

Construction and demolition waste

A management toolkit

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Introduction

This toolkit refers specifically to the tender, contract and project management phases of construction projects. It is designed to help procurement officers and construction project managers to engage contractors and work on contracts that involve construction and demolition.

Unlawful waste disposal or fraudulent behaviour by principal contractors and subcontractors creates the potential for significant reputation damage, financial penalty and criminal conviction.

The NSW Environment Protection Authority (EPA) recommends procurement officers and construction project managers be familiar with how their principal contractors and subcontractors manage and dispose of waste.

1. Who is responsible for lawfully disposing of waste?

Waste generated from construction and demolition projects, including soil, contaminated soil and demolition waste, must be re-used or disposed of lawfully. Unlawful waste disposal or fraudulent practices by your principal contractors and subcontractors potentially exposes the proponent or your organisation to significant reputation damage and significant penalties including criminal conviction.

In NSW the **owner of the waste** and the **waste transporter** may both be guilty of an offence when waste is transported to a place that cannot lawfully be used as a waste facility.

The **owner of waste** includes, in relation to waste that has been transported, the person who was the owner of the waste immediately before it was transported (Section 143(4) of the *Protection of the Environment Operations Act 1997* (POEO Act)).

Section 143 of the POEO Act makes it an offence to transport waste to a place that cannot lawfully accept it. Penalties apply for doing the wrong thing. The **maximum penalty** is:

- \$1,000,000 for a corporation
- \$250,000 for an individual.

A range of orders under Part 8.3 of the POEO Act may be sought from the courts to recover costs and expenses and obtain compensation for offences proven. Orders can be made in addition to any penalty or action imposed in relation to the offence.

This toolkit provides guidance to support lawful waste disposal practices.

Part 1 outlines recommended areas for consideration when developing tender documents and contracts.

Part 2 outlines some of the tools available to check waste transport and disposal compliance by principal contractors and subcontractors.

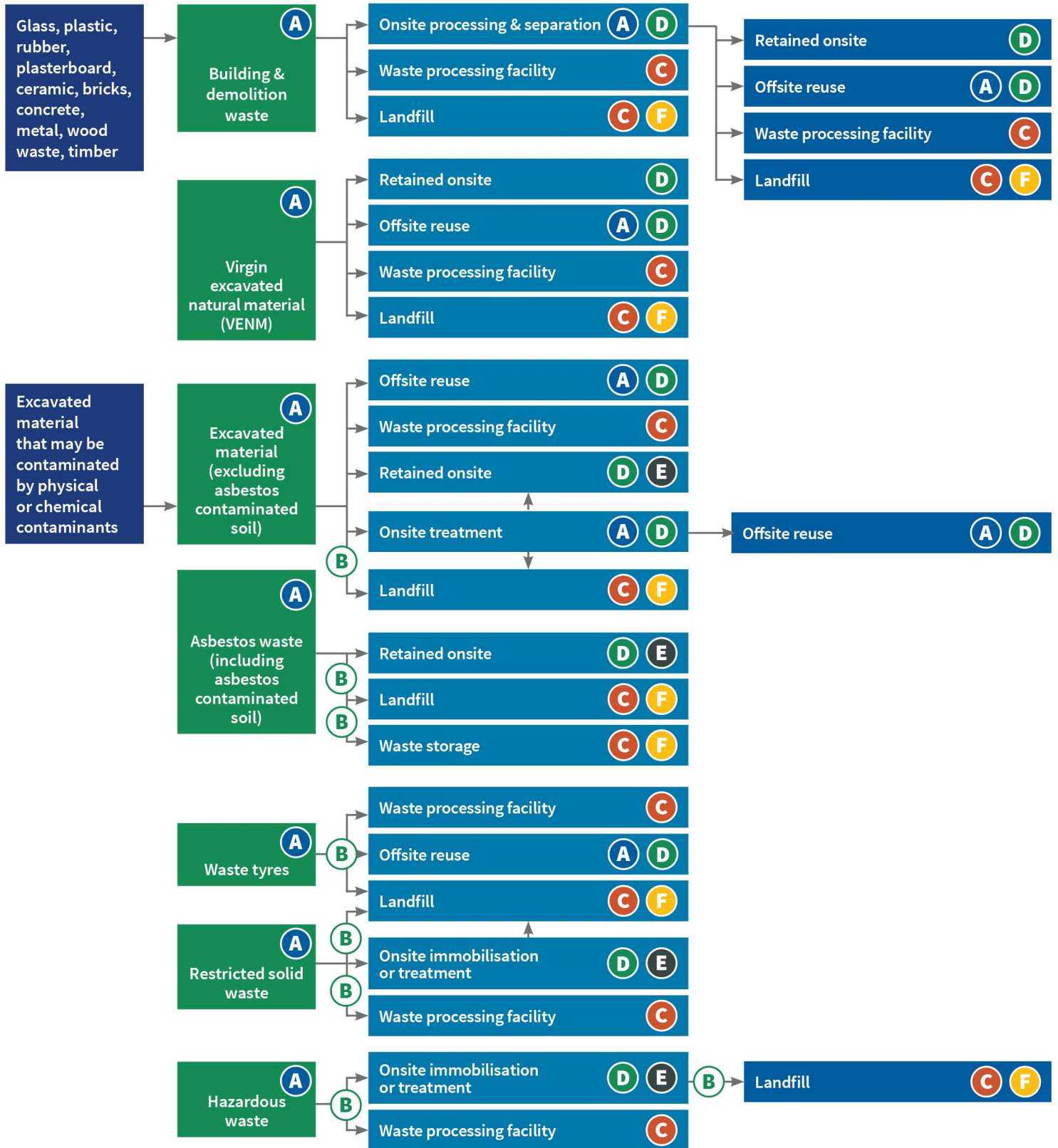
A supporting document, [Owner's guide to lawful disposal of construction and demolition waste \(PDF 22KB\)](#)¹, is available on the EPA website.

