Environmental Planning Policies are regulated under the EP&A Act.

Protection of the Environment Operations Act 1997 (POEO Act)

The POEO Act allocates responsibilities between the EPA, local councils and other public authorities for activities with potentially significant environmental impacts. Authorities can issue environment protection notices to stop polluting activities, manage pollution incidents and to enforce proceedings relating to environmental offences. Licenced premises under the POEO Act are required to notify the EPA in writing of any pollution incidents. Pollution prevention is particularly relevant to the management of contaminated site remediation activities. Stormwater management must be of a high standard to prevent the release of contaminated stormwater from remediation sites.

Maritime Services Act 1935

This Act stipulates that permission from RMS is required to build or alter any structures on RMS managed waterways. A tenure agreement is required to occupy or build upon any RMS waterways assets. Any development on RMS land must provide evidence of applicable development and construction approvals before a new tenure agreement can be finalised. The consideration of sediment contamination for marine-based private developer proposals and NSW Maritime works is a key consideration in his guideline.

Ports and Maritime Administration Act, 1995 and Amendment Regulation, 2011 (PMA Act)
RMS is constituted under the PMA Act as a statutory authority representing the Crown with the principal function of managing property vested in it, including acquiring, developing and leasing land for maritime commercial, industrial and recreational purposes. Under the Act, RMS is responsible for managing seabeds in NSW, dry land, intertidal zones, and a number of significant maritime properties (FS6)(FS7).

Contaminated Land Management Regulation, 2008
The regulation is made under the CLM Act 1997 and outlines the requirements for site clean-up while reinforcing the 'polluter pays' principle. The regulation gives the EPA the power to require certain people to investigate site contamination, issue management orders to those who are responsible for the contamination and to ensure site management and remediation are delivered and satisfactory outcomes are achieved. Under the regulation, landowners must notify the EPA of contamination when they become aware of that contamination (FS8).

POEO Act (Underground Petroleum Storage Systems) Regulation, 2008
Under the POEO Act 1997 this regulation requires owners and operators of underground petroleum storage systems (UPSS) to regularly check for leaks in the fuel tanks used to store and handle petroleum products. It also outlines the minimum standards for day-to-day environmental management of UPSS. Any sites where UPSS are present must be managed in accordance with this regulation. (FS13).

Work Health and Safety Act 2011 (WHS) and the WHS Regulation 2011
The WHS Act and Regulation set out the legal obligations that RMS must comply with to provide for the health and safety of workers. All staff at RMS have a due diligence to ensure proactive WHS management in all aspects of its operations, including the management of contamination. See factsheet (FS5).

State Environmental Planning Policies (SEPPs)
SEPPs are State Government planning controls that deal with issues considered to have state significance. SEPPs are environmental planning instruments (EPIs) under the EP&A Act. SEPP 55 relates directly to the remediation of contaminated land and specifies when consent is/is not required for remediation works, and provides the considerations that are relevant in rezoning land and determining development applications. Further information is provided in factsheet (FS2).

Key guidance
The EPA has produced a series of contaminated land management guidelines to provide technical direction for the management of contaminated lands. An understanding of the guidelines provides a sound basis for decision making when it comes to contaminated site issues.

Guidelines for Assessing Service Station Sites, 1994
These provide the sampling protocols to be followed in the investigation and validation of service stations and other fuel storage/dispensing facilities.

Sampling Design Guidelines, 1995
These describe the statistically viable methods of developing a sampling plan for a site. In general, compliance with the sampling design guidelines is essential in obtaining data that is statistically applicable to managing and/or validating a contaminated site.

Guidelines on the Duty to Report Contamination under the CLM Act, 2011
Detail provided in (FS8).

Guidelines for the NSW Site Auditor Scheme, 1998
Detail provided in (FS9).

Guidelines for the Assessment and Management of Groundwater Contamination, 2007

Outlines the best practice framework for assessing and managing contaminated groundwater in NSW.

Guidelines for Consultants Reporting on Contaminated Sites, 2011

Outlines the contaminated site investigation, remediation and validation process and provides checklists of the detail that should be incorporated into reports for each stage of the contaminated site investigation process.

National Environment Protection (Assessment of Site Contamination) Measure 1999

A policy framework to assess site contamination that provides a series of guidelines covering investigation levels for soil and groundwater, data collection, sample design and reporting, risk assessment methodologies, community consultation and risk communication, protection of health and the environment during contaminated site investigation.

Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 2000

Published by Australian and New Zealand Environment and Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ). The national guidelines for water quality management provide criteria against which the health of such systems can be monitored. They are frequently used by contaminated land consultants to assess groundwater and surface water quality.

Australian Drinking Water Guidelines (ADWG), 2011

Published by the NHMRC and Natural Resource Management Ministerial Council of Australia and New Zealand, the ADWG provides guidance on what constitutes good quality drinking water and is frequently used by contaminated land consultants to assess groundwater quality where the resource may be used as a drinking water supply.

FURTHER INFORMATION
For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Factsheet 2
Planning context

RMS Guideline for the Management of Contamination | Last updated:

Contaminated land and the planning regime

RMS staff and contractors must obtain the appropriate planning approvals for contaminated land activities and adequately address any conditions specifically relating to contamination.

The Environmental Planning and Assessment Act 1979 (the EP&A Act)

The primary legislation governing land use and development in NSW. Recognising its responsibilities under the Act, RMS has established processes to ensure all statutory planning and environmental impact assessment requirements are an integral part of project planning, implementation, operations and maintenance.

Under the EP&A Act, State Environment Planning Policies (SEPPs) have been implemented to cover issues of state-wide planning importance. Some of these are discussed in more detail within this factsheet. RMS staff and contractors can obtain Section 149 certificates from local councils so site-specific planning controls can be determined.

State Environmental Planning Policy 55 – Remediation of Land (SEPP 55)

SEPP 55 is the specific planning policy that governs all remediation work in NSW, including any remediation work accompanying roads or ports activities. SEPP 55 outlines the relevant procedures for remediating contaminated land and states a consent authority (local council) must not consent to any development unless:

- It has considered if the land is contaminated and if the land is contaminated, it is satisfied that the land is suitable in its contaminated state for the purpose for which the development is to be carried out
- Or if the land requires remediation, it is satisfied that the land will be remediated before the land is used for that purpose.

Whether development consent is needed during remediation work should be determined when preparing a Remediation Action Plan (RAP). Under SEPP 55, remediation works are classified as either Category 1 or Category 2, and are generally differentiated by the level of environmental impact.

Category 1: requires development consent

Category 1 work includes designated development, and other remediation work identified for potential environmental impacts (SEPP 55, clause 9). Category 1 includes remediation work that:

- Is proposed on land declared as critical habitat under the *Threatened Species Conservation Act 1995*
- Is likely to have a significant effect on threatened species, populations, ecological communities or their habitats (as determined under the 7 part test in section 5A of the EP&A Act), and requires a species impact statement to be prepared
- Requires development consent under a SEPP (including any regional environmental plan)
- Is proposed in an area or zone identified in an environmental planning instrument as being an area of environmental significance
- Does not comply with a policy made under the contaminated land planning guidelines by the relevant council.

As Category 1 remediation work requires development consent, the following documents are required:

- Development application, including site plans.
- Statement of environmental effects (or EIS for designated development).
- RAP.

The documents will be publicly advertised for 30 days.

Based on this information, the consent authority determines whether or not to grant development consent for the remediation work. A consent authority must give development consent to all Category 1 remediation work unless it is satisfied there would be a more significant risk to human health or the environment from the remediation work (e.g. excavation works in a designated wetland).

Where Category 1 remediation work is 'designated development' it also requires an environmental impact statement (EIS). 'Designated development' is defined in the Environmental Planning and Assessment Regulation 2000. It includes some types of contaminated soil treatment works that treat large volumes of contaminated soil or are located in certain areas of environmental significance (eg. wetlands).

In some cases, Category 1 remediation work may become State Significant Development (SSD), and require an EIS prepared that is assessed by the Minister (or delegates) for Planning and Infrastructure. Category 1 remediation work becomes SSD if it is required by a management order under the *Contaminated Land Management Act 1997* (the CLM Act).

Category 2: May take place without development consent

Category 2 includes all remediation work that is not captured under Category 1 and can generally take place without development consent unless the specific work is inconsistent with council policy on contaminated land. Advice can be sought from the local council on whether specific restrictions apply. Before starting a Category 2 process, RMS must ensure obligations are met:

- The proposed remediation works must be assessed under Part 5 of the EP&A Act and a review of environmental factors prepared in accordance with the *RMS Environmental Impact Assessment Guidelines*.
- Provide written notice to the relevant local council at least 30 days before work starts.
- Council policy of approving Category 2 works may vary so advice should be sought from the relevant council. For all Category 1 and 2 remediation works, a completion notice must be submitted to local council within 30 days of the conclusion of remediation works.

State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP).

The Infrastructure SEPP provides specific planning provisions and development controls for 25 types of infrastructure works or facilities or 'designated development', including roads and ports.
Under the Infrastructure SEPP, RMS may undertake any pollution control facilities, OH&S measures and environmental management works as 'exempt development' without any need for approval, provided that work is completed in accordance with applicable pollution control provisions and guidelines.

Remediation works within a larger project

SEPP 55 (Clause 15) covers remediation work that is proposed as part of a larger overall project. For ancillary Category 2 works, project managers working on designated development projects may elect to treat remediation work as part of the overall planning approval for the project or separately under SEPP 55.

