

Spoil and Imported Material Management

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EMS 0013 – Spoil Management – v3

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1. Purpose

To provide guidance on spoil and imported fill management so that Endeavour Energy, contractors, and Accredited Service Providers (ASP) operate following legislative requirements and guidelines when managing spoil and imported construction and/or recovered materials.

2. Documentation Scope

This standard applies to all Endeavour Energy employees and contractors undertaking the excavation of spoil from company worksites, and importation of virgin and recovered materials. ASPs are to align their procedures/worksite practices with this Standard (where applicable) and relevant legislation and Australian Standards.

3. References

External Regulations

Contaminated Lands Management Act 1997 (NSW)
Electricity Supply Act 1995 (NSW)
Environment Planning and Assessment Act 1979 (NSW)
Protection of the Environment Operations Act 1997 (NSW)
Protection of the Environment Operations (Waste) Regulation 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation 2014 – Resource Recovery Order under Part 9, Clause 93 – The Excavated Natural Material Order 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation 2014- Resource Recovery Order under Part 9, Clause 93- The Excavated Natural Material Exemption 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation 2014 – Resource Recovery Exemption under Part 9, Clauses 91 and 92 – The Recovered Aggregate Exemption 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation 2014 – Resource Recovery Order under Part 9, Clause 93 – The Recovered Aggregate Order 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation 2014 – Resource Recovery Exemption under Part 9, Clauses 91 and 92 – The Treated Drilling Mud Exemption 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation 2014 – Resource Recovery Order under Part 9, Clause 93 – The Treated Drilling Mud Order 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation- Resource Recovery Order under Part 9, Clause 93- The Mulch Order 2016 (NSW)
Protection of the Environment Operations (Waste) Regulation- Resource Recovery Order under Part 9, Clause 93- The Mulch Exemption 2016 (NSW)
Protection of the Environment Operations (Waste) Regulation- Resource Recovery Order under Part 9, Clauses 91 and 92- The Processed Foundry Sand Order 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation- Resource Recover Order under Part 9, Clauses 91 and 92- The Processed Foundry Sand Exemption 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation- Resource Recover Order under Part 9, Clauses 91 and 92- The Basalt Fines Order 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation- Resource Recover Order under Part 9, Clauses 91 and 92- The Basalt Fines Exemption 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation- Resource Recover Order under Part 9, Clauses 91 and 92- The “Continuous Process” Recovered Fines Order 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation- Resource Recover Order under Part 9, Clauses 91 and 92- The “Continuous Process” Recovered Fines Exemption 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation- Resource Recover Order under Part 9, Clauses 91 and 92- The Batch Process” Recovered Fines Order 2014 (NSW)
Protection of the Environment Operations (Waste) Regulation- Resource Recover Order under Part 9, Clauses 91 and 92- The “Batch Process” Recovered Fines Exemption 2014 (NSW)
Waste Classification Guidelines, NSW EPA, 2014
State Environment Planning Policy (SEPP) (Transport and Infrastructure) 2021 (NSW)
State Records Act 1988 (NSW)

External Standards		
Standard No.	Year	Title
AS 4454-2012	2012	Composts, soil conditioners, and mulch

Company Policies and Procedures
Board Policy (Environment) 4.0 – Environmental Sustainability Company Policy (Communications) 14.11 – Community Partnerships Company Procedure (Environment) GPE 0009 – Contaminated Land Project Management Company Procedure (HSE) GSY0051 – HSE Incident Learning & Reporting Company Procedure (Health & Safety) GSY 0084 – Pre-Purchase Risk Assessment Company Procedure (Health & Safety) GSY 1065 – Asbestos Management Company Form (Health & Safety) FSY 0151 – Pre-purchase Risk Assessment Form Network Management Plan December 2013 Review Electrical Safety Rules

Company Standards	
Environmental Management Standard EMS 0001	Environmental impact assessment and environmental management plans
Environmental Management Standard EMS 0007	Waste Management
Environmental Management Standard EMS 0008	Environmental incident response and management

4. Definitions and Abbreviations

Term	Definition
Accredited Service Provider (ASP)	An individual or entity accredited by the NSW Government Trade & Investment in accordance with the <i>Electricity Supply (General) Regulation 2001 (NSW)</i> .
Acid Sulphate Soils	A type of soil naturally occurring in both coastal (tidal) and inland or upland (freshwater) environments. These soils contain iron sulphides which when exposed to oxygen generate sulfuric acid together with toxic quantities of iron, aluminium, and heavy metals.
Appropriately licensed vehicle	Vehicle licensed by the Environment Protection Authority (EPA) for the transport of more than 200kg of contaminated spoil that is deemed to be category 1 or category 2 trackable waste under Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> . Refer to Company Standard EMS 0007- Waste Management, for further information on when a transport licence and waste tracking is required and refer to Company Procedure (Health & Safety) GSY 1065 – Asbestos Management for the transportation requirements associated with asbestos-contaminated spoil.
Application to land	Application to land of all materials received from off-site, including (but not limited to) application by any of the following methods — • spraying, spreading, or depositing on the land, • ploughing, injecting, or mixing into the land, • filling, raising, reclaiming, or contouring the land.
Asbestos	Asbestos is the generic term for a number of naturally occurring fibrous silicate minerals that are incombustible and resistant to chemicals. Asbestos was formerly widely used in the form of fabric or board as a heat-resistant structural material. Asbestos-containing material means any material, object, product, or debris that contains asbestos and is classed as either friable or bonded. It is classified as “Special Waste” by the <i>Waste Classification Guidelines 2014</i> as there are unique regulatory requirements to guide handling and disposal.
Contaminated spoil	Spoil that contains a substance at a concentration above that which is normally present in that same area (background concentration) and presents a risk or harm to human health or any other aspect of the environment.
Decision Statement	Conditions of approval formulated by Endeavour Energy as a consent authority under Part 5 of the <i>Environment Planning and Assessment Act 1979 (NSW)</i> . The Decision Statement is provided to the proponent (which can include Endeavour Energy) following the determination of an EIA.
Designer	Accredited person(s) or group(s) engaged by the proponent to design the proposal (can include Project Officers, Mains Development Officers, and Level 3 Accredited Service Providers).

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Term	Definition
Emergency works	Works for the purpose of maintaining or restoring infrastructure facilities or equipment in order to maintain public safety or to protect buildings or the environment due to: • a sudden natural event, including a storm, flood, tree fall, bushfire, landslip, or coastal inundation. • accident, equipment failure, or structural collapse; or • damage caused by vandalism or arson.
EnviroGIS	A GIS is accessible to Endeavour Energy employees and contains environmental data. It can be accessed at the following link: Enviro GIS (endeavourenergy.com.au)
Environmental Impact Assessment (EIA)	It is a work planning process prepared in accordance with the <i>Environmental Planning and Assessment Act 1979 (NSW)</i>. An Environmental Impact Assessment (EIA) assesses the impacts of an activity on the environment and is undertaken in the form of a Summary Environmental Report (SER) or Review of Environmental Factors (REF) or an Environmental Impact Statement (EIS). Refer to Environmental Management Standard EMS 0001 – Environmental Impact Assessment and Environmental Management Plans for further information.
Environmental Management Plan (EMP)	Details mitigation measures for the environmental risks identified in the EIA as set out in the requirements within Company Standard EMS 0001 – Environmental Impact Assessment and Environmental Management Plans.
Environmentally Sensitive Area	Defined in The Mulch Exemption 2016 (NSW EPA 2016) as any of the following: (a) land to which State Environmental Planning Policy (resilience and Hazards) 2021 (NSW) applies. (b) land within a wetland of international significance declared under the Ramsar Convention on Wetlands or within a World Heritage area declared under the World Heritage Convention. (c) land reserved as an aquatic reserve under the Fisheries Management Act 1994 or as a marine park under the Marine Parks Act 1997. (d) land within 100 metres of land to which paragraph (a), (b), or (c) applies. (e) land identified in any environmental planning instrument as being of high biodiversity significance. (f) land reserved under the National Parks and Wildlife Act 1974, or land acquired under Part 11 of that Act. (g) land reserved or dedicated under the Crown Lands Act 1989 for the preservation of flora, and fauna or other environmental protection purposes. (h) land identified as being a critical habitat under the Biodiversity Conservation Act 2016 or Part 7A of the Fisheries Management Act 1994. (i) land dedicated or set apart under the Forestry Act 2012 or the former Acts as a flora reserve. (j) land (including subterranean lands) declared to be a wilderness area under the Wilderness Act 1987 or the National Parks and Wildlife Act 1974.

