

CHECKLISTS AND OTHER INFORMATION

APPENDIX 1 – PRELIMINARY SITE INVESTIGATION REPORT CHECKLIST

REPORT SECTION	REQUIRED INFORMATION	PRESENT? (YES/NO /NA)	COMMENTS (ACTIONS, REQUESTS, RED FLAGS)
Document control	Report date within 2 years		
	Report version, author and reviewer, including consultant certification ¹ (for example, experienced contaminated land specialist, certified environmental practitioner)		
	Details of who commissioned the report		
Executive summary	Background		
	Objectives of the investigation		
	Scope of works		
	Sampling summary (where appropriate)		
	Summary of key findings		
	Summary of conclusions and recommendations		
Objectives	Objectives of the investigation report and the broader objectives of the site investigation process and proposed development or activity		
Scope of works	Scope of work performed (and work not undertaken, if relevant)		
Site identification and details	Site name and description		
Site identification (where available)	Street number, street name and suburb		
	Property description (for example, lot and deposited plan or strata plan number; less commonly, volume and folio; or, in rare cases, book and number). Current certificates of title (identifying portion or full title). Current owners/occupiers		
	Geographic coordinates related to a nearby cadastral corner of a state survey control marker. Site area and dimensions		
	Current site plan with scale bar, showing north, local water drainage and other local environmentally significant features		
	Locality map		

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Site identification (where available) (Cont.)	Trigger for assessment (for example, change in land use)		
	Controls and permissions: state or local government statutory controls assigned to the site; legal permission to access site required or obtained; consent of adjoining landowners and/or occupiers to access land (if required)		
Site history (where available)	Zoning and land use (previous, present and proposed). Summary of Council rezoning, relevant development and building approvals records		
	Interviews with owner, occupier, staff and/or neighbours (present and former) who have a historical knowledge of the site		
	Historical land title search. Chronological list of site uses, indicating information gaps and unoccupied periods		
	Review of aerial photographs (historical preferable to current). Review of the historical use of adjacent land		
	Site layout plans showing locations of past and present industrial processes, storage areas, waste disposal areas and areas of unknown use		
	Possible contaminant sources and potential migration pathways relevant to offsite processes.		
	Potential chemical substances associated with activities, and their environmental fate (for example, volatile, semi-volatile, miscible, soluble, persistent, organic, inorganic or bio-accumulative) ²		

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Site history (where available) (Cont.)	<p>Details and locations of current and former site infrastructure, including:</p> <ul style="list-style-type: none"> • current and former underground and above-ground storage tanks, fill points, and dispensing and transfer lines • chemical storage areas and waste disposal locations • product spills, losses, incidents, and accidents, including fires, with an indication of the chemicals spilled, frequency, estimates of quantity, extent of fire damage and structures affected • description of manufacturing processes, raw materials, chemicals and fuels associated with site use (if applicable) • discharges to land, water and air (authorised and unauthorised) • location of onsite and nearby wells and groundwater monitoring wells 		
	<p>Local site knowledge of residents and staff (present and former)</p>		
	<p>Details of building and related permits, licences, approvals, trade waste agreements and regulatory search, including:</p> <ul style="list-style-type: none"> • complaint history – regulatory actions and legal actions • state and local government records on contamination for the site and surrounding areas • state and local government environmental records, including licensing conditions, regulatory notices, inspection records, complaints and licence breaches • state and local government dangerous goods records, including licensing requirements, goods licensed to store, storage licences, inspection records, complaints and licence breaches 		
	<p>Verification of information sources (assessment of the integrity and accuracy of the information)</p>		