1.1. Waste flows for common construction and demolition waste

The diagram on the next page shows the flow of wastes commonly generated at construction and demolition projects. This diagram is general and not exhaustive.

¹ <https://www.epa.nsw.gov.au/your-environment/waste/industrial-waste/construction-demolition>

Waste flows for common construction and demolition waste



Key

- (A) Testing requirements**
 - Classified in accordance with the Waste Classification Guidelines
 - If applicable:
 - Compliance with relevant Resource Recovery Order for the waste
 - Compliance with relevant Resource Recovery Exemption for the waste
- (B) Transport requirements may apply:**
 - WasteLocate (asbestos waste and waste tyres)
 - Waste tracking required for wastes listed in schedule 1 of the POEO Waste Regulation
- (C) Receive facility must have planning approval and may require an EPL for that waste type**
- (D) Required development consent**
- (E) SEPP 55 - land use suitability criteria and CLM Act applies**
- (F) Waste levy applies**

Note: Waste tracking also required for wastes generated in the MLA and transported interstate.

2. The tender and contract

The EPA recommends considering the steps below, in addition to any other relevant matters, when preparing requests for tender documentation for principal contractors.

2.1. Tender specification considerations

Waste management plan (WMP)

Consider including the following in your WMP:

- a. waste classification in accordance with the NSW EPA's Waste Classification Guidelines², allotting budget and time to this task
- b. estimated quantities of each waste type to be removed from the site
- c. re-use options
- d. suitable receival sites for excavated material including virgin excavated natural material (VENM) and excavated natural material (ENM)
- e. an outline of how the waste types will be managed during the construction phases, from generation to reuse, recycling or disposal. Include details of any receival sites to be used and the required approvals e.g. development consent, environment protection licence (EPL)
- f. a reporting and monitoring template used to deliver the above-mentioned information to the principal contractor. Note: this may be able to occur within overall project reporting
- g. an itemised schedule of rates for the transport, disposal and recycling of each type of waste including any contaminated soil
- h. details of any contractors and subcontractors to be used, their environmental history, ACN/ABN and how subcontractors will be managed
- i. details of monitoring of transporters such as GPS trackers, WasteLocate³ and waste tracking
- j. allocated areas for waste segregation, stockpiling and management, if applicable
- k. contact details for consultant and disposal company that can manage contaminated soil, if applicable
- l. sufficient contingency budget and a plan for dealing with unearthed contamination. The plan will need to cover how the unearthed contamination will be managed and the estimated cost to the client.