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	(k) any additional areas listed as an environmentally sensitive area in a relevant Local Environmental Plan; and (l) agricultural land being land used for broad acre cropping, pasture, horticulture, growing fruit, and keeping livestock.
EPA	NSW Environment Protection Authority
EPA-licensed waste recovery or disposal facility	A facility licensed by the EPA under the <i>Protection of the Environment Operations Act 1997</i> to accept specific waste streams as specified in the Environment Protection Licence for the site. A list of licensed facilities is available on the EPA website: http://www.epa.nsw.gov.au/prpoeoapp/
Excavated Natural Material (ENM)	It is material that meets the conditions of <i>The ENM Order 2014</i> and <i>The ENM Exemption 2014</i> and includes naturally occurring rock and soil that: • has been excavated from the ground; and • contains at least 98% (by weight) natural material (such as clay, gravel, sand, soil, or rock fines); and • does not meet the definition of Virgin Excavated Natural Material (VENM) in the <i>Protection of Environment Operations Act 1997 (NSW)</i>; and • has been sampled and tested in accordance with <i>The ENM Order 2014</i> and <i>The ENM Exemption 2014</i>. ENM does not include material: that has been processed (for example mixed, or blended); from a contamination hotspot; or that contains asbestos or actual or potential acid sulphate soils or sulfidic ores. In other words, ENM is previously disturbed soil which has been proven to be uncontaminated via sampling and testing.
Exempt development	As referred to in Division 4 of the Transport and Infrastructure SEPP 2021 and Section 2.46 of the Transport and Infrastructure SEPP 2021 relevant to Exempt Development for Electricity transmission and distribution networks. Exempt Development is not assessable and does not require an EIA under the Code of Practice (CoP) and relevant legislation.
FSC	Field Service Centre
GIS	Geographic Information System
Imported fill	In this standard, imported fill refers to material applied to land usually for levelling, surfacing, and earthwork processes. It can include soil of various types (such as sand, clay, and topsoil) and aggregate.
Imported material	In this standard, imported material refers to material applied to land as a soil amendment (such as mulch) or fill.
Integrated Waste Tracking Solution (IWTS)	NSW EPA online waste tracking system which is used to meet compliance requirement of tracking Category 1 trackable waste and Category 2 trackable waste as defined in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> .
Mulch	Means plant material shredded and/or screened to a preferred particle size grading for particular applications. Mulch, by virtue of the nature and source of the plant

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Term	Definition
	material, must pose minimal risk to the presence of physical and chemical contaminants. Mulch may include urban wood residues and forestry and sawmill residues but does include plant material from kerbside waste collections.
NATA	National Association of Testing Authorities
PFAS	Perfluoroalkyl and Polyfluoroalkyl Substances
Proponent	The person or organisation proposing to conduct works on Endeavour Energy's network including Endeavour Energy Designers, Project Officers, Project Managers, and ASPs.
Proposal	The work to be performed, which includes all activities, including material storage and access to the subject site.
Proximity principle	In accordance with the <i>Protection of the Environment Operations (Waste) Regulation 2014 (NSW)</i> it is an offense to transport waste generated in NSW by motor vehicle for disposal more than 150 kilometres from the place of generation unless the waste is transported to one of the two nearest lawful disposal facilities to the place of generation (even if that facility is located more than 150 kilometres from its place of generation). If the material has been classified as Restricted Solid Waste, then it must be transported to the closest waste disposal facility that is licensed to accept Restricted Solid Waste.
Recovered aggregate	Material that meets the conditions of <i>The Recovered Aggregate Order 2014</i> and <i>The Recovered Aggregate Exemption 2014</i> and includes material comprising of concrete, brick, ceramics, natural rock, and asphalt processed into an engineering material. It does not include refractory bricks or associated refractory materials, or asphalt that contains coal tar.
Resource Recovery Exemption	Resource recovery exemptions contain the conditions that <u>consumers</u> must meet to apply waste to land, reuse waste as fuel, or use it in connection with a process of thermal treatment outside of certain requirements of the waste regulatory framework. They may include specifications and requirements on how to reuse or apply the waste, record keeping, reporting, and other requirements. All resource recovery exemptions are made under clauses 91 and 92 of the <i>Protection of the Environment Operations (Waste) Regulation 2014</i>
Resource Recovery Order	Resource recovery orders include conditions that <u>generators and processors</u> of waste must meet to supply the waste to land, or reuse waste as fuel, or use it in connection with a process of thermal treatment. They may include material specifications, processing specifications, record keeping, reporting, and other requirements. All resource recovery orders are made under clause 93 of the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> .
SER Application	An electronic web-based program used to complete SERs. It consists of a GIS containing environmental data.
Spoil	Material that is generated during excavation or under boring activities. It can comprise soil, sand, clay, rock, and/or treated drilling mud (as defined following).