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Condition of site and surrounding environment (where available)	Site inspection details, ³ including: <ul style="list-style-type: none"> • the location and condition of all visible features, including current buildings, surface structures, roads, foundations, positions of former buildings, tanks, pits, wells, drains and bores • site features and infrastructure information – construction of buildings, including materials (for example, wood frame), openings and height (for example, one storey or multistorey) • the condition and type of surface cover (for example, bare ground, asphalt, concrete or gravel) and the estimated percentage of the site occupied by buildings, landscaped areas, paved and non-paved areas, underground petroleum storage systems, above-ground storage tanks • visible signs of contamination, such as discolouration or staining of soil, bare patches (both onsite and offsite adjacent to the site boundary) • visible signs of plant stress, quality of surface water, odours, presence of fill and flood potential • presence of stockpiled material, imported soil or fill material, as well as any signs of settlement, subsidence or disturbed ground. • evidence that chemical substances have migrated or are likely to have migrated to a neighbouring site and are or are likely to be causing contamination of the neighbouring property • evidence of possible naturally occurring contaminants 		
	Photographs of the site and surrounding adjacent land showing significant features, topography, nature of the surface and existing structures		

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Condition of site and surrounding environment (where available) (Cont.)	Topography, elevation, lithology and a summary of expected geology, hydrology, and hydrogeology. Include readily available information such as the anticipated underlying soil type and characteristics, surface water bodies and flow direction, depth to groundwater and groundwater flow direction		
	Current site use and surrounding land use, including type and density of land use (for example, industrial, commercial, residential or vacant green land)		
	Conditions at the site boundary, such as the type and condition of fencing, soil stability and erosion		
	Details of any relevant local sensitive environment (for example, rivers, lakes, creeks, wetlands, local habitat areas, and endangered flora and fauna)		
Conceptual site model	Conceptual site model ⁴		
Sampling and analysis quality plan (SAQP) and sampling methodology (summary of requirements)	Detailed sampling, analysis and data quality objectives (DQO)		
	Rationale for the: <ul style="list-style-type: none"> • sampling pattern. • sampling density, including an estimated size of the residual hotspots that may remain undetected • sampling locations, including locations shown on a site map • sampling depth • samples for analysis and samples not analysed • assessment criteria • analytical methods • analytes for samples 		

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Field quality assurance and quality control QA/QC	Include only if there is to be no further site investigations		
Laboratory QA/QC	Include only if there is to be no further site investigations		
QA/QC data evaluation	Include only if there is to be no further site investigations		
If sampling is undertaken⁵			
Result	Summary of previous results (if applicable)		
	Summary of all results in a table that: <ul style="list-style-type: none"> shows all essential details including sample numbers and sampling depth shows assessment criteria highlights all results exceeding the assessment criteria (usually colour coded) 		
	Site plan showing all sample locations, sample identification numbers, and sampling depths		
	Site plan showing the extent of soil and groundwater contamination exceeding selected assessment criteria for each sampling depth		
Site characterisation	Assessment of type of all environmental contamination, particularly soil and groundwater		
	Assessment of extent of soil and groundwater contamination, including offsite effects		
	Assessment of the chemical degradation products		
	Assessment of possible exposure routes and exposed populations (human, ecological, etc)		

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Conclusions and recommendations	Summary of all findings and a brief discussion of results		
	Detail of the assumptions used in reaching the conclusions		
	Detail of the extent of uncertainties in the results (and how they affect the conclusion or necessitate further work)		
	Where remedial action has been taken, a list summarising the activities and physical changes to the site		
	Conclusion addressing the stated objective. This may be in the form of a statement that the consultant considers the subject site to be (or not to be) suitable for the proposed use (where this conclusion can be reached)		
	Recommendations for further work (if appropriate)		

Source: NSW Environmental Protection Authority. (2020). *Consultants reporting on contaminated land: Contaminated land guidelines*; National Environment Protection Council. (November 2010). *ASC NEPM field checklist* [spreadsheet], 'Site Information' and 'SAP, QAQC' tabs.

¹ See the *Guide to Selecting a Consultant* fact sheet.

² Refer to *National Environment Protection (Assessment of Site Contamination) Measure 1999* Schedule B1 and Australian Standards AS 4482.1 and AS 4481.2.

³ Refer to *National Environment Protection (Assessment of Site Contamination) Measure 1999* Schedule B1.

⁴ Refer to the conceptual site model checklist (Appendix 5).

⁵ See the 'Stage 2 – Detailed Site Investigation' tab for a review of the sampling and analysis quality plan (SAQP) including its data quality objectives, and the laboratory QA/QC and the QA/QC data evaluation.