² www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines

³ www.epa.nsw.gov.au/your-environment/waste/transporting-asbestos-waste-tyres/tracking-asbestos-waste-locate

2.2. Waste contract considerations

The EPA recommends that you consider the following, in addition to any other relevant factors, when preparing contracts with principal contractors for the management, transport and/or the disposal of waste:

- a. requiring principal contractors and subcontractors to adhere to WMP requirements
- b. requiring the proponent or your organisation to be advised of variation/updates to the WMP
- c. requiring principal contractors and subcontractors to follow any reporting and monitoring template developed under the WMP
- d. linking payment milestones to evidence of lawful waste reuse, recycling or disposal. For example, require waste classification reports, the receipt sites development consent, recycling and disposal dockets prior to milestone payment
- e. paying disposal costs directly to the disposal or recycling facilities and paying the transporter for transport only
- f. requiring transport monitoring (e.g. GPS tracking, WasteLocate, waste tracking) and recording waste dispatch details from site
- g. requiring details of any subcontractors to be used, their environmental history, ACN/ABN and how they will be managed
- h. requiring evidence of lawful disposal/recycling/re-use (for example EPL or development consent and WasteLocate consignment number) before waste is removed from site.

3. Management of waste on construction and demolition projects

3.1. Tools available to assess compliance

The EPA strongly recommends that procurement officers and project managers ensure their contractors meet contractual obligations for the lawful transport of waste and its disposal off site.

While procurement officers and project managers must rely on their own inquiries, the checklists in the tables that follow highlight some factors that may help in assessing whether contractual obligations have been met when transporting common types of waste to another place for re-use, processing or disposal. The checklists are not exhaustive.

The checklists also provide suggested examples of the types of information that contractors provide as evidence of lawful transport or disposal. The EPA recommends procurement officers and project managers make further inquiries if principal contractors and subcontractors cannot provide such evidence.

Table 1 Building and demolition waste (B&D waste)

No.	Checklist	Requirement	Evidence	Note
1	Is any of the waste B&D waste?	If yes: <ul style="list-style-type: none"> classify waste onsite using the EPA Waste Classification Guidelines if the waste is subject to an RRO and RRE, all conditions of the RRO and RRE must be complied with. 	<ul style="list-style-type: none"> waste classification report any records including sampling results records required by RRO including sampling results and copies of the statements of compliance 	
2	Will the B&D waste be transported offsite?	If yes: <ul style="list-style-type: none"> waste tracking requirements apply if waste is generated in the metropolitan levy area (MLA) and transported outside NSW loads must be covered during transport 	<ul style="list-style-type: none"> records detailing where material was transported to transport records (e.g. GPS trackers) 	

No.	Checklist	Requirement	Evidence	Note
3	Will the B&D waste be sent for recycling/re-use/processing?	<p>If yes:</p> <ul style="list-style-type: none"> receiving facility must have planning approval and may require an EPL for those waste types 	<ul style="list-style-type: none"> copy of receiving facility's EPL (available on public register), if required. if no EPL, records showing the facility can receive the waste lawfully e.g. copy of the receiving facility's development consent weighbridge receipts invoicing and payment receipts from receiving facility. 	It's recommended that you pay receiving facility costs directly to the facility.
4	Will the B&D waste be sent for disposal?	<p>If yes:</p> <ul style="list-style-type: none"> disposal facility must have planning approval and may require an EPL to dispose of those waste types. 	<ul style="list-style-type: none"> copy of disposal facility's EPL (available on public register), if required. if there is no EPL, evidence demonstrating the disposal facility can receive and dispose of the waste lawfully e.g. copy of the disposal facility's development consent weighbridge receipts invoicing and payment receipts from disposal facility. 	It's recommended that you pay receiving facility costs, including the waste levy, directly to the facility.

Table 2 Asbestos waste (including asbestos-contaminated soils)