If a development is permissible without planning approval but involves ancillary Category 1 remediation work, RMS will need to obtain development consent for the remediation work, even if the remediation is part of a project that otherwise does not need consent under of the Infrastructure SEPP.

Specific development plans for Sydney Harbour

The Sydney Regional Environmental Plan (Sydney Harbour Catchment 2005 [a deemed SEPP] and the Sydney Harbour Foreshores and Waterways Area DCP (2005) cover the waterways, foreshores and the entire catchment of the Harbour. These documents establish a set of planning principles and controls for strategic foreshore sites, outlining matters for consideration for developments within the foreshores and waterways area, and include provisions relating to heritage conservation and environmental protection.

Summary of RMS obligations

Contaminated sites must be thoroughly documented, flagged and addressed throughout the planning assessment and approvals process. All remediation work must be carried out in accordance with the CLM Act, SEPP 55, NSW Guidelines for the Assessment of Contaminated Sites and relevant Planning Guidelines. Additional requirements for the management of contamination are provided within Local Environmental Plans and Development Control Plans (although these may not always apply for Part 5 State Significant Infrastructure projects).

FURTHER INFORMATION

Section 149 certificates can be obtained from local councils to determine the site-specific planning controls. Further information about SEPPs can be found at www.planning.nsw.gov.au. Information on 'designated development' can be found in the relevant LEP and within the *Environmental Planning and Assessment Regulation 2000.*

For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Factsheet 3
Identification

RMS Guideline for the Management of Contamination

Last updated:

How to identify potential contamination

There are numerous activities that can cause contamination, however the signs are not always obvious. If you have reason to believe that contamination has affected a site that RMS intends to lease, purchase or sell, seek advice to determine if further investigation is needed.

Could contamination exist?

In general, contaminated sites are the result of polluting practices from commercial, agricultural and industrial land uses or sites that have previously been filled with contaminated material. Contamination may also exist in the road corridor as a result of previous accidents and spills. RMS buys, manages and sells sites that might be contaminated. The land's environmental condition must be taken into consideration for any purchase or sale, and for ongoing site management by RMS.

At the inception stage of any project it is important to ask the question, 'Could contamination exist at this site?

A number of tools can be used to answer this question and decide whether a contamination investigation is likely to be required. There are multiple lines of evidence that may indicate whether or not a site may have been contaminated.

Identification and reporting of possible contamination is the responsibility of all RMS staff and contractors. However, the management of any given contamination issue is the direct responsibility of the project or site manager.

Contamination indicators

Incidents

Documented or anecdotal evidence of environmental spills or environmental incidents, losses, or other uncontrolled releases of fuels or dangerous goods, illegal dumping or burials.

Records

Publicly available records of notice under Section 58 of the CLM Act (such as preliminary investigation orders, declarations of significantly contaminated land, management or ongoing maintenance orders or voluntary management proposals), environmental protection licences, disclosure of previous environmental reports, dangerous goods or hazardous materials registers, management plans, records of community complaints about contamination or media reports of incidents.

Observations

Staining, odours, discolouration of soil or water, stressed or dead vegetation or wildlife, dumped rubbish, poorly stored items containing hazardous chemicals (such as used batteries, paints, oils, greases and solvents) corroded drums, unmanaged stockpiles (such as rubbish, bitumen or soils), indications of potentially contaminating previous uses, such as underground tanks, fuel bowsers, vent pipes and other chemical storage infrastructure.

Establishing the site context

Appropriate identification and management of contaminated land is essential to limit the potential liabilities to RMS. These liabilities include the potential for future human health impacts from contact with pollutants and/or environmental impacts due to the exposure, movement or redistribution of pollutants from contaminated land.

RMS staff and contractors must consider the current and historical land uses of the subject site. As contamination can migrate across boundaries both above and below ground via surface water, groundwater, sediment and dust, the current and historical uses of surrounding land should also be considered.

If when managing a site or project you become aware that any of the activities listed have occurred on or next to the subject land, seek specialist advice to establish the management or investigation actions that may be required.

The following tables (adapted from Department of Urban Affairs and Planning, 1998*)* provides a list of industries and associated chemicals which may prompt further investigation of a site.

Table FS3a: Common Industries and Associated Chemical Use

Industry	Associated Chemical Use
Agricultural / horticultural activities	See fertiliser, insecticides, fungicides and herbicides under 'Chemicals manufacture activities and use'.
Airports	Hydrocarbons - aviation fuels and metals particularly aluminium, magnesium and chromium
Asbestos production / disposal	Asbestos
Battery manufacture / recycling	Metals such as lead, manganese, zinc, cadmium, nickel, cobalt, mercury, silver, antimony and acids (sulfuric acid).
Breweries / distilleries	Alcohols - ethanol, methanol and esters
Defence works	See Explosives under 'Chemicals manufacture and use'; also 'Foundries', 'Engine works' and 'Service stations.
Drum reconditioning	See 'Chemicals manufacture and use'
Dry cleaning	Trichlorethylene and 1,1,1–trichloroethane Carbon tetrachloride Perchlorethylene
Electrical	PCBs (transformers and capacitors), solvents, tin, lead, copper, mercury
Engine works	Hydrocarbons, metals, solvents, acids/alkalis and refrigerants (Chlorofluorocarbons, hydrochlorofluorocarbons, hydrofluorocarbons) and antifreeze (ethylene glycol, nitrates, phosphates and silicates
Foundries	Metals, particularly aluminium, manganese, iron, copper, nickel, chromium zinc, cadmium and lead and oxides, chlorides, fluorides and sulfates of these metals, acids (sulfuric and phosphoric, phenolics and amines) and coke/graphite dust.
Gas works	Ammonia, cyanide, nitrate, sulfide, thiocyanate, aluminium, antimony, arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, selenium, silver, vanadium and zinc, BTEX, phenolics, PAHs and coke.
Iron and steel works	BTEX, phenolics, PAHs, metals and oxides of iron, nickel, copper, chromium, magnesium, manganese and graphite.
Landfill sites	Alkanes and ammonia, sulfides, heavy metals, organic acids

Table FS3a: Common Industries and Associated Chemical Use	
Industry	**Associated Chemical Use**
Marinas	Chemicals associated with antifouling paints - copper, tributyltin (TBT). See 'Engine works' and Electroplating metals under 'Metal treatments'
Metal treatment - Electroplating	- Nickel, chromium, zinc, aluminium, copper, lead, cadmium, tin, sulfuric, hydrochloric, nitric, phosphoric sodium hydroxide, 1,1,1–trichloroethane, tetrachloroethylene, toluene, ethylene glycol, cyanide compounds.
Metal treatment - Liquid carburizing baths	Sodium, cyanide, barium, chloride, potassium chloride, sodium chloride, sodium carbonate, sodium cyanate
Mining and extractive industries	Arsenic, mercury and cyanides and also explosives under 'Chemicals manufacture and use' Aluminium, arsenic, copper, chromium, cobalt, lead, manganese, nickel, selenium, zinc and radio-radionuclides. (The list of heavy metals should be decided according to the composition of the deposit and known impurities).
Power stations	Asbestos, PCBs, fly ash metals, water treatment chemicals
Printing shops	Acids, alkalis, solvents, chromium, see also Photography under 'Chemicals manufacture and use'.
Railway yards	Hydrocarbons, arsenic, phenolics (creosote), heavy metals, nitrates, ammonia
Scrap yards	Hydrocarbons, metals, solvents
Service stations / fuel storage	Aliphatic hydrocarbons, BTEX, PAHs, phenols and lead.
Sheep and cattle dips	Arsenic, organochlorines, organophosphates, carbamates, synthetic pyrethoids
Smelting and refining	Metals, the fluorides, chlorides and oxides of copper, tin, silver, gold, selenium, lead and aluminium
Tanning and associated trades	Chromium, manganese, aluminium, ammonium sulfate, ammonia, ammonium nitrate, arsenic phenolics, formaldehyde, sulfide, tannic acid.
Wood preservation	Chromium, copper, arsenic, naphthalene, ammonia, pentachlorophenol, dibenzofuran, anthracene, biphenyl, ammonium sulfate, quinoline, boron, creosote, organochlorine pesticides
Water and sewage treatment	Aluminium, arsenic, cadmium, chromium, cobalt, lead, nickel, fluoride, lime, zinc

Table FS3b: Common Chemicals and their ingredients	
Chemical	**Ingredients**
Acid/alkali manufacture/use	Mercury (chlor/alkali), sulfuric, hydrochloric and nitric acids, sodium and calcium hydroxides
Adhesives/resins	Polyvinyl acetate, phenols, formaldehyde, acrylates, phthalates
Dyes	Chromium, titanium, cobalt, sulfur and nitrogen organic compounds, sulfates, solvents
Explosives	Acetone, nitric acid, ammonium nitrate, pentachlorophenol, ammonia, sulfuric acid, nitroglycerine, calcium cyanamide, lead, ethylene glycol, methanol, copper, aluminium, bis(2-ethylhexyl) adipate, dibutyl phthalate, sodium hydroxide, mercury and silver.