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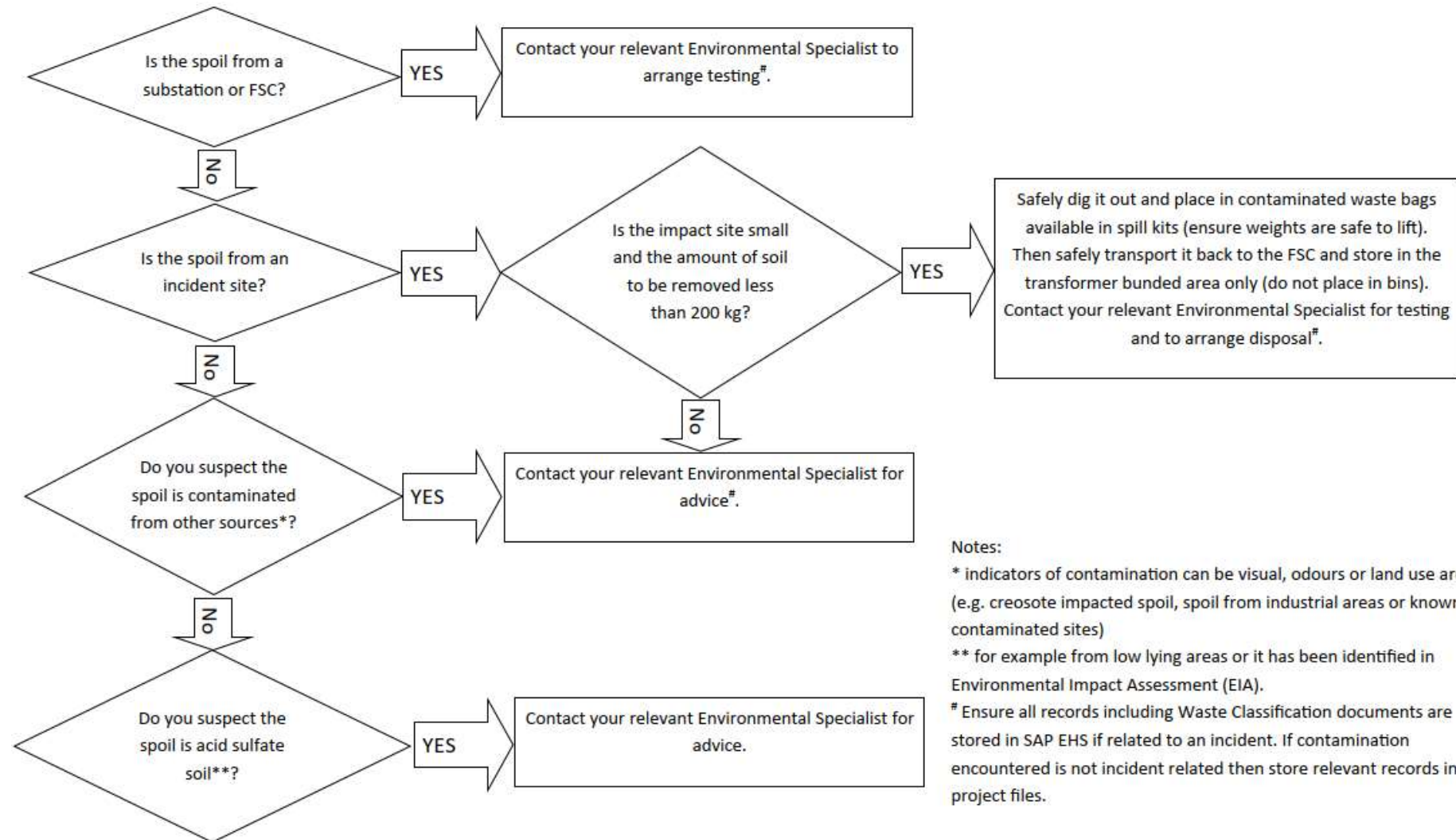
Term	Definition
Substation	For the purposes of this Standard, any location where electrical energy is transformed or switched at transmission or zone substation level voltages.
Supervisor	Any person who directs, manages, administers, or guides another person or group of people working on a proposal.
The Blue Book	Name given to the Managing Urban Stormwater: Soils and Construction published by Landcom 2004 that prescribes best practice sediment and erosion control methods.
Transport and Infrastructure SEPP	State Environment Planning Policy (SEPP) (Transport and Infrastructure) 2021 (NSW).
Treated drilling mud	Means drilling mud that has undergone dewatering such that the resultant solid: • does not have an angle of repose of less than 5 degrees above horizontal; or • does not become free flowing at or below 60 degrees Celsius or when it is transported; or • is generally capable of being picked up by a spade or shovel; and • it must meet the requirements under <i>The Treated Drilling Mud Order and The Treated Drilling Mud Exemption 2014</i>. Drilling mud means a mixture of naturally occurring rock and soil, including but not limited to materials such as sandstone, shale, and clay, and drilling fluid generated during drilling operations such as horizontal directional drilling/under boring or potholing. Drilling mud does not include drilling mud that has been generated by: • deep drilling for mineral, gas, or coal exploration; or • drilling through contaminated soils, acid sulphate soils, or potential acid sulphate soils.
Virgin Excavated Natural Material (VENM)	It is defined in the <i>Protection of the Environment Operations Act 1997</i> 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 process residues, as a result of industrial, commercial, mining, or agricultural activities; and • does not contain any sulfidic ores or soils or any other waste. VENM cannot be “made” from processed soils, and excavated material that has been stored or processed in any way cannot be classified as VENM. In other words, VENM is previously unturned soil that has no potential to be contaminated.
Waste classification	Classification of waste in accordance with the <i>Waste Classification Guidelines 2014</i> for appropriate and lawful disposal of the waste.
Waste Regulation	<i>Protection of the Environment Operations (Waste) Regulation 2014 (NSW)</i> .

Term	Definition
Worksite	For the purposes of this Standard: • a worksite is defined as any site used by Endeavour Energy or an ASP for the purpose of conveying electricity; and • the extent of the worksite is defined by the job scope. In the event that the job scope crosses multiple land use zonings as specified in the Local Environment Plan (for example the project crosses from residential to industrial zonings), a separate worksite should apply to each land use zoning; and • the worksite incorporates the spoil storage location.

5. Actions

The requirements of this Standard must be considered for any proposal involving the generation of spoil and importation of materials throughout Endeavour Energy's network area. A summary of these requirements is included in the following flowcharts. The minimum mandatory requirements are also documented in the Environmental Guidelines Handbook.

Spoil Management Flowchart – Potentially Contaminated* or Acid Sulphate Soil ** Spoil



Notes:

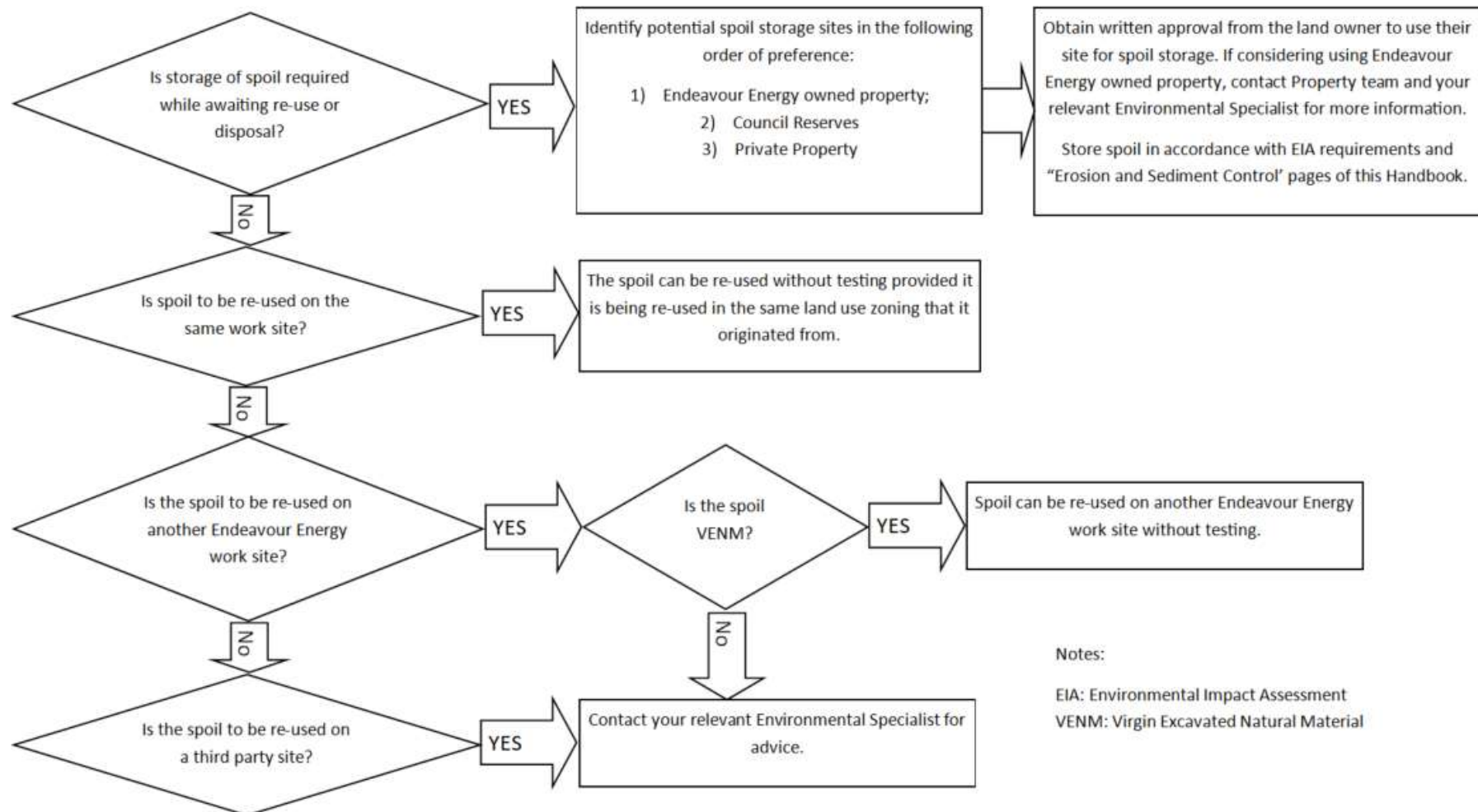
* indicators of contamination can be visual, odours or land use areas (e.g. creosote impacted spoil, spoil from industrial areas or known contaminated sites)