No.	Checklist	Requirement	Evidence	Note
1	Is any of the waste asbestos waste?	<p>If yes:</p> <ul style="list-style-type: none"> • classify waste onsite using the EPA Waste Classification Guidelines • SafeWork NSW may require written notification of asbestos removal work by a licensed asbestos removalist • you may need a clearance certificate under work, health and safety laws to verify that the site is safe for normal use and can be re-occupied. 	<ul style="list-style-type: none"> • waste classification report • any records including sampling results • records of site checks • asbestos audit • copy of SafeWork NSW notification, if required • copy of asbestos removalist's licence • clearance certificate 	'Asbestos waste' is any waste that contains asbestos, including asbestos-contaminated soil.
2	Will the asbestos waste be transported offsite?	<p>If yes:</p> <ul style="list-style-type: none"> • asbestos sheets must be wrapped • friable asbestos must be in a sealed container • soils contaminated with asbestos waste must be wetted down and covered • loads must be covered during transport • if asbestos waste is >100kg or 10 square metres and being transported in NSW, the consignment must be tracked in WasteLocate • the transporter must use a smart phone or tablet that connects to the internet to record on-road details in WasteLocate • waste tracking requirements apply if asbestos waste > 10 tonnes is transported outside NSW. 	<ul style="list-style-type: none"> • WasteLocate consignment number (audit consignments) or consignment authorisation • transport records (e.g. GPS tracker) 	

No.	Checklist	Requirement	Evidence	Note
3	Will the asbestos waste be sent for storage?	<p>If yes:</p> <ul style="list-style-type: none"> the receival facility must have planning approval and may require an EPL to store asbestos waste. the receival facility must have a QR plate to scan for WasteLocate consignment. 	<ul style="list-style-type: none"> copy of receival facility's EPL (available on public register), if required if there is no EPL, evidence demonstrating the receival facility can receive and store asbestos waste e.g. a copy of the receival facility's development consent weighbridge receipts invoicing and payment receipts from receival facility WasteLocate consignment number (audit consignments) 	It's recommended that you pay receival facility costs directly to the facility.
4	Will the asbestos waste be sent for disposal?	<p>If yes:</p> <ul style="list-style-type: none"> the disposal facility must have planning approval and an EPL to dispose of asbestos waste. the disposal facility must have a QR plate to scan for WasteLocate consignment. 	<ul style="list-style-type: none"> copy of disposal facility's EPL (available on public register). weighbridge receipts invoicing and payment receipts from disposal facility WasteLocate consignment number (audit consignments) 	It's recommended that you pay disposal facility costs, including the waste levy, directly to the facility.

Table 3 Virgin excavated natural material (VENM)

No.	Checklist	Requirement	Evidence	Note
1	Is any of the waste VENM?	<p>If yes:</p> <ul style="list-style-type: none"> classify waste onsite using the EPA Waste Classification Guidelines. 	<ul style="list-style-type: none"> waste classification report sampling results (if available) geo-tech report (if available) 	
2	Will the VENM be transported offsite?	<p>If yes:</p> <ul style="list-style-type: none"> waste tracking requirements apply if waste >10 tonnes generated in the MLA is transported outside NSW loads must be covered during transport. 	<ul style="list-style-type: none"> records detailing where material was transported to transport records (e.g. GPS trackers) 	
3	Will the VENM be sent for reuse or processing?	<p>If yes:</p> <ul style="list-style-type: none"> receival facility must have planning approval and may require an EPL to lawfully reuse or process VENM. 	<ul style="list-style-type: none"> copy of receival facility's EPL (available on public register), if required if there is no EPL, evidence demonstrating the facility can re-use or process VENM lawfully e.g. a copy of the receival facility's development consent statutory declaration from owner of receival facility weighbridge receipts, if applicable invoicing and payment receipts from receival facility, if applicable 	It's recommended that you pay receival facility costs directly to the facility, if applicable.
4	Will the VENM be sent offsite for disposal?	<p>If yes:</p> <ul style="list-style-type: none"> disposal facility must have planning approval and may require an EPL to dispose of VENM. 	<ul style="list-style-type: none"> copy of disposal facility's EPL (available on public register), if required if there is no EPL, evidence demonstrating the disposal facility can dispose of VENM lawfully e.g. a copy of the disposal facility's development consent weighbridge receipts invoicing and payment receipts from disposal facility 	It's recommended that you pay disposal facility costs, including the waste levy, directly to the facility.