Table FS3b: Common Chemicals and their ingredients	
Chemical	**Ingredients**
Fertiliser	Calcium phosphate, calcium sulfate, nitrates, ammonium sulfate, carbonates, potassium, copper, magnesium, molybdenum, boron and cadmium.
Flocculants	Aluminium
Foam production	Urethane, formaldehyde, styrene
Fungicides	Carbonates, copper sulfate, copper chloride, sulfur, chromium, zinc
Herbicides	Ammonium thiocyanate, carbonates, organochlorines, organophosphates, arsenic, mercury, triazines
Paints	Heavy metals - arsenic, barium, cadmium, chromium, cobalt, lead, manganese, mercury, selenium, zinc and titanium and solvents - toluene oils either natural (e.g. pine oil) or synthetic
Pesticides	Active ingredients - arsenic, lead, organochlorines, organophosphates, sodium tetraborate, carbamates, sulfur, synthetic pyrethroids and solvents - xylene, kerosene, methyl isobutyl ketone, amyl acetate and chlorinated solvents.
Petroleum	Aliphatic hydrocarbons, BTEX, PAHs, phenols and lead.
Pharmaceutical	Solvents - acetone, cyclohexane, methylene chloride, ethyl acetate, butyl acetate, methanol, ethanol, isopropanol, butanol, pyridine methyl ethyl ketone, methyl isobutyl ketone and tetrahydrofuran.
Photography	Hydroquinone, sodium carbonate, sodium sulfite, potassium bromide, monomethyl para-aminophenol sulfate, ferricyanide, chromium, silver, thiocyanate, ammonium compounds, sulfur compounds, phosphate, phenylene diamine, ethyl alcohol, thiosulfates, formaldehyde
Plastics	Sulfates, carbonates, cadmium, solvents, acrylates, phthalates, styrene
Rubber	Carbon black
Soap/detergent	Potassium compounds, phosphates, ammonia, alcohols, esters, sodium hydroxide, surfactants (sodium lauryl sulfate), silicate compounds, sulfuric acid and stearic acid and palm, coconut and pine, tea tree oils.
Solvents	Ammonia, benzene, toluene, ethylbenzene, xylene and chlorinated organics e.g. trichloroethane, carbon tetrachloride, methylene chloride

FURTHER INFORMATION

Appendix A of the *'Managing Land Contamination Planning Guidelines, SEPP 55 – Remediation of Land'* provides a detailed list of industries with a high contaminating potential and associated contaminants that can be accessed at: http://www.planning.nsw.gov.au/assessingdev/pdf/gu_contam.pdf.

For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Factsheet 4
Assessment

Transport Roads & Maritime Services

RMS Guideline for the Management of Contamination | Last updated:

General stages of assessing contamination

Once it is identified there may be contamination, contract a consultant to assess the nature, extent and severity of contamination to determine if the land is suitable for the existing or intended use. Clearly define the site management objectives prior to beginning the investigation.

Defining site management objectives

Site management objectives include the intended land use, WHS objectives and environmental objectives. Note that RMS's intended land use may include the sale of residual property at the completion of a project. Site managers should ensure that the site investigation scope of works is designed to meet the site management objectives.

If it is considered that contamination may exist, RMS staff and contractors should seek advice from a member of the Contaminated Site Assessment and Management Services Consultant Panel (see Section 5.2 of the RMS Guideline for the Management of Contamination) who can advise on the next steps.

General stages of a land contamination investigation

The stages of a land contamination investigation may include:

- Stage 1 – Preliminary site investigation (Phase 1)
- Stage 2 – Detailed site investigation (Phase 2)
- Stage 3 – Assessment of the management options
- Stage 4 – Remedial Action Plan (RAP)
- Stage 5 – Remediation, validation and monitoring.

It is essential to address each of the stages adequately and make sure the recommendations from each stage are appropriate for the current site zoning and the RMS site management objectives. For smaller site contamination investigations it may be possible to combine some of the stages to streamline the project and to reduce costs.

Stage 1 – Preliminary site investigation

Stage 1 should be fulfilled as a minimum requirement for any site where potentially contaminating activities have occurred (FS3). This will generally involve a site inspection and a determination of the:

- History of the site and surrounds
- Chemicals of interest
- Proposed use
- Physical site setting.

The results of the Stage 1 investigation are used to determine if further investigations are required.

A full Stage 1 may not be required if there is enough information in RMS site files to proceed directly to Stage 2, 3 or 4. This can be determined by the appointed Contaminated Site Assessment and Management Services Consultant Panel member.

Following a Stage 1 investigation, it may be necessary to engage a site auditor to approve the further investigation, remediation and validation of a site (FS9).

Stage 2 – Detailed site investigation

A detailed investigation involves sampling environmental media (soils, groundwater, surface water and/or sediments) and laboratory analysis of these samples for the chemicals of interest. Multiple investigations may be required for complex sites as new information becomes available from each round of sampling. Where there is known contamination, the sampling program must investigate both the known contaminated site, and the area in the immediate vicinity (both laterally and vertically) of the known contamination. The investigation results are compared to specific criteria for each chemical of concern in relation to the current and intended land use.

The investigation report must include a description of the contaminated areas of the site, contaminant concentrations in relation to guideline criteria, the potential impacts on the environment and human health and areas requiring further management or remediation. After the results are assessed, the consultant may recommend additional investigations to delineate contamination. In some cases where contamination poses a risk of harm to either human health or the environment, the NSW EPA must be informed of the contamination (FS8).

Stage 3 – Assessment of the management options

In the case where the Stage 1 or 2 investigations reveal the site is suitable to meet the intended land use criteria, the report(s) effectively serve(s) as the validation report and no additional investigation or management is required. An auditor can sign off the report/s if required (FS9).

RMS staff and contractors should ensure that environmental reports and records are appropriately managed (FS10), including provision of reports to the NSW EPA (FS8) and as part of any sale or lease where full disclosure of environmental information is required for due diligence purposes.

If the site investigation indicates contaminants are present at levels that exceed the adopted investigation levels, further action will be required.

RMS staff and contractors must seek advice from the consultant to determine the most appropriate management strategy for the site. A risk-based management approach can be considered in some circumstances, and will generally cost far less than physical remediation of the site.

Stage 4 – Remedial action plan (RAP) and approvals for remediation works.

The RAP documents the remediation goals and actions required to mitigate any unacceptable environmental or human health risks so the site can be rendered suitable for the intended land use. The RAP describes the methodology required to treat or dispose of contaminated material, the necessary environmental controls, the validation goals, methodology for assessing risk and any regulatory approvals required for the works (such as licences and planning approvals (FS2). Consultants can help obtain the necessary approvals.

RMS staff must approve the RAP before starting remediation works. Only once the appropriate planning and regulatory approvals have been finalised, can the remediation works begin. Where a site auditor has been appointed to oversee the works, they also have to endorse the RAP before work starts (FS9).

Seek advice on estimated costs for remedial works from the consultant (to be provided separately from investigation / validation reports). Templates have been provided as part of the RMS Guideline for the Management of Contamination to help project managers when engaging and appointing specialists.

Stage 5 – Remediation, validation and monitoring

Remediate in accordance with the RAP. To demonstrate site remediation is successful, post-remediation validation samples are collected to ensure RAP goals have been fulfilled. If the validation sample results exceed the RAP site criteria, the consultant will prepare a strategy to ensure the remediation goals are achieved. RMS staff and contractors should approve any additional remediation and/or validation works required.

Once the goals have been reached, the appointed consultant will provide a validation report, which must detail any ongoing monitoring required to manage the site. Where a site auditor has been appointed to oversee the works, they must approve the final report to complete the process (FS9)

Reviewing the consultant's proposal and work

Proposals from consultants can vary considerably in scope, cost and the technical detail provided. If in doubt about any aspect of a proposal, contact your regional environment manager for advice.
Once investigations have been completed, consultant reports must be reviewed to ensure they meet the requirements of the brief and the management outcomes presented are reasonable and can be practically implemented. A checklist is provided within the NSW Guidelines for Consultants Reporting on Contaminated Sites, 1997, which you can use to ensure the consultant's work is satisfactory. If in doubt about any aspect of a report, contact your regional environment manager for advice.

For further information refer to Section 3.6 of the RMS Guideline for the Management of Contamination.

Specialised investigations

Where RMS staff and contractors find sites that contain anything from following list of materials, they will require specialised investigation:

- Unexploded ordnance
- Radioactive substances
- Biologically pathogenic materials and waste
- Contaminated marine sediments.

FURTHER INFORMATION
A checklist is provided within the NSW DEC Guidelines for Consultants Reporting on Contaminated Sites, 1997 which is useful in checking that the relevant stages of the investigation have been undertaken adequately. For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Factsheet 5
Health and safety

RMS Guideline for the Management of Contamination | Last updated:

Work health and safety considerations when managing contamination

Contaminated sites present specific health and safety risks to RMS staff, contractors and the wider community. WHS regulations and codes of practice must be followed to eliminate the occurrence of these risks and potential liabilities to RMS.

Work health and safety legislation

Work health and safety (WHS) laws are administered by WorkCover and include:

- *Work Health and Safety Act 2011*
- Work Health and Safety Regulation 2011
- Codes of practice.

The WHS defines the health and safety duties of employers and businesses, workers and those defined as a 'person conducting a business or undertaking' (PCBU). These are particularly relevant to work done on contaminated land.

Codes of practice

The WorkCover codes of practice provide details on identifying hazards and managing risks to achieve the standards required under the WHS legislation. Many of the physical and chemical hazards and risks identified in the codes also relate to contaminated land investigation and remediation. A list of codes of practice can be found at www.workcover.nsw.gov.au.