** for example from low lying areas or it has been identified in Environmental Impact Assessment (EIA).

Ensure all records including Waste Classification documents are stored in SAP EHS if related to an incident. If contamination encountered is not incident related then store relevant records in the project files.

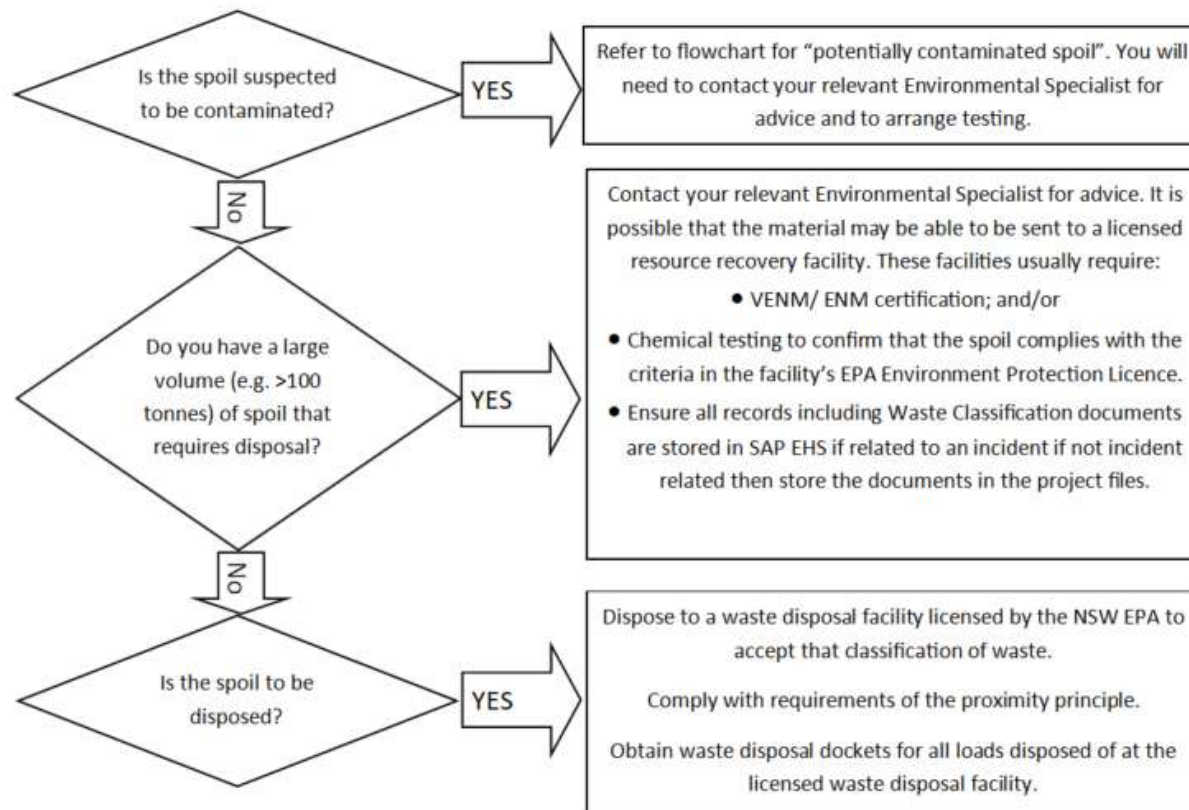
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Spoil Management Flowchart – Spoil Storage and / or Re-use



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Spoil Management Flowchart – Disposal



Notes:

VENM: Virgin Excavated Natural Material

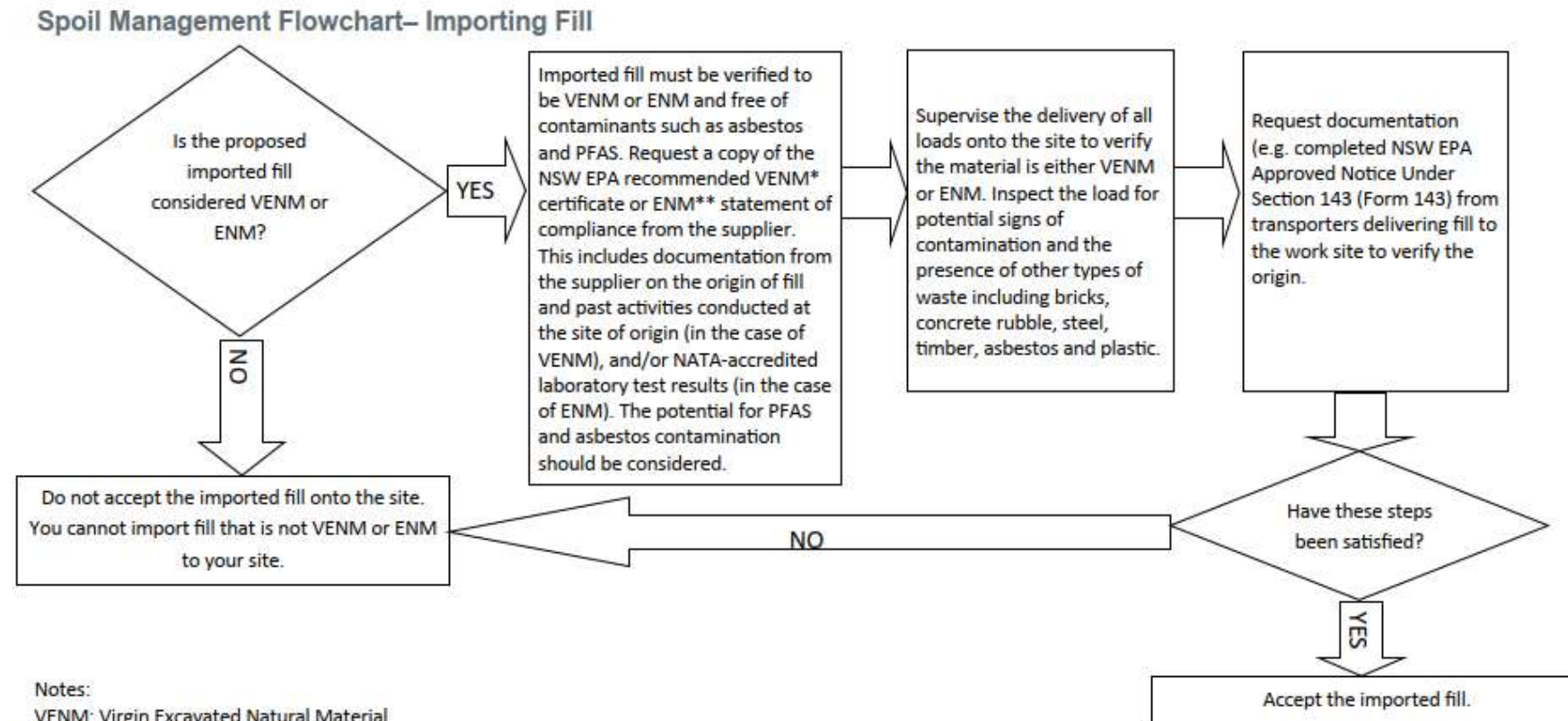
ENM: Excavated Natural Material

EPA: Environment Protection Authority (NSW)

Proximity Principle: Waste must be disposed of at a licensed waste disposal facility located within 150 km from the place of generation, unless there is no facility licensed to accept that classification of waste within 150km which in that case it must be disposed of to one of the two nearest lawful disposal facilities. Note the proximity principle only applies to waste being disposed, it does not apply to waste being recovered or recycled.

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Spoil Management Flowchart – Importing Fill



Notes:

VENM: Virgin Excavated Natural Material

ENM: Excavated Natural Material

* If there are doubts as to whether the material is VENM, request that the material is appropriately sampled, and then chemically tested by a NATA-accredited laboratory for potential contaminants of concern and sight the certification and original laboratory results.

** If importing ENM, it must also meet the requirements of *The ENM Order and Exemption 2014*. In accordance with *The ENM Order and Exemption 2014*, the following must be completed:

- a written statement must be obtained from the supplier stating that the ENM complies with the conditions of *The ENM Order 2014*. These conditions include but are not limited to, chemical testing by a NATA-accredited laboratory of the ENM and relevant record keeping. This chemical testing should include testing for asbestos, with ENM to be free of asbestos. Relevant NATA-accredited laboratory test results should be provided by the supplier for the ENM. Consideration should also be given to the requirement for chemical testing for PFAS (depending on the origin of the fill and past activities conducted at the site of origin); and
- the delivery of all loads onto the worksite must be supervised to verify the material meets the physical characteristics of ENM (e.g. <2% foreign material).

6. Spoil classification

Spoil must be classified in the following situations:

- the spoil is suspected to be contaminated.
- the spoil is suspected to be acid sulphate soils; or
- re-use of the spoil as fill is to occur on another worksite or a third-party site.

Classification involves sampling, and then chemical testing by a NATA-accredited laboratory and can be organised by the relevant Environmental Specialist (internal employees) or a suitably qualified environmental consultant (ASPs) prior to the commencement of work.

6.1 Spoil is suspected to be contaminated

Any spoil excavated from substations and Field Service Centre (FSC) has the potential to be contaminated and should be managed as spoil suspected to be contaminated.

In relation to works elsewhere on the Network, the proponent should consider the following during the planning processes to determine the potential for contamination:

- current and historical land uses that may have the potential to cause contamination (for example, industrial land use, adjacent to a petrol station).
- the proximity of the worksite to any contaminated sites notified to, or regulated by the EPA; and/or
- evidence of leaks from oil-filled equipment.

In addition, spoil should be monitored during excavation works for signs of contamination including:

- odours
- discolouration or staining
- asbestos (for example, conduits, fibrous fragments/sheeting)
- buried material (for example, drums, underground storage tanks, building materials);
- presence of ash or slag, and;
- signs of creosote (odours, staining).

If spoil is suspected to be contaminated during excavation, **cease works immediately** and contact the supervisor and the relevant Environmental Specialist (internal employees) or a suitably qualified environmental consultant (ASPs). The spoil that is suspected to be contaminated must be classified through sampling, and then chemical testing by a NATA-accredited laboratory, prior to disposal (refer to Section 5.1 Spoil classification).

Management of contaminated spoil should also consider requirements in Company Procedure (Environment) GPE 0009 – Contaminated Land Project Management (internal employees).

If spoil is contaminated with asbestos refer to Company Procedure (Health & Safety) GSY 1065 – Asbestos Management (internal employees) and follow the [Asbestos in Soil Process Map](#).

Advice should be sought from the relevant Environmental Specialist (applies to internal employees) or a suitably qualified environmental consultant (applies to ASPs) on the management of spoil excavated from around pole butts treated with creosote. Spoil impacted with creosote cannot be reused and requires testing for waste classification purposes to inform disposal requirements (testing should include metals, total recoverable hydrocarbons (TRH) and polycyclic aromatic hydrocarbons (PAHs)). Any residual creosote impacted pole butt spoil remaining in pole holes should be covered with road base or concrete.

6.2 Acid sulphate soils

Endeavour Energy's GIS programs that contain environmental data (including EnviroGIS, SER Application) (for internal employees) or mapping sourced from <http://www.environment.nsw.gov.au/acidsulfatesoil/riskmaps.htm> or local councils (for ASPs) can be used to identify the probability of acid sulphate soils occurring on a worksite.

Should works involve the potential disturbance of acid sulphate soils, refer to the Generic Acid Sulphate Soils Management Plan included as Annexure B: Generic Acid Sulphate Soils Management Plan (for internal staff) or the *Acid Sulphate Soil Manual 1998* (for ASPs). If acid sulphate soils are identified through the EIA process, the EMP for the proposal should include the necessary mitigation measures.

Advice on the management of acid sulphate soils can be sought from the relevant Environmental Specialist (internal employees) or a suitably qualified environmental consultant (ASPs).

7. Spoil storage

7.1.1 General requirements

The proponent should identify potential spoil storage sites during the preparation of the EIA and where possible contact the relevant landowner in the first instance to request approval. Conditions for spoil storage should be included in the EMP (refer to Environmental Management Standard EMS 0001 – Environmental impact assessment and environmental management plans) and communicated to relevant staff.

For fault and emergency and maintenance works, the Supervisor should identify potential spoil storage sites and contact the relevant landowner to request approval (internal employees only).

Spoil storage sites must be selected in the following order of priority:

- 1) Endeavour Energy owned property (internal employees only) – contact the relevant Environmental Specialist for more information.
- 2) Council reserves – local council should be contacted to determine if there is council owned land that can be used for spoil storage. It is prudent that written approval is obtained from the council prior to the commencement of spoil storage; and
- 3) Private land – the last option for storage is privately owned land. Written approval must be obtained from the landowner prior to spoil storage occurring on private land.

Surrounding land uses and associated working hours should be considered when selecting spoil storage sites.

If there are no storage sites available, disposal options should be organised for the spoil (refer to Section 5.4 Spoil disposal).

It is recommended that uncontaminated spoil is stored temporarily on a level surface at the worksite for later re-use.

The following key requirements must be adopted in the management of spoil storage sites:

- The relevant Environmental Specialist will conduct regular inspections of the spoil storage sites (internal employees only).
- segregate spoil on the basis of the land use zonings from where it originated (for example spoil excavated from a residential zoning must not be mixed with spoil excavated from an industrial zoning).
- topsoil should be stockpiled separately to assist in restoration works at the completion of the project.
- fence and lock the spoil storage site to reduce the likelihood of illegal dumping and manage public liability.
- install signposting containing the contact details (of the waste generator and waste disposal contractor), dates, and any warnings regarding the handling of the spoil (for example, if the material is contaminated).
- establish adequate erosion and sediment control in accordance with "The Blue Book".