Table 4 Excavated natural material (ENM)

No.	Checklist	Requirement	Evidence	Note
1	Is any of the waste ENM?	<p>If yes:</p> <ul style="list-style-type: none"> • classify waste onsite using the EPA Waste Classification Guidelines • the waste is subject to an RRO and RRE. All conditions of the RRO and RRE must be complied with. 	<ul style="list-style-type: none"> • waste classification report • sampling results • records required by RRO including sampling results and copies of the statements of compliance • geo-tech report (if available) 	
2	Will the ENM be transported offsite?	<p>If yes:</p> <ul style="list-style-type: none"> • waste tracking requirements apply if waste >10 tonnes generated in the MLA is transported outside NSW • loads must be covered during transport. 	<ul style="list-style-type: none"> • records detailing where ENM was transported to • transport records (e.g. GPS trackers) 	
3	Will the ENM be sent for reuse?	<p>If yes:</p> <ul style="list-style-type: none"> • receival facility must have planning approval to re-use the waste. 	<ul style="list-style-type: none"> • statutory declaration from owner of receival facility • evidence demonstrating the facility can re-use ENM lawfully e.g. a copy of the receival facility's development consent • invoicing and payment receipts from receival facility, if applicable 	It's recommended that you pay receival facility costs directly to the facility, if applicable.

Table 5 Excavated material (other than VENM, ENM or asbestos-contaminated soil)

No.	Checklist	Requirement	Evidence	Note
1	Is any of the waste excavated material (other than VENM, ENM and asbestos-contaminated soil)?	<p>If yes:</p> <ul style="list-style-type: none"> • classify waste onsite using the EPA Waste Classification Guidelines • if the waste is subject to an RRO and RRE, all conditions of the RRO and RRE must be complied with. 	<ul style="list-style-type: none"> • waste classification report • sampling results • records required by RRO including sampling results and copies of the statements of compliance • geo-tech report (if available) • immobilisation approvals 	<p>Prior to disposal, hazardous waste must be treated to lower its waste classification, either onsite or off-site at a licensed hazardous-waste processing facility. Treatment may include immobilisation under an immobilisation approval.</p>
2	Will excavated material (other than VENM, ENM and asbestos contaminated soil) be transported offsite?	<p>If yes:</p> <ul style="list-style-type: none"> • waste tracking requirements apply if: <ul style="list-style-type: none"> ○ waste >10 tonnes generated in the MLA is transported outside NSW, or ○ waste is of a type described in Schedule 1 of the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> • loads must be covered during transport. 	<ul style="list-style-type: none"> • consignment authorisations and waste transport certificates, if required • records detailing where material was transported to • transport records (e.g. GPS trackers) 	
3	Will excavated material (other than VENM, ENM and asbestos-contaminated soil) be sent for re-use or processing?	<p>If yes:</p> <ul style="list-style-type: none"> • receival facility must have planning approval and may require an EPL to re-use or process those waste types 	<ul style="list-style-type: none"> • copy of receival facility's EPL (available on public register), if required • if there is no EPL, evidence demonstrating the facility can re-use or process the waste lawfully e.g. a copy of the receival facility's development consent • weighbridge receipts • invoicing and payment receipts from receival facility • statutory declaration from owner of receival facility 	<p>It's recommended that you pay receival facility costs directly to the facility.</p>

No.	Checklist	Requirement	Evidence	Note
4	Will excavated material (other than VENM, ENM and asbestos-contaminated soil) be sent for disposal?	If yes: <ul style="list-style-type: none"> disposal facility must have planning approval and may require an EPL to dispose of those waste types. 	<ul style="list-style-type: none"> copy of disposal facility's EPL (available on public register), if required if there is no EPL, evidence demonstrating the disposal facility can dispose of the waste lawfully e.g. a copy of the disposal facility's development consent weighbridge receipts invoicing and payment receipts from disposal facility 	It's recommended that you pay disposal facility costs, including the waste levy, directly to the facility.

4. Resources

4.1. Abbreviations

B&D waste	Building and demolition waste
CLM Act	<i>Contaminated Land Management Act 1997</i>
ENM	Excavated natural material
EPL	Environment protection licence
MLA	Metropolitan Levy Area
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
RRE	Resource recovery exemption
RRO	Resource recovery order
SEPP 55	State Environmental Planning Policy No 55 – Remediation of Land
VENM	Virgin excavated natural material
Waste Reg	Protection of the Environment Operations (Waste) Regulation 2014

4.2. Definitions

Asbestos

The *Protection of the Environment Operations Act 1997* (POEO Act) defines asbestos as:

The fibrous form of those mineral silicates that belong to the serpentine or amphibole groups of rock-forming minerals, including actinolite, amosite (brown asbestos), anthophyllite, chrysotile (white asbestos), crocidolite (blue asbestos) and tremolite.

Asbestos waste

The POEO Act defines asbestos waste as:

Any waste that contains asbestos.