Examples of hazards associated with contamination

Contaminated sites present WHS risks during investigations and remediation. Known and unknown hazards can be found at any stage of site works. The contaminants could be in a solid, liquid, vapour or dust form and may be in soil, surface water or groundwater. Natural and/or organic substances (eg. natural gas) can also pose risks to workers in certain circumstances or conditions.
Hazards can include physical, biological and chemical hazards.

Physical hazards

Fires, explosions, confined spaces, underground and aboveground services (e.g. gas lines and electricity), plant, manual handling and slips, trips and falls, sharps, building demolition, tank removal.

Biological hazards

Microorganisms, viruses, pathogens and biological toxins

Chemical and hazardous substances

Many flammable, combustible, poisons, explosive, asbestos, corrosives, radiological, asphyxiants, heavy metals and oxidants, as individual compounds or mixture

Exposure to hazards

Contaminants can enter the body by three routes:

- Ingestion through the mouth
- Inhalation through the lungs
- absorption through the skin or via cuts or abrasions (dermal contact)

Exposure to contaminants can affect human health and the environment in a variety of ways by:

- acute poisoning
- producing chronic cumulative damage to tissues and organs after repeated exposure
- sensitising some individuals to produce allergic reactions
- acting in more insidious ways (such as carcinogens, mutagens or teratogens)
- causing chemical burns and tissue destruction,
- by more complicated synergistic effects with mixtures of chemicals or exposure like asbestos and smoking.

During ground disturbance or demolition activities contaminants may become airborne when released as a fume, mist, gas, vapour or dust. People who assess and remediate contamination must be protected by appropriate work health and safety measures (including training).

Managing hazards and risks

Work health and safety plan

Develop a site-specific safety plan (work method statement or job safety analysis) to remove or appropriately mitigate the identified risks before the intrusive investigation or remediation of a contaminated site. The aim is to provide as safe a working environment as possible for workers and/or the public. The level of detail in the safety plan would reflect the complexity of the contaminated site conditions expected and would include:

- The likelihood of the hazard or risk occurring
- The degree of harm from the hazard or risk
- Knowledge about ways to eliminate or minimise the hazard/risk
- The availability and suitability of ways to eliminate or minimise the hazard/risk.

Members of the RMS Contaminated Site Assessment and Management Services Consultant Panel are experienced in developing such plans and can provide advice and recommendations on the most suitable approach to monitor and manage the risks associated with contamination on a site-specific basis.

Communication of risk

It essential to clearly communicate contaminated site hazards, risks and work practices. Make sure all workers and regular visitors of a contaminated site are familiar with the work health and safety plan via a formal site induction. At the very least, the induction must:

- Provide the fullest possible briefing on known or potential site contamination
- Identify key personnel that manage the contamination works
- Identify the physical and chemical hazards and risks, and actions to take to mitigate them, including any exclusion zones that are present, decontamination and waste disposal procedures
- Detail emergency response procedures, including the location of the nearest hospital and contact numbers for emergency services.

Community perception

Even where evidence suggests there is not likely to be adverse health risks to site workers or the surrounding community from contamination on an RMS site, often there can be a perceived risk. Manage it with effective community engagement and communication (FS11). Monitoring (site and boundary) may

be applicable to mitigate public concerns and should be detailed in any contamination investigation or remedial action plan.

Incident reporting

Report any direct contact with a potentially contaminated substance immediately as specified in the RMS incident reporting procedure. This will allow appropriate notification to authorities and management measures to be implemented. If there is any doubt on the need to report an incident, contact Environment Branch for advice. It is better to over-report than potentially miss a contamination risk.

As the effects of contact with contaminants on a suspect site may not be immediately apparent, also report any ill-effects noted following previous site works. RMS staff and contractors should set up and maintain records of accidents and incidents and implement and document any response actions.

FURTHER INFORMATION
Advice and information relating to WHS requirements can be accessed via www.workcover.nsw.gov.au For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Factsheet 6
Land-based considerations

Transport Roads & Maritime Services

RMS Guideline for the Management of Contamination | Last updated:

Responsibilities and considerations for land-based contamination

If a project involves earthworks, there is the potential for contamination to be present. This potential should always be considered, and investigations and management measures should be implemented that are appropriate for the scale and type of project.

Avoiding potential liabilities and adverse impacts

At the inception stage of any contaminated land investigation, RMS staff and contractors should consider the potential site conditions, including the potential for the work to cause adverse impacts.

Sites with fill

Assess the presence of fill as part of any preliminary site investigation to manage the potential liability of costly remediation. Many sites, particularly in urban areas, have previously been filled with materials of unknown origin, usually before RMS owned them. Fill can contain contaminants that not only make the site unsuitable for specific uses but also might adversely affect groundwater quality. As contaminated fill can be a legacy of historic site uses or illegal dumping, there is not usually an opportunity to seek clean-up costs from the original polluters; so as the owner, RMS is likely to be liable for these costs.

Potential for acid sulfate materials (ASM)

The potential for ASM should always be considered. ASM are naturally occurring soils, sediments and rock that contain sulfides, which, if exposed to air, can oxidise to form sulfuric acid. When soils containing ASM are disturbed or exposed, they can create unacceptable environmental impacts, including acidification of waterways, fish kills, habitat destruction, geotechnical instability and corrosion of structures. When ASM are suspected, refer to RMS Guidelines for the Management of Acid Sulfate Material and the NSW Acid Sulfate Soil Manual.

Agricultural land

Orchards and market gardens

The Guidelines for Assessing Former Orchards and Market Gardens (DEC, 2005) provide guidance on the minimum requirements for investigating orchards and market gardens to establish a confidence level that such sites would be suitable for more sensitive land uses such as residential.

Broad-acre agricultural land

The Guideline for the Vertical Mixing of Soil on Broad-Acre Agricultural Land (1995) provides an alternative option to landfill disposal. The procedure relies on diluting surface soil contamination by mixing with less contaminated or uncontaminated soils below and is the only case where the NSW EPA has approved dilution as a method of site remediation. Consultants should consider vertical mixing if agricultural land requires remediation.

Tick dip sites

Cattle tick dip sites can be encountered during site purchase, sale, management or construction activities. Cattle and sheep tick dip sites can contain residues of the chemicals used for tick control, including arsenic and DDT which can be harmful to human health and the environment. Information relating to the location and management of such sites is available on the NSW Department Primary Industries website. If RMS is proposing works in a former dip site an environmental investigation will be required. Environment Branch (regional or head office) or an RMS Contaminated Site Assessment and Management Services Consultant Panel member should be contacted for assistance.

Biodiversity

Some assets owned by RMS will contain important or rare flora and fauna. In its operations, RMS aims to avoid reducing biodiversity and where it cannot be avoided, to minimise, mitigate, or offset impacts. See RMS Environmental Directions No. 3 Purchase of land for compensatory habitat for more details.

Heritage and conservation

Assess heritage values, wherever possible, before any physical investigation of contamination of a site. The RMS Heritage Guidelines have been prepared to help RMS staff members in property management planning and environmental assessment of activities. The RMS Heritage and conservation register provides information on RMS assets that have heritage significance and is an essential tool in managing RMS assets and to meet statutory requirements.

The RMS Procedure for Aboriginal Cultural Heritage Consultation and Investigation should be followed for projects that could disturb Aboriginal cultural heritage.

The RMS Unexpected Archaeological Finds Procedure provides an overarching framework on how to proceed if unexpected archaeological finds are uncovered during project works and where to find technical assistance.

Resource management

Refer to and follow the following RMS documents as appropriate during contaminated land investigation or remediation works as applicable.

Water management

- RMS Water Policy
- Code of Practice for Water Management, 1999
- Environmental Management of Construction Site Dewatering
- Guide for Construction Water Quality Monitoring, 2005
- Temporary Stormwater Drainage for Road Construction
- Environmental Direction No. 19: Use of Reclaimed Water
- Environmental Direction No. 25: Management of Tannins from Vegetation Mulch
- Procedure for selecting treatment strategies to control road runoff

Environmental controls

- Erosion and Sedimentation Management Procedure
- Environmental Incident Classification and Reporting Procedure

Waste management

- RMS Waste Management Guide for Road Construction and Maintenance

FURTHER INFORMATION

RMS Guidelines can be accessed via the RMS website.

For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Factsheet 7
Estuarine and marine land

Transport Roads & Maritime Services

RMS Guideline for the Management of Contamination

Last updated:

Responsibilities and considerations when dealing with estuarine and marine land

The provisions of the Contaminated Land Management Act 1997 also apply to submerged land. Submerged land can have a legacy of contamination from historical maritime uses and runoff from adjacent industrial sites. This contamination must be considered as it would be in land-based situations, and investigations should be proportionate to the activities taking place.

RMS responsibilities for estuarine and marine land

Generally classified as a type of Crown land, estuarine and marine land borders the coast of NSW below the mean high water mark and includes most coastal estuaries, large riverbeds, wetlands and the State's territorial waters, which extend 5.5 km out to sea. RMS is responsible for parts of this estuarine and marine land, including the major ports of Sydney Harbour and its tributaries, Botany Bay, Newcastle Harbour and Port Kembla Harbour. RMS is also responsible for the development, management and use of wetlands, intertidal zones and dry land property and maritime structures (including wharves, moorings and navigational aids).