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- store away from stormwater drainage paths/sensitive environmental receptors and in an area not readily accessible by the public.
- verify the volume of spoil stored does not exceed 1,000 tonnes or 1,000 cubic metres (whichever is less) at any one time, and 6,000 tonnes total volume per annum per project.
- only one work party to use an individual spoil storage site at any one time. The relevant Environmental Specialist will monitor this requirement; and
- restore the spoil storage site to the original condition on completion of works and remove sediment and erosion controls as soon as the site has appropriately stabilised. Contact the relevant Environmental Specialist (for internal employees) or a suitably qualified environmental consultant (for ASPs) for advice on restoration if required.

The following FSCs have exceptions for ongoing Spoil Storage and Disposal as they do not have access to a suitable nearby waste management facility, these sites have an onsite bin that is serviced by BINGO:

- Katoomba
- South Windsor

Other sites that may have temporary bins for short periods of time include:

- Narellan (for creosote pole butt spoil)
- Springhill (for creosote pole butt spoil)

The spoil bins at these sites are **not** for contaminated soil, for contaminated spoil contact your Environmental Specialist for assistance and follow the guidelines below.

7.1.2 Storage of spoil suspected to be contaminated

If spoil is suspected to be contaminated, the relevant Environmental Specialist (internal employees) or a suitably qualified environmental consultant (ASPs) must be contacted to prescribe storage requirements.

Storage must only be undertaken on a temporary basis to enable waste classification to be completed prior to disposal to an appropriately licensed waste disposal facility.

A maximum of five tonnes of known contaminated spoil generated from a worksite may be stored at any one time. EPA licensing requirements apply to the storage of contaminated spoil in excess of five tonnes.

Spoil suspected to be contaminated must be placed in a designated receptacle and/or a sealed area.

Spoil that is contaminated with asbestos must also be managed in accordance with Company Procedure (Health & Safety) GSY 1065 – Asbestos Management.

8. Spoil re-use

8.1.1 On the same worksite

Spoil can only be reused on the same worksite without sampling and chemical testing if it is not suspected to be contaminated and it is being reused in the same land use zoning that it originated from. If spoil is to be re-used in different land use zonings contact the relevant Environmental Specialist (internal employees) or a suitably qualified environmental consultant (ASPs) for advice.

Contaminated spoil must not be re-used and should be lawfully disposed of (refer to Section 5.4 Spoil disposal).

8.1.2 On another worksite

Spoil can only be re-used on another company worksite provided it meets the definition of VENM or NSW EPA resource recovery orders and exemptions. The works must also be approved in accordance with company standard EMS 0001 Environmental Management Standard EMS 0001 – Environmental Impact Assessment and Environmental Management Plans. If unsure, contact the relevant Environmental Specialist (internal employees).

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Spoil may only be re-used on another worksite without testing if it is VENM.

If the spoil is likely to meet the physical characteristics of ENM, it must be chemically tested by a NATA-accredited analytical laboratory to determine whether it meets the ENM criteria for generators and suppliers as per *The ENM Order 2014*. Sampling should be completed in accordance with *The ENM Order 2014* and can include sampling either in situ (prior to excavation) or from stockpiled material.

If the spoil is likely to meet the physical characteristics of treated drilling mud, it must be chemically tested by a NATA-accredited analytical laboratory to determine whether it meets *The Treated Drilling Mud Order 2014*. The generation process of the treated drilling mud will determine sampling requirements. Further detail on sampling requirements is included in *The Treated Drilling Mud Order 2014*.

ENM or treated drilling mud can only be re-used on another worksite if it is being applied as engineering fill or used in earthworks as per *The ENM Exemption 2014* or *The Treated Drilling Mud Exemption 2014*. Refer to Section 5.3.3 Third-party sites for guidance on the re-use of a third-party site.

The re-use of ENM or treated drilling mud on another worksite is only cost-effective for large volumes of spoil (for example in excess of 100 tonnes). This option should be investigated in consultation with the relevant Environmental Specialist (internal employees) or a suitably qualified environmental consultant (ASPs) and ideally such consideration should occur at the planning stage of the proposal and during the preparation of the EIA.

The potential for PFAS and/or asbestos contamination in spoil should be considered when investigating the re-use of VENM, ENM, or treated drilling mud, and testing should be completed if a potential for PFAS and/or asbestos contamination has been identified.

8.1.3 Third party sites

Spoil may only be re-used on third party-owned sites if it meets the requirements outlined in Section 5.3.2, and if the staff member and/or contractor has obtained written approval from the Project Manager (internal projects only). For internal civil projects, the staff member and/or contractor are to provide the Project Manager with the following documentation, to be reviewed with the relevant Environmental Specialist, prior to approving the re-use of spoil on a third party-owned site:

- Development Approvals and Conditions of Consent issued by a relevant authority.
- testing results and spoil classification in accordance with *The ENM Order 2014* and/or *The Treated Drilling Mud Order 2014*; and
- details on the methodology used by the civil contractor to comply with *The ENM Order 2014* and *The ENM Exemption 2014* and/or *The Treated Drilling Mud Order 2014* and *The Treated Drilling Mud Order 2014*, and consideration of potential PFAS and/or asbestos contamination.

It is recommended that if re-use on a third party-owned site is being considered by a civil contractor then the required documentation is provided to Endeavour Energy at the tendering stage for the works (where practicable).

The donation of spoil to a third party may only occur in accordance with Company Policy 14.11 (Community Partnerships). Contact the Corporate Communications Branch for advice (internal employees).

If the re-use of spoil on a third party-owned site is occurring as a disposal option, consideration must be given to what evidence can be provided as proof of lawful disposal. This will also permit the appropriate reconciliation of invoices. It is recommended that a copy of the Approved Notice Under Section 143 is signed by the landholder of the third party-owned site. This can be found here: <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/wasteregulation/160095-notices143-form.docx>

An example fee schedule template for disposal rates for various spoil classifications is included as Annexure A: Fee Schedule Template – Disposal Rates.

Contact the relevant Environmental Specialist for further advice where required.

9. Spoil disposal

9.1.1 General requirements

If spoil is contaminated or cannot be re-used (in accordance with Section 5.3 Spoil re-use) it must be disposed of at an appropriately EPA-licensed waste facility and adhere to the requirements of the Waste Regulation. This must entail compliance with the Proximity Principle. Further details on these requirements can be found in Environmental Management Standard EMS 0007 – Waste Management.

Disposal dockets, rates and transport certificates (where applicable) must be obtained from the licensed waste disposal facility for invoice reconciliation purposes (internally delivered projects only). A register which tracks imported fill material and spoil disposal to/from the project site(s) must be maintained, and their associated dockets and transport certificates (where applicable) provided to Endeavour Energy (externally delivered projects) (company form FSY 0150 includes a register template that can be used if required). Waste disposal dockets and registers must be filed and retained for a minimum of three years in accordance with the *State Records Act 1998 (NSW)*.

A fee schedule template for disposal rates for various spoil classifications is included as Annexure A: Fee Schedule Template – Disposal Rates.

Flowchart are included at the start of Section 5 that summarise spoil management processes including when spoil should be tested, re-used and disposed. Further detail on this is provided below.