Building and demolition waste

The POEO Act defines building and demolition waste as:

Unsegregated material (other than material containing asbestos waste or liquid waste) that results from –
the demolition, erection, construction, refurbishment or alteration of buildings other than –
chemical works, or
mineral processing works, or
container reconditioning works, or
waste treatment facilities, or
the construction, replacement, repair or alteration of infrastructure development such as roads, tunnels, sewage, water, electricity, telecommunications and airports,
and includes materials such as –
bricks, concrete, paper, plastics, glass and metal, and
timber, including unsegregated timber, that may contain timber treated with chemicals such as copper chrome arsenate (CCA), high temperature creosote (HTC), pigmented emulsified creosote (PEC) and light organic solvent preservative (LOSP),
but does not include excavated soil (for example, soil excavated to level off a site prior to construction or to enable foundations to be laid or infrastructure to be constructed).

Contaminated soil

The POEO Act defines contaminated soil as:

Soil or sediment that contains a substance at a concentration above the concentration at which the substance is normally present in soil or sediment from the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment, where harm to the environment includes any direct or indirect alteration of the environment that has the effect of degrading the environment.

Excavated natural material (ENM)

The resource recovery order 'Excavated Natural Material Order 2014' defines, for the purposes of the order, excavated natural material as:

naturally occurring rock and soil (including but not limited to materials such as sandstone, shale, clay and soil) that has:
been excavated from the ground, and
contains at least 98% (by weight) natural material, and
does not meet the definition of Virgin Excavated Natural Material in the Act.

Excavated natural material does not include material located in a hotspot; that has been processed; or that contains asbestos, Acid Sulfate Soils (ASS), Potential Acid Sulfate soils (PASS) or sulfidic ores.

All requirements of the Excavated Natural Material Order 2014 and the related resource recovery exemption 'Excavated Natural Material Exemption 2014' must be met for the re-use of excavated natural material to be lawful.

Virgin excavated natural material (VENM)

The POEO Act defines virgin excavated natural material as:

natural material (such as clay, gravel, sand, soil or rock fines):

that has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial, mining or agricultural activities and

that does not contain any sulfidic ores or soils or any other waste,

and includes excavated natural material that meets such criteria for virgin excavated natural material as may be approved for the time being pursuant to an EPA Gazettal notice.

4.3. Webpages

Table 6 Webpages providing information about specific terms

Term	URL
Classifying waste	www.epa.nsw.gov.au/your-environment/waste/classifying-waste
Consignment authorisations	www.epa.nsw.gov.au/your-environment/waste/tracking-transporting-hazardous-waste/owt-help/owt-help-consignment-authorisations
EPA public register	http://app.epa.nsw.gov.au/prpoeoapp/
Environment protection licence	www.epa.nsw.gov.au/your-environment/waste/waste-overview/licensing
Metropolitan levy area (MLA)	www.epa.nsw.gov.au/your-environment/waste/waste-levy/levy-regulated-area-and-levy-rates
NSW EPA website	www.epa.nsw.gov.au
NSW legislation	www.legislation.nsw.gov.au/
<i>Protection of the Environment Operations Act 1997</i> (POEO Act)	www.legislation.nsw.gov.au/#/view/act/1997/156
Protection of the Environment Operations (Waste) Regulation 2014	www.legislation.nsw.gov.au/#/view/regulation/2014/666
Resource recovery orders and exemptions	www.epa.nsw.gov.au/your-environment/recycling-and-reuse/resource-recovery-framework/current-orders-and-exemption
Tracking waste from the MLA	www.epa.nsw.gov.au/your-environment/waste/tracking-waste-mla
Virgin excavated natural material	www.epa.nsw.gov.au/your-environment/waste/classifying-waste/virgin-excavated-natural-material
Waste classification guidelines	www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines
Waste levy	www.epa.nsw.gov.au/your-environment/waste/waste-levy
WasteLocate	www.epa.nsw.gov.au/your-environment/waste/transporting-asbestos-waste-tyres/tracking-asbestos-waste-locate
Waste offences (POEO Act)	www.legislation.nsw.gov.au/#/view/act/1997/156/chap5/part5.6
Waste tracking	www.epa.nsw.gov.au/your-environment/waste/tracking-transporting-hazardous-waste/online-waste-tracking