As a legacy of previous contaminating activities in NSW, areas of sediments within these waterways have become contaminated via runoff. Areas of particular concern are those immediately next to former chemical, industrial and/or gas manufacturing plants. Scientific studies into Sydney Harbour sediments have identified areas of contamination, although information on other waterways is limited.
The dynamic nature of the marine environment presents particular challenges to assessing and managing contaminated sediment within the RMS portfolio.

This factsheet provides some preliminary guidance for RMS staff and contractors on managing contamination in estuarine and marine land.

Legislative framework

Legislatively, the *Contaminated Land Management Act 1997* (FS1) also applies to water on or below the surface of land and the bed of such water.

The Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (SREP 2005) and the Sydney Harbour Foreshore and Waterways Area Development Control Plan 2005 (DCP 2005) also have provisions that seek to:

- Manage impacts from contaminated sediments or remobilisation of contaminants that may affect biodiversity, ecology and the environment
- Minimise disturbance of contaminated sediments from public access to, and use of, foreshores and waterways (including private landing facilities, seawalls and reclamation)

- Minimise the detrimental effects of dredging.

SEPP 55 (FS2) also applies to SREP 2005 and DCP 2005. While no SEPP has been prepared for Newcastle and Port Kembla Harbours and Botany Bay, it is recommended that the intent of SREP 2005 is applied in the management of other ports. This includes issues such as minimising sediment disturbance while managing developments.

Further information about maritime definitions and standards is provided in NSW Maritime (2005) Engineering Standards and Guidelines for Maritime Structures.

Sediment investigations

Like assessing land-based contamination (FS4), RMS staff and contractors should seek advice from Environment Branch staff (regional or head office), or a member of the Contaminated Site Assessment and Management Services Consultant Panel, to establish the appropriate level of contamination investigation for submerged lands involving dynamic sediments.

Due to the common existence of contaminated sediments within NSW ports, it may not be appropriate to require detailed sediment investigations for all developments or tenure agreements on estuarine and marine land. However, in some circumstances, the following will need to be considered:

- The size of the project and whether the sediment is likely to be disturbed (with a view to minimising the disturbance of potentially contaminated sediment).
- Whether work will occur in areas that are known to have been contaminated (eg. Homebush Bay in Sydney Harbour).
- Using appropriate sampling methodology and analytical testing.
- The description of the seafloor, including sediment type (mud, silt, sand, clay, bedrock), presence of anthropogenic materials, seagrass and any benthic and pelagic fauna.
- Assessing material to appropriate human health and ecological sediment quality guidelines (such as Interim Sediment Quality Guideline (ISQG) levels set out in ANZECC/ARMCANZ (2000) Australian and New Zealand Guidelines for Fresh and Marine Water).
- The development of management strategies consistent with the SREP 2005.
- The RMS approach is that any contaminated sediment investigations should be proportionate to the activities occurring with consideration for the type and location of developments or portfolio transaction. For example:
- Simple developments or a simple transfer of a lease where there is no development, (eg. mooring leases or foreshore retail premises with little or no sediment disturbance) may not require an investigation.
- Where the proposed activity is in an area of known sediment contamination (eg. Homebush Bay in Sydney Harbour) or near land-based sites that are significantly contaminated (eg. former gasworks, chemical manufacturing plants). Environment Branch can assist in identifying potentially impacted sites and determining appropriate levels of investigation.
- Where development would likely result in the disturbance of sediments in environmentally sensitive areas or areas where human exposure is likely (eg. intertidal zones or areas used extensively for recreational activities).
- Where dredging activities are proposed.

A member of the Contaminated Site Assessment and Management Services Consultant Panel should design an investigation to assess contamination of sediments.

Further information on sediment sampling and quality investigations is given in the *Handbook for Sediment Quality Assessment* (Simpson et al., 2005) and *National Assessment Guidelines for Dredging* (Commonwealth of Australia, 2009). As with land-based investigations, sediment investigations need to include data quality objectives and documented in reports consistent with the NSW EPA (1997). *Guidelines for Consultant Reporting on Contaminated Sites.*

Dredging

Sydney Harbour Foreshores and Waterways Area DCP 2005 states that dredging should be minimised but notes that:

Heavy metals and other toxins often appear in bottom sediments and testing of samples may be required prior to approval. A statement must accompany a development application addressing the likelihood of contaminants, the mitigation measures proposed and indicate the proposed disposal methods.

Dredging within RMS managed waterways can take place under SEPP (Infrastructure) 2007 by or on behalf of RMS without development consent, providing the development (including dredging and reclamation) is directly related to an existing port or public transport facility (clause 68) - although the works must be assessed under Part 5 of the EP&A Act and a review of environmental factors prepared in accordance with the RMS Environmental Impact Assessment Guidelines. Development consent is required for any other activity (including dredging and reclamation) not identified in clause 68.

Even when consent is not required, you must consider addressing potentially contaminated sediments and any mitigation measures that are required to minimise disturbance. The *National Assessment Guidelines for Dredging* (Commonwealth of Australia, 2009) provides further guidance on the framework of environmental impact assessment, determining management and monitoring requirements and permitting the ocean disposal of dredged material.

FURTHER INFORMATION

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 and Sydney Harbour Foreshore & Waterways Area Development Control Plan (2005) NSW Planning and Infrastructure website: *www.planning.nsw.gov.au* *and* *National Assessment Guidelines for Dredging* (Commonwealth of Australia, 2009).

For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Factsheet 8
Duty to report

RMS Guideline for the Management of Contamination

Last updated:

When to notify NSW EPA of contamination

In certain circumstances, as defined in the Contaminated Land Management Act 1997, the NSW Environment Protection Authority must be notified when contamination is identified. RMS staff and contractors should always consider the duty to report requirements.

The duty to report contamination

Under the Contaminated Land Management Act 1997 (CLM Act 1997), there is a duty for landowners and people who have responsibility for contamination to report it to the NSW Environment Protection Authority (NSW EPA). The below information describes when this duty applies under the CLM Act 1997.

It should be noted that the RMS protocol is to pro-actively communicate with relevant agencies when contamination is identified. This will ensure that the needs of all relevant stakeholders can be incorporated into the management of contamination.

Reporting triggers

Reporting triggers, and guidance on how they should be applied, are provided within the NSW EPA (2009) 'Guidelines on the Duty to Report Contamination under the CLM Act 1997'. In general, notification to the EPA is required in any of the following circumstances:

- The level of the contaminant in or on soil exceeds the level set out in the Duty to Report guidelines with respect to current or approved use of land and people have been, or foreseeably will be, exposed to the contaminant
- The contamination meets a criterion prescribed by the regulations
- The contaminant has entered or will foreseeably enter neighbouring land, the atmosphere, groundwater or surface water and the contamination exceeds or will foreseeably exceed a level of contamination set out in the Duty to Report Guidelines and will foreseeably continue to remain above that level.

Assessment

To assess whether there is a duty to notify the EPA of contamination, at minimum, a review of site activities and site history is required as well as a site inspection to look for indicators of contamination (FS3).This may be followed by intrusive investigations (eg- soil sampling) to gather more data on the site conditions.

Reporting process

If contamination is identified on a site, seek specialist advice from Environment Branch or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel to decide if there is a requirement to notify the EPA, or what further information needs to be gathered to decide. If it is decided to notify the EPA, a Site Contamination Notification Form must be completed. An appointed consultant can help you complete this form. Before a submission is made to the EPA, Environment Branch should be contacted to:

- Review the notification form and seek legal branch inputs
- Advise the RMS Executive of the intended notification
- Brief the appropriate NSW EPA contact (usually the Regional Manager).

After notification

If the EPA has reasonable grounds to believe contamination presents a risk of harm to human health or the environment, it can declare the land to require further investigation or remediation. Once a declaration is made, the investigation and remediation of the site needs to be completed to the EPA's satisfaction. There may also be a requirement to appoint an EPA accredited site auditor (FS9).

If the EPA does not believe the site presents a risk, the contamination issues are generally managed by local government through the planning process when the site is developed or rezoned (FS2).

FURTHER INFORMATION

'Guidelines on the Duty to Report under the CLM Act 1997' (2009) is published by the NSW EPA and can be found at http://www.environment.nsw.gov.au/resources/clm/09438gldutycontclma.pdf.

For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Factsheet 9
Accredited auditors

Transport Roads & Maritime Services

RMS Guideline for the Management of Contamination | Last updated:

Appointing a NSW EPA accredited auditor

The NSW EPA administers the NSW Site Auditor Scheme under the CLM Act 1997. An auditor can be appointed pro-actively to add rigour to an investigation, but in some cases must be appointed to meet statutory requirements.

The aim of the NSW Site Auditor Scheme

Due to the complex behaviour of chemicals and the various effects on human health and the environment, contaminated site assessment and remediation can be technically challenging. A site auditor can provide an expert review of a consultant's work to ensure the methodology used and interpretation of data is consistent with current regulations, guidelines and best practice.

NSW EPA accredited site auditors can be engaged to independently review work by contaminated land consultants. The aim of the scheme is to protect the environment and human health through appropriate management of contaminated land, particularly where it changes to a more sensitive land use.

What is a site audit?

A site audit is defined under Section 47 of the CLM Act and is a separate process from the investigation and remediation of a contaminated site. The Guidelines for the NSW Site Auditor Scheme describe the obligations of site auditors in auditing a site and the administrative framework supporting the site auditor scheme. A site audit is designed to determine:

- Land use suitability
- Extent/nature of contamination
- Appropriateness of an investigation/remedial action plan (RAP)/management plan
- If the land can be made suitable for use or uses by implementing a specified RAP/management plan.