9.1.2 Contaminated spoil

Contaminated spoil must be appropriately sampled and classified in accordance with *Waste Classification Guidelines 2014* to inform disposal requirements.

Contaminated spoil considered Category 1 or Category 2 trackable waste under Schedule 1 of the *Protection of the Environment Operations Act 1997 (NSW)* must be tracked using the EPA Integrated Waste Tracking System (IWTS) and a transport certificate obtained prior to the transportation of trackable waste (refer to EMS 0007 – Waste Management).

Category 1 or Category 2 trackable waste must be transported by an appropriately licensed vehicle (refer to EMS 0007 – Waste Management). An exemption exists for the transport of contaminated spoil in an emergency to protect human health, the environment, or property (internal employees).

Waste disposal dockets must be obtained from the licensed waste disposal facility and provided to Endeavour Energy for invoice reconciliation purposes (internal projects only). Waste disposal dockets must be filed and retained for a minimum of three (3) years in accordance with the *State Records Act 1998 (NSW)*.

Advice should be sought from the relevant Environmental Specialist (internal employees) or a suitably qualified environmental consultant (ASPs) on the disposal of spoil excavated from around pole butts treated with creosote. This material cannot be classed as ENM or disposed of at a licensed resource recovery facility.

9.1.3 Resource Recovery Options

Licensed resource recovery facilities accept spoil at a reduced disposal rate if it is VENM or meets a set of criteria as defined by the facility's EPA Environment Protection Licence. These criteria are typically more conservative than a facility that is licensed to accept other types of waste.

For the disposal of large volumes of spoil (for example in excess of 100 tonnes) the use of licensed resource recovery facilities should be investigated in consultation with the relevant Environmental Specialist (internal employees) or an appropriately qualified environmental consultant (ASPs). This investigation should occur at

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the planning stage of the proposal and during the preparation of the EIA as the following may be required at the discretion of the licensed resource recovery facility:

- inspection for VENM certification; and/or
- chemical testing to confirm that the spoil complies with the criteria in the facility's EPA Environment Protection Licence.

Waste disposal dockets must be obtained from the licensed resource recovery facility and provided to Endeavour Energy for invoice reconciliation purposes (internal projects only). Waste disposal dockets must be filed and retained for a minimum of three years in accordance with the *State Records Act 1998 (NSW)*.

10. Imported fill

Imported fill must be verified to be VENM or ENM and free of contaminants such as asbestos and PFAS. If accepting imported fill onto a site, the following must be completed by the Project Manager and/or Operations Manager and/or delegated site supervisor (internal employees) or ASPs:

- request documentation from the supplier on the origin of fill and past activities conducted at the site of origin (in the case of VENM), and/or NATA-accredited laboratory test results (in the case of ENM). The potential for PFAS and asbestos contamination should be considered. This information, in addition to records of the quantity received and the name and address of the supplier, must be kept for a period of six years.
- Request a copy of the NSW EPA recommended VENM certificate or ENM statement of compliance from the supplier
- supervise the delivery of all loads onto the site to verify the material is either VENM or ENM. Inspect the load for potential signs of contamination and the presence of other types of waste including bricks, concrete rubble, steel, timber, asbestos, plastic; and
- request documentation (e.g., Completed [NSW EPA Approved Notice Under Section 143 \(Form 143\)](#) from transporters delivering fill to the work site to verify the origin.

If importing VENM, and there are doubts as to whether the material is VENM, request that the material is appropriately sampled, and then chemically tested by a NATA-accredited laboratory for potential contaminants of concern and sight the certification and original laboratory results.

If importing ENM, it must also meet the requirements of *The ENM Order and Exemption 2014*. In accordance with *The ENM Order and Exemption 2014*, the following must be completed by the Project Manager and/or Operations Manager (internal employees) or ASP:

- a written statement must be obtained from the supplier stating that the ENM complies with the conditions of *The ENM Order 2014*. These conditions include but are not limited to, chemical testing by a NATA-accredited laboratory of the ENM and relevant record keeping. This chemical testing should include testing for asbestos, with ENM to be free of asbestos. Relevant NATA-accredited laboratory test results should be provided by the supplier for the ENM. Consideration should also be given to the requirement for chemical testing for PFAS (depending on the origin of the fill and past activities conducted at the site of origin); and
- the delivery of all loads onto the worksite must be supervised to verify the material meets the physical characteristics of ENM (e.g. <2% foreign material).

11. Imported recovered aggregate

Recovered aggregate can be imported for the purpose of road-making activities, building, landscaping, and construction works only. When importing recovered aggregate, the following is recommended to be completed by the Project Manager and/or Operations Manager (internal employees) or ASP:

- obtain a written statement from the supplier stating that the recovered aggregate complies with the conditions of *The Recovered Aggregate Order 2014*. This statement should include how they comply with

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these conditions including, but not limited to sampling and then chemical testing by a NATA-accredited laboratory of the recovered aggregate and the implementation of procedures that minimise the potential to receive or process waste containing asbestos and relevant record keeping; and

- supervise the delivery of all loads onto the worksite to verify that the material is recovered aggregate (that is it contains processed concrete, brick, ceramics, natural rock, and asphalt).

Workers must keep written records of the quantity of recovered aggregate received and the name and address of the supplier for a period of six (6) years.

For internal employees, the risk of receiving recovered aggregate that does not conform to legislative requirements is reduced by obtaining it from suppliers endorsed by Endeavour Energy's Supply Chain branch and the Sustainability and Environment branch. The Pre-Purchase Risk Assessment (Company Procedure GSY 0084 – Pre-purchase risk assessment and associated Company Form FSY 0151 – Pre-purchase risk assessment form) should consider environmental legislative compliance of the recovered aggregate supplier and product.

Consult with the relevant Environmental Specialist (internal employees) or an appropriately qualified environmental consultant (ASP) for advice on compliance and use of these products.

12. Imported recovered mulch

This standard provides guidance on controls required when importing recovered mulch from a third-party supplier for the purposes of applying to land as a soil amendment. For further information on the legislative requirements surrounding the generation and supply of mulch by Endeavour Energy and/or ASPs please refer to company standard EMS 0004 Managing Vegetation Near Electrical Infrastructure and Pest, Weed and Disease Mitigation.

Recovered mulch cannot be applied within designated environmentally sensitive areas (such as National Parks and/or Water NSW Special Areas and Controlled Lands, coastal wetlands, littoral rainforests, critical habitats, and agricultural land, as defined by relevant Endeavour Energy Environmental GIS layers). If recovered mulch is proposed to be applied within environmentally sensitive areas, contact the Sustainability and Environment branch for advice as the source plant material must be visually inspected to determine the presence of any weed, disease or pest by a person that has achieved Australian Qualifications Framework Units AHCPMG301A (Control weeds), AHCPMG302A (Control plant pests, diseases and disorders), or AHCPMG303A (Identify plant specimens), or an equivalent qualification.