The desired outcome of a site audit is a site audit statement about the suitability of the investigation and/or land use.

When to engage a site auditor

Either party (land manager or purchaser) may appoint an auditor at any stage to provide technical advice on a site contaminated land issue. It is recommended the site auditor is engaged at the beginning of the contamination investigation and/or remediation project. This will allow the consultant and the site auditor to communicate early on and ensure the auditor is satisfied with the approach. This can avoid repeating investigations and minimise potential delays.

An auditor is likely to be required where land with a known or suspected history of potentially contaminating activities is proposed to be redeveloped for a more 'sensitive' purpose, such as change of land use from commercial / industrial to residential. A site auditor may also be appointed at any time when contamination issues onsite are particularly complex, technically challenging, or contentious (eg. when contamination has migrated from a site to neighbouring lands).
Under statutory instruments, an auditor must be engaged when:

- It is identified the site presents a risk of harm to either the environment or to human receptors
- The EPA has issued a remediation order or investigation order
- It is specified in a development consent condition either under a State Environmental Planning Policy (SEPP) or any other environmental planning instrument.

The additional time and budget implications should be considered when engaging a site auditor.

FURTHER INFORMATION

NSW Auditor Scheme Guidelines and a list of accredited Auditors can be found at www.environment.nsw.gov.au/clm/auditorscheme

For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Factsheet 10
Records management

RMS Guideline for the Management of Contamination | Last updated:

Maintaining contamination information on sites RMS owns or manages

Public and RMS records can contain information about the environmental condition of sites, to assist in their management and reduce risk and liability. RMS staff and contractors should keep complete and accurate records of all contaminated site issues.

Records management

It is important to accurately document, and make accessible, any information about the environmental condition of RMS sites (including pollution events or incidents and contamination investigations, remediation and validation). Information on contamination may be required:

- To establish the condition of the site before lease or sale where full disclosure is required for due diligence
- When undertaking a desktop study to establish suitability for use
- If an environmental audit is made on the site
- To identify high risk sites for future investigations or reporting to the NSW EPA
- To provide to consultants on the Contaminated Site Assessment and Management Services Panel to plan an investigation
- To assess compliance with environmental regulations.

RMS Contaminated Land Management Database

RMS currently stores information about contaminated land that it owns or manages in the Property Information Management System (PIMS). This non-spatial database does not contain a complete record of all relevant contaminated sites. Contact Environment Branch for further details.

A spatial contaminated land management database is currently under development by RMS Environment Branch. This fact sheet will be updated when the new database is available.

Public records

Information on contaminated land for particular sites may also be on a public record, as described below. It should be noted that these records only contain contaminated sites that have been reported to NSW EPA, and are not a complete list of all contaminated sites.

Contaminated land public record (record of notices) and POEO Public Register.
These public records are maintained by the NSW EPA and provide a searchable database of written notices issued by the EPA under the CLM Act, Environmental Protection Licences and applications. They can assist to identify if potentially contaminating activities are taking place, or have taken place, on and next to the subject site. Environmental consultants will look at these during a Phase 1 contamination investigation **(FS3).** They can be accessed via www.environment.nsw.gov.au/prpoeoapp/

Record of site reported under section 60 of the *Contaminated Land Management Act 1997*.

Over 900 sites across NSW have been notified to the NSW EPA as being potentially significantly contaminated or that contamination can foreseeably migrate offsite. These are reported on the EPA website and include a management class that identifies the stage of the determination or how the site is being regulated. It can be accessed at www.environment.nsw.gov.au/clm/publiclist.htm

S149 Certificates

Under Section 149 of the EP&A Act 1979 (FS1), a local council can, upon application, issue a certificate providing information about the property.

A certificate issued under Section 149 provides information about the zoning of the property, the relevant state, regional and local planning controls, and other items affecting property such as land contamination (including land declared to be significantly contaminated, land subject to a management order, ongoing maintenance order, voluntary management or the subject of a site audit statement). The certificates contain information on how a property may be used and the restrictions on development. You may request a 149 certificate to obtain information about a property before redevelopment or sale.

Depending on the nature of contamination of an RMS site, RMS may need to notify the council and establish if there is a requirement for details to be recorded under Section 149.

FURTHER INFORMATION

Existing RMS procedures and guidance on environmental records include the Environmental Inspection Report Guidance Note, RMS Environmental Incident Classification and Reporting Procedure and the Environmental Incident Form which are all available via the RMS intranet.

For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Stakeholder engagement and risk communication

RMS encourages pro-active and effective communication about site contamination issues, whether they are actual or perceived. At the inception stage of managing any contamination issue, an appropriate communication strategy should be developed.

Managing stakeholder understanding

RMS has a responsibility and desire to effectively inform stakeholders about any contamination associated with its activities. Stakeholders may believe that contamination is detrimental to their health and/or the environment. This risk can be perceived rather than real, but the perception of risk must be managed adequately.When contamination is identified, RMS must inform and engage relevant stakeholders at the earliest possible stage, and continue this process until the contamination issue is finalised.

Is stakeholder engagement required?

Under schedule B(8) of the NEPM (1999) (FS1), there are *Guidelines for Community Consultation and Risk Communication*. They provide advice on the factors that should be considered and appropriately communicated to stakeholders when managing sites that have been affected by contamination. There are also several RMS-specific documents to guide communication and stakeholder engagement in relation to contamination, including:

- Community Engagement Manual 2012
- Media and community engagement protocol for critical issues such as contamination
- Stakeholder Engagement and Communication

Some level of communication and stakeholder engagement is required for all contamination issues. However the risk (perceived or real) of the particular contamination issue will determine the scale and nature of the communication and stakeholder engagement that is required

Communication Strategy

At the inception stage of managing any RMS contamination issue, the nature and extent of communication and stakeholder engagement that is required should be evaluated and an appropriate communication and stakeholder engagement strategy developed. The strategy should be designed to pro-actively provide stakeholders with the fullest possible explanation of known contamination and continually provide updates on the progress of work to deal with that contamination.

Managing the media

The media can be a useful tool to assist with effective communication and stakeholder engagement, but can also be detrimental if not managed appropriately. Communication and stakeholder engagement strategies must focus on pro-actively providing media outlets with concise, up-to-date and factual

information to mitigate against the temptation for them to run sensationalised stories of unsubstantiated allegations which cause unnecessary alarm for stakeholders.

Specialist help

Effective communication and stakeholder engagement is a multi-stage, two-way process of listening and communicating and requires a considered approach. Communication and stakeholder engagement should be pro-active, strategic and consistent so the best outcomes for all stakeholders can be reached. The Communications Branch within RMS is specialised in such interactions and should be engaged early to assist with developing an appropriate communication and stakeholder engagement strategy. The Branch should also be contacted immediately if community concern is identified in relation to contamination. A member of the RMS Contaminated Site Assessment and Management Services Consultant Panel can also be engaged to provide technical input to the strategy.

FURTHER INFORMATION

For specific RMS communications advice, contact RMS Communications Branch.

The NEPM 1999, Guidelines for Community Consultation and Risk Communication can be found via http://www.scew.gov.au/nepms/assessment-site-contamination.

For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Factsheet 12
Managing contamination

RMS Guideline for the Management of Contamination | Last updated:

Managing contamination during RMS works

Contamination may need to be remediated, managed on-site or disposed off-site as a waste material and will require appropriate management. Environmental management plans and contingency planning to deal with identified or unexpected contamination can save time and money during the construction phase of projects.

Contamination management

Contamination can be detected at all stages of an RMS project, including:

- Routine investigations for possible contamination during the feasibility stages
- More widespread contamination found during construction
- Previously unknown contamination.

The potential sources and types of contamination are almost endless, and the potential for rare and unusual contamination issues should always be considered.

Unexpected discovery of contamination

If unexpected contamination is discovered at any stage of a project, work must stop immediately and the procedures of any site-specific contingency plans should be followed. Environment Branch and relevant agencies should also be contacted immediately in accordance with the RMS Environmental Incident Classification and Reporting Procedure. Environment Branch will help identify an appropriate RMS response to deal with the issue, and can assist in liasing with appropriate agencies (e.g. the EPA) where necessary. Where there is doubt on the need to notify or the relevance of a particular agency, a cautious approach should be adopted and the issue should be reported – it is better to over-report than potentially miss a contamination risk.

At this point, a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel may be engaged to investigate the type and extent of contamination.

Environmental management

At the planning or preliminary stages of site works environmental management plans will be required to manage various aspects of the project.

A number of plans may be needed to manage contamination during construction.
An overarching construction environmental management plan (CEMP) would be prepared that includes various sub-plans (as applicable) such as:

- Contamination management plan (CMP)
- Acid sulfate soil management plan (AASMP)

- Asbestos management plan (AMP)
- Erosion and sediment control plan.

These site-specific plans ensure appropriate environmental management practices are followed during the construction phase of a project. All plans should identify any potential environmental and human health impacts from contamination and the mitigation measures that will be used to deal with them. They should also include contingency plans for how to deal with the discovery of unknown or unsuspected contamination. This will ensure a timely response that minimises impacts to human health and the environment, and associated time and cost delays.

Hazardous materials

Works to construct a new road, building or maritime structure may require the demolition of older structures or buildings. Before demolishing any structure, the presence of potentially hazardous materials should be considered. These include asbestos-containing materials, lead-based paint, synthetic mineral fibres, storage tanks and stored chemicals, and to a lesser extent items containing PCBs and CFCs. The uncontrolled release of such materials during work could present a hazard to human health and the environment but may also result in costly remediation if they contact or mix with soil and groundwater. Surveys of hazardous materials can be done before work starts to manage the issue and mitigate any costly impacts.

Waste management

Wastes generated during projects, particularly wastes from contamination investigations and/or remediation, require appropriate management and waste disposal practices. Wastes generated include:

- road tars, including coal tar based tars, emulsions and containers
- used or waste asphalt pavement
- building demolition materials (including asbestos containing waste)
- contaminated or acid sulfate soils
- excess non-contaminated soil and rock material requiring off-site disposal.

Waste is regulated primarily through the:
- Protection of the Environment Operations Act 1997 (POEO Act),
- Waste Avoidance and Resource Recovery Act 2001
- Protection of the Environment Operations (Waste) Regulation 2005.

These statutes provide the requirements for managing, storing, transporting, processing, recovering and disposing of waste.

RMS has developed waste fact sheets and guidelines to help RMS staff and contractors test, classify and manage waste.

Additional RMS guidance

A number of other existing RMS guidance documents are also available detailing how to manage contamination and hazardous materials identified in the workplace
They include:

- Stockpile Site Management Guideline
- Guidelines for the Management of Acid Sulfate Materials: Acid Sulfate Soils, Acid Sulfate Rock and Monosulfidic Black Ooze (RTA, 2005)
- Environmental Directions No. 20 Legal Offsite Disposal of Bulk RTA Project Wastes
- Environmental Directions No. 21 Coal Tar Asphalt Handling and Disposal.

FURTHER INFORMATION

Generic waste management information can be found at www.environment.nsw.gov.au/waste/

For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Site operations that require specific management actions

Some RMS operational activities might cause contamination and some asset types must comply with specific NSW regulations.

Underground petroleum storage tanks

Underground petroleum storage tanks are present on some RMS sites (including foreshore areas) and have the potential to leak. Under the *Protection of the Environment Operations Act 1997* (POEO), the Underground Petroleum Storage Systems (UPSS) Regulation 2008 requires owners and operators of UPSS to check regularly for leaks and outlines the minimum standards for their day-to-day environmental management. Under the regulation, the person responsible for a UPSS (usually the owner/operator) is required to have in place:

- a system for detecting and monitoring leaks, such as groundwater monitoring wells at sensitive locations, and a program to test them
- an Environment Protection Plan (EPP)
- systems in place for keeping records, reporting leaks and notifying the regulators when a UPSS is decommissioned.

It is an offence under the regulations to allow or ignore contamination resulting from leaking UPSS. If UPSS are present, Environment Branch should be contacted to ensure appropriate management measures are in place. More information on UPSS requirements can be found on the NSW EPA website www.environment.nsw.gov.au/clm/upss

Asbestos

Management of asbestos is covered by the NSW Work Health and Safety Act 2011 (WHS) and the NSW Work Health and Safety Regulation 2011.

Asbestos is a common material which was used extensively in building products (eg. cladding, corrugated roofs, insulation, spray coatings, fire retardants, sealants and in electrical boards) in Australia between 1945 and 1980.

Asbestos can also be naturally occurring and has been mined in NSW.

Asbestos was phased out in Australia after 1980 and was finally banned from building products in 1989, however, fibrous cement sheeting (or fibro) containing asbestos still remains in place in many buildings. Asbestos impacts to soil is also common because of inappropriate building demolition, waste disposal or fires. If dust from asbestos is inhaled, it can cause potentially fatal asbestos-related diseases. RMS has a legal duty to manage the risks associated with potential exposure to asbestos.

Under the WHS Act 2011 every non-domestic property built before 2004 must have either:

- positive confirmation the building does not contain asbestos, or

- be on an asbestos register and have a management plan in place that is accessible onsite if requested.
- Asbestos removal works should only ever be undertaken by a licensed contractor.
- Additional information on managing asbestos can be found at www.workcover.nsw.gov.au, including:
- How to Manage and Control Asbestos in the Workplace: Code of Practice 2011
- How to Safely Remove Asbestos: Code of Practice 2011.

Boatyards and marinas

Adverse environmental and human health impacts can result from pollutants generated (and stored) by everyday boatyard and marina operations. Under section 120 of the POEO Act it is illegal to pollute or cause or permit pollution of waters. Under the Act, 'water pollution' includes introducing anything (including litter, sediment, fuel, oil, grease, wash water, debris, detergent, paint) into waters or placing such material where it is likely to be washed or blown into waters or the stormwater system or percolate into groundwater.

Activities that might cause contamination include boat engine maintenance, solvent cleaning operations, storing and using fuels, greases and engine fluids, spray painting, grit blasting, using antifouling paints, vessel refuelling and effluent disposal. The majority of waterfront land owned by RMS is privately leased and no information about contamination may be available. The EPA document 'Environmental Action for Marinas, Boatsheds and Slipways' summarises NSW environmental laws that apply and provides practical advice on key environmental issues. Everyone (including owners, managers, supervisors, operators, contractors and subcontractors) needs to be aware of environmental laws that apply to minimise the risk of an environmental incident by implementing precautionary and control measures.

During contract legal review of lease agreements it should be explicitly stated that operators are expected to comply with relevant regulatory obligations and best practice to avoid contamination. If activities at a marina are particularly 'risky' in terms of contamination potential (such as refuelling infrastructure, chemical storage near to waterways etc.) RMS may consider developing a site specific environmental management plan (EMP) and/or monitoring regime to be included under lease agreements.

Chemical storage

Dangerous goods, including but not limited to road tars, antifouling paints, pesticides, road marking paints, timber treatment chemicals and fuels, oils and solvents may be stored at RMS depots, work sites and facilities. Under section 116 of the POEO Act, when handling hazardous materials or waste, it is an offence to cause any substance to leak, spill or otherwise escape in a manner that harms or is likely to harm the environment.

The laws relating to chemical storage vary depending on the types of substances and amounts stored. Legal requirements need to be considered by RMS staff and contractors when using, storing, transporting and disposing of chemicals.

Relevant material safety data sheets (MSDS) must be maintained at all RMS sites for all chemical products present.

Any leaks, spills or other environmental incidents must be reported to RMS Environment Branch immediately as per the *RMS Environmental Incident Classifcation and Reporting Procedure.* If there is any doubt on the need to report an incident, contact Environment Branch regardless and ask for advice on the requirements.

Some sites that have been used for chemical storage for a long time may have been subject to historical spills or leaks. If there are records available indicating that chemical release incidents have occurred previously but there is no follow up reporting, it may be necessary to commission an environmental site investigation. This will demonstrate due diligence and make sure the potential human health and environmnetal risks are appropriately assessed and that the site is suitable for continued use.

FURTHER INFORMATION

UPSS requirements can be found on the NSW EPA website www.environment.nsw.gov.au/clm/upss.

Information on managing asbestos and chemical storage can be found at www.workcover.nsw.gov.au.

Practical advice on key environmental issues for Maritime facilities can be found within the *Environmental Action for Marinas, Boatsheds and Slipways* at www.environment.nsw.gov.au/sustainbus/marinas.htm

For environemntal incidents, RMS staff and contractors should refer to the *RMS Environmental Incident Classifcation and Reporting Procedure*.

For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Factsheet 14
Land strip acquisition

RMS Guideline for the Management of Contamination

Last updated:

Finding contamination on parcels of land that RMS intends to buy

RMS buys strips of land to facilitate road realignment and expansion projects. If RMS buys land strips where contamination or an Environment Protection Licence already exists, the potential liability requires careful consideration. Legal advice should be sought to develop appropriate contract clauses and ensure statutory requirements can be met.

Potential liabilities

RMS buys small strips of land that may have previously been part of larger parcels that were used for potentially contaminating activities, such as service stations, fuel depots, landfills and dry cleaners. If the original polluter of the land cannot be identified, as landowner RMS can be made liable for managing the contamination.

If contamination migrates from adjacent land through a parcel of land owned by RMS (for example via surface water or groundwater pathways) RMS may still be exposed to liability under common law and the CLM Act 1997 if reasonable steps to prevent migration of the contamination are not taken.
Where RMS has knowledge of existing contamination, a duty of care exists to neighbouring owners/occupiers even if contamination is not caused by RMS but is migrating through RMS land. RMS may also be liable for pre-existing contamination that is exacerbated by RMS activities (such as ground disturbance or dewatering).

Disclosure and investigation

Full disclosure of all environmental reports should be sought before any land is purchased. If only limited information is available, RMS staff and contractors should establish whether any further environmental investigations are intended. It would not be common practice for RMS to investigate the land as the investigation might exacerbate contamination conditions, which could increase RMS's exposure to liability.

Release and indemnity clauses

If RMS buys land that has been contaminated, if possible, insert an indemnity into the contract of sale which indemnifies RMS against any potential claims relating to contamination. If RMS cannot negotiate and agree indemnity as part of the sale contract, consider the level of risk from buying the site, the sale price and if there are any viable alternatives for the project. It is important in such cases to seek legal advice to ensure the appropriate contract clauses are included to limit future liabilities to RMS.

Purchase of land under an Environment Protection Licence.