When importing recovered mulch, the following should be completed by the Project Manager and/or Operations Manager (internal employees) or ASP:

- obtain a written statement from the supplier stating that the recovered mulch complies with the conditions of *The Mulch Order 2016* and *Australian Standard 4454-2012 Composts, soil conditioners, and mulch*. This includes confirmation that the mulch:
 - does not contain asbestos, engineered wood products, preservative-treated or coated wood residues, or physical contaminants, including but not limited to glass, metal, rigid plastics, flexible plastics, or polystyrene; and
 - is ready for land application; and
 - does not contain any weed, disease, or pest to a consumer.
- obtain a copy of the supplier's written risk management protocol (as per *The Mulch Order 2016*) that details the following:
 - A version, date, and signature of approval of the protocol (note the protocol should be less than 2 years old).
 - A scope, including a description of the activity, geographic location, the source plant material, and the land application site.
 - Measures implemented by the supplier that minimise the potential for the land application of mulch to cause:

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- harm to the environment; and
 - the introduction, presence, spread, or increase of any weed, disease, or pest.
- The location of the source plant material, such as the address and paddock/ plot identification.
- The method of mulch generation and how this affects the composition of the mulch.
- The scheduling of mulch generation considering the potential presence of plant propagules and the seasonal growth of plant material.
- The location of the land application site, such as the address and paddock or plot identification, and its proximity to the location of the source plant material.
- The time interval between the assessment of the plant material prior to mulch generation, the mulch generation, and the land application of the mulch.
- The effect of the mulch on the land application site and surrounding environment.
- Details of the assessment of the plant material that will be completed (for example how and when) and the recording of the scientific or common name and extent of any weed, disease, or pest detected according to the following requirements:
 - before mulch generation, a person who has demonstrated competency in identifying weeds, diseases, or pests significant to their enterprise must carry out a visual assessment of the source plant material to determine the presence of any weed, disease, or pest; or
 - after mulch generation, a suitably qualified professional must carry out an assessment of the location where the plant material was sourced and the mulch to determine the presence of any weed,
- The circumstances under which mulch that contains any weed, disease or pest may be supplied to a consumer for land application (other than in an environmentally sensitive area).
- Risk mitigation strategies including, but not limited to, hygiene procedures or training and education implemented by the processor.
- obtain written confirmation from the supplier on control measures that they implement to prevent the presence of asbestos in recovered mulch and supporting evidence to confirm that these control measures have been implemented by the supplier (for example NATA accredited laboratory test results).
- supervise the delivery of all loads onto the worksite to verify that the material is recovered mulch, and it does not contain asbestos, engineered wood products, preservative-treated or coated wood residues, or physical contaminants, including but not limited to glass, metal, rigid plastics, flexible plastics, or polystyrene; and does not contain any weed, disease, or pest to a consumer. Visual inspections of imported recovered mulch should be documented, including location and date of inspection, the supplier of the recovered mulch and photographs.

When applying recovered mulch, Endeavour Energy and/or ASPs should:

- apply the mulch in accordance with any requirements stipulated in the '*The Mulch Exemption 2016*' and the supplier's written risk management protocol
- ensure that the migration of leachate from the land application site does not occur
- not undertake further processing of the mulch at the land application site, and
- ensure that any application of mulch to land occurs within 6 weeks of receipt.

13. Other resource recovery orders and resource recovery exemptions

There are many other recovered products that can be used for fill (including for use as aggregate or as topsoil for landscaping) provided they meet the requirements of the relevant resource recovery order and resource recovery exemption. Some examples of these products include recovered fines, basalt fines, and foundry sand. The potential for PFAS and/or asbestos contamination in these recovered products should be considered when investigating the use of these other recovered products. Testing should be completed by a NATA-accredited laboratory if a potential for PFAS and/or asbestos contamination has been identified (after

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considering factors such as the origin of the product, the process to recover the product, controls implemented by the facility to prevent contamination of the product, etc.)

For internal employees, the risk of receiving recovered products that do not conform to legislative requirements is reduced by obtaining them from suppliers endorsed by Endeavour Energy Supply Chain branch and the Sustainability and Environment branch. The Pre-Purchase Risk Assessment (Company Procedure (Health & Safety) GSY 0084 – Pre-purchase risk assessment and associated Company Form (Health & Safety) FSY 0151 – Pre-purchase risk assessment form) should consider environmental legislative compliance of the recovered aggregate supplier and product.

The relevant Environmental Specialist (internal employees) or an appropriately qualified environmental consultant (ASP) can provide advice where required on compliance with the relevant resource recovery order and resource recovery exemption and whether testing for asbestos or PFAS should occur, which is crucial in preventing contamination from the use of these products.

14. Authorities and Responsibilities

Chief Data People and Sustainability Officer has the authority and responsibility for approving this Standard.

Head of Portfolio Management Office has the responsibility for maintaining project work is in accordance with requirements of this Standard.

Head of Sustainability has the authority and responsibility for administering this Standard.

Project Managers and ASPs have the authority and responsibility for:

- contacting the relevant landowner of a potential spoil storage site
- requesting and retaining waste disposal dockets including transport certificates where applicable for all waste disposed.
- ceasing works if contamination is encountered, and contact the relevant Safety Business Partner and Environmental Specialist (internal employees) for advice and adhere to instructions provided
- paying for costs associated with soil sampling and analysis associated with works that have generated spoil; and
- adhering to the imported material and recovered product requirements detailed in this Standard.
- organising waste tracking documentation for transportation of waste with waste contractor, where applicable.

Endeavour Energy Operations Managers and Technical Supports have the same authority and responsibility as a Project Manager for maintenance works.

Environmental Specialists have the authority and responsibility:

- to provide guidance on the management of spoil, sampling requirements, organise chemical testing by a NATA accredited laboratory, and to review and ensure the business maintain spoil storage sites in accordance with this standard.
- to identify and obtain initial approval for the use of potential spoil storage sites during preparation of the EIA for major capital works, and to identify the potential for contamination at the worksite
- to provide advice and recommendations for the use of recovered products; and
- if requested to provide details of approved consultants to undertake soil sampling and analysis; and
- advise project, or operations managers of associated costs of soil sampling or analysis, including the charging of their own time undertaking sampling.

Environmental Services Manager has the authority and responsibility to provide resources and training to support staff in implementing this Standard.

Strategic Property Manager has the authority and responsibility to assist in identifying landowners when this information is difficult to obtain (internal employees).

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Design Engineering Specialists have the authority and responsibility to identify and obtain initial approval for the use of potential spoil storage sites during the preparation of the EIA and to identify the potential for contamination at the worksite.

The proponent has the authority and responsibility for managing spoil in accordance with this Standard.

A **RACI flowchart** found [here](#) has been developed to assist define accountabilities for all parties in the management of Spoil. This flowchart also describes the process for undertaking soil sampling to determine any relevant contamination levels for disposal management.

15. Annexures

Annexure A: Fee Schedule Template – Disposal Rates

Rate Element	Quantity / Unit	Rate GST Excl.
Disposal of CT1 to an EPA-licensed resource recovery site	Tonne	
Disposal of VENM to an EPA-licensed resource recovery site	Tonne	
Disposal of General Solid Waste (GSW) to an EPA-licensed disposal site	Tonne	
Disposal of Restricted Solid Waste to an EPA-licensed disposal site	Tonne	
Disposal of Hazardous Waste to an EPA-licensed disposal site	Tonne	
Disposal of GSW + Asbestos Special Waste to an EPA-licensed disposal site	Tonne	
Disposal of Restricted Solid Waste + Asbestos Special Waste to an EPA-licensed disposal site	Tonne	
Disposal of Hazardous Waste + Asbestos Special Waste to an EPA-licensed disposal site	Tonne	
Disposal of Liquid Waste materials to an EPA-licensed disposal site	Tonne	
Disposal of Liquid Waste + Asbestos Special Waste materials to an EPA-licensed disposal site	Tonne	
Re-use of Excavated Natural Material on a site approved by Endeavour Energy and the landowner as per EMS 0013 – Spoil Management	Tonne	

Annexure B: Generic Acid Sulphate Soils Management Plan

The generic plan is available to download via the Standards/ ASP portal