Some sites (including but not limited to landfills, mining operations, agricultural processing sites, cement works, contaminated waste treatment facilities, boat construction/maintenance etc) are regulated by the EPA under an Environment Protection Licence (EPL). Where land to be bought by RMS is subject to an EPL, negotiations will be required relating to the EPL's conditions, how they apply to the land and the responsibilities for ongoing compliance. There may be options to acquire, amend or terminate parts of the EPL but RMS must clearly document the final outcome and the land must then be managed in compliance with statutory requirements. If the sale of land includes any land regulated under an EPL, ask Environment Branch for further advice.

FURTHER INFORMATION
For further advice contact Environment Branch (regional or head office) or a member of the RMS Contaminated Site Assessment and Management Services Consultant Panel.

Management Tool 1

Request for Proposal for Environmental Site Assessment

Transport Roads & Maritime Services

RMS Guideline for the Management of Contamination		Last updated:

<insert date>

<insert recipient>
<insert company>
<insert address line 1>
<insert address line 2>

Dear <insert recipient title and surname>,

RE: Request for proposal for an environmental site investigation

RMS is seeking **<delete as appropriate>** a proposal proposals for the provision of a **<delete as appropriate>** Stage 1 Investigation Stage 2 Investigation Combined Stage 1 & 2 Investigation for the following subject site:

Property ownership	RMS is the property owner / lessee
Site name	
Site address	
Lot / DP	
Current use / zoning	
Proposed use / zoning	

This request for proposal has been issued under the RMS Panel Deed for the supply of contaminated site assessment and management services (RMS Contract number 10.2714.1669). The work is required in order to <Insert detail (e.g. assess the site to relinquish site lease / sell site>.

The following documents relating to the site have been provided:

- Map and site boundary information, including zonings
- Any information relating to the environmental condition of the site
- Site photos
- Any information relating to facilities, buildings or processes on the site
- <insert additional document>
- <insert additional document>

Work should be undertaken in general accordance with the requirements of (where applicable):

- All relevant NSW Environmental Legislation
- National Environmental Protection Measures
- Relevant Environmental Planning Instruments
- NSW WorkCover,

- NSW Office of Environment and Heritage
- NSW Environmental Protection Authority
- Department of Planning
- Australian and New Zealand Conservation Council
- *NSW EPA Sampling Design Guidelines, 1995*
- *NSW EPA Guidelines for Consultants Reporting on Contaminated Land, 1997*
- *NSW EPA Guidelines for the NSW Site Auditor Scheme, 1998*
- *Contaminated Land Management Act 1997*
- *DECCW Waste Classification Guidelines Part 1: Classifying Waste, 2009*
- National Environmental Protection Measures
- Relevant Environmental Planning Instrument
- Australian Standards, and
- Other relevant documents as required to satisfy the objectives of this project

The Environmental Consultant will be required to obtain all approvals from the relevant authorities to enable the site investigation to proceed.

Should you have any questions, please contact the RMS representative <insert representative name> on 02 <insert phone number>.

Yours sincerely,

<insert name>
<insert title>

Management Tool 2

Request for Proposal for Remediation Action Plan

Transport Roads & Maritime Services

RMS Guideline for the Management of Contamination		Last updated:

<insert date>

<insert recipient>
<insert company>
<insert address line 1>
<insert address line 2>

Dear <insert recipient title and surname>,

RE: Request for proposal for a remediation action plan

RMS is seeking **<delete as appropriate>** a proposal proposals for the provision of a remediation action plan for the following subject site:

Property ownership	RMS is the property owner / lessee
Site name	
Site address	
Lot / DP	
Current use / zoning	
Proposed use / zoning	

This request for proposal has been issued under the RMS Panel Deed for the supply of contaminated site assessment and management services (RMS Contract number 10.2714.1669). A work brief is attached which provides further detail relating to this request.

The following documents relating to the site have also been provided:

- <list previous site investigation reports>
- <insert additional document>
- <insert additional document>
- <insert additional document>

Should you have any questions, please contact the RMS representative <insert representative name> on 02 <insert phone number>.

Yours sincerely,

<insert name>
<insert title>

Level 00, Building Name 000, Street Name, City NSW 0000 **|** PO Box 000 City NSW 0000 DX00 City
T 02 0000 0000 **|** **F** 02 0000 0000 **|** **E** xxxx@rms.nsw.gov.au **www.rms.nsw.gov.au**

Management Tool 3

Request for Proposal for Remediation and / or Monitoring

Transport Roads & Maritime Services

RMS Guideline for the Management of Contamination		Last updated:

<insert date>

<insert recipient>
<insert company>
<insert address line 1>
<insert address line 2>

Dear <insert recipient title and surname>,

RE: Request for proposal for <remediation works / monitoring>

RMS is seeking **<delete as appropriate>** a proposal proposals for the provision of a <remediation works / monitoring> for the following subject site:

Property ownership	RMS is the property owner / lessee
Site name	
Site address	
Lot / DP	
Current use / zoning	
Proposed use / zoning	

This request for proposal has been issued under the RMS Panel Deed for the supply of contaminated site assessment and management services (RMS Contract number 10.2714.1669). A work brief is attached which provides further detail relating to this request.

The following documents relating to the site have been provided:

- <Provide remediation action plan which will provide the scope>
- <Provide previous investigation reports for background information>
- <insert additional document>
- <insert additional document>
- <insert additional document>

Should you have any questions, please contact the RMS representative <insert representative name> on 02 <insert phone number>.

Yours sincerely,
<insert name>
<insert title>

Level 00, Building Name 000, Street Name, City NSW 0000 **|** PO Box 000 City NSW 0000 DX00 City
T 02 0000 0000 **|** **F** 02 0000 0000 **|** **E** xxxx@rms.nsw.gov.au **www.rms.nsw.gov.au**

Management Tool 4

Letter of Engagement to Undertake a Contaminated Land Assessment

RMS Guideline for the Management of Contamination		Last updated:

<insert date>

<insert recipient>
<insert company>
<insert address line 1>
<insert address line 2>

Dear <insert recipient title and surname>,

RE: Letter of engagement to undertake a <insert task> **at the RMS property known as** <insert site name><Insert site address>< insert Lot/DP>

I am pleased to advise that your proposal for <insert task, date and reference> at <insert site Name / Lot / DP / address> has been selected as the preferred proposal by RMS.

As detailed in the Request for Proposals dated <insert month / year>, the contract for this work will be in accordance with the current 'RMS Panel Deed for the Supply of Contaminated Site Assessment and Management Services 2008' (the 'Deed'). This Deed, including all annexures, schedules, attachments and other information relating to the Deed, along with the Request for Proposals, your proposal and the details contained within this letter, shall be the contract for the professional services work.

You are also requested to immediately inform the RMS Project Manager if you consider that the site may be considered significantly contaminated land under the *Contaminated Land Management Act 1997*.

This exchange of letters will execute the contract under the Deed. You must, by <insert date 2 weeks from date of letter>, execute and deliver to RMS a letter of acceptance to enact the contract. If you do not execute the contract by this date, your proposal may be rejected. The RMS Contract number under the RMS Panel Deed for the supply of contaminated site assessment and management services is 10.2714.1669.

The basis of payment for this work will be <insert details of either "lump sum" or "fees and expenses">. Payments will be in accordance with the provisions of the contract under the Deed. The timing of payments will be on completion of the project milestones outlined in the following table.

<add or delete milestones and details in the table as necessary – DELETE THIS TEXT>

Milestone No.	Milestone Detail	Payment (GST exc.)
1	<insert milestone detail>	$<insert value>
2	<insert milestone detail>	$<insert value>
3	<insert milestone detail>	$<insert value>
4	<insert milestone detail>	$<insert value>

Should you have any questions about this process, please contact the RMS representative <insert representative name> on 02 <insert phone number>.

Yours sincerely,

<insert name>
<insert title>

Roads & Maritime Services

Level 00, Building Name 000, Street Name, City NSW 0000 **|** PO Box 000 City NSW 0000 DX00 City
T 02 0000 0000 **|** **F** 02 0000 0000 **|** **E** xxxx@rms.nsw.gov.au **www.rms.nsw.gov.au**

Management Tool 5

Request for Proposal for a NSW EPA Accredited Site Auditor

RMS Guideline for the Management of Contamination		Last updated:

<insert date>

<insert recipient>
<insert company>
<insert address line 1>
<insert address line 2>

Dear <insert recipient title and surname>,

RE: Request for proposal for the provision of NSW EPA Accredited Auditor services for <insert site name / lot / DP/ address>.

NSW Roads and Maritime Services (RMS) is the <owner/lessee> of the <residential / commercial / industrial> property at <insert site address>.

RMS is seeking <a proposal / proposals> for the provision of services from a NSW EPA Accredited Auditor to oversee environmental <remediation / monitoring> works.

The following documents relating to the site have been provided:

- <Provide remediation action plan which will provide the scope>
- <Provide previous investigation reports for background information>
- <insert additional document>
- <insert additional document>
- <insert additional document>

This request for proposal has been issued under the RMS Panel Deed for the supply of contaminated site assessment and management services (RMS Contract number 10.2714.1669). A work brief is attached which provides further detail relating to this request.

Should you have any questions, please contact the RMS representative <insert representative name> on 02 <insert phone number>.

Yours sincerely,

<insert name>
<insert title>

Roads & Maritime Services

Level 00, Building Name 000, Street Name, City NSW 0000 **|** PO Box 000 City NSW 0000 DX00 City
T 02 0000 0000 **|** **F** 02 0000 0000 **|** **E** xxxx@rms.nsw.gov.au **www.rms.nsw.gov.au**