Shire of Coolgardie

Mother of the Goldfields

Coolgardie Waste Facility Notes for Waste Classification and Disposal

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1 Introduction

The following information is provided to assist customers regarding the contaminated waste acceptance process at the Coolgardie Waste Facility. We highly recommend you contact the Manager of Waste Services before lodging an application to assist in meeting the requirements of the waste application, assessment, and approval process.

Accepted Waste Classes

Landfill Class	Waste types permitted for disposal
Class I (Prescribed Premises Category 63)	• Clean Fill • Inert Waste Type 1 • Uncontaminated fill • Neutralised acid sulfate soil neutralised acid sulfate soil treated in accordance with Identification and investigation of acid sulfate soils and acidic landscapes and Treatment and management of soil and water in acid sulfate soil landscapes • Contaminated solid wastes meeting waste acceptance criteria specified for Class I landfills • Inert Waste Type 2 • Inert Waste Type 3 • Special Waste Type 1 • Special Waste Type 3
Class II (Prescribed Premises Category 64 or 89)	• Clean Fill • Inert Waste Type 1 • Neutralised acid sulfate soil neutralised acid sulfate soil treated in accordance with Identification and investigation of acid sulfate soils and acidic landscapes and Treatment and management of soil and water in acid sulfate soil landscapes • Putrescible Wastes • Contaminated solid waste meeting waste acceptance criteria specified for Class II landfills • Inert Waste Type 2 • Special Wastes Type 1 • Special Waste Type 2 • Special Waste Type 3
Class III	• Clean Fill • Inert Waste Type 1 • Uncontaminated fill • Neutralised acid sulfate soil neutralised acid sulfate soil treated in accordance with Identification and investigation of acid sulfate soils and acidic landscapes and Treatment and management of soil and water in acid sulfate soil landscapes • Putrescible Wastes • Contaminated solid waste meeting waste acceptance criteria specified for Class II or Class III landfills • Inert Waste Type 2 • Special Wastes Type 1

	• Special Waste Type 2 • Special Waste Type 3
Controlled waste	https://www.der.wa.gov.au/images/documents/our-work/controlled-waste/updated_controlled_waste_category_list/20180511_Controlled_Waste_Category_list.pdf
Hazardous	• Wastes that meet the criteria for assessment as dangerous goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail, and categorised as one of the following: explosives; gases (compressed, liquefied or dissolved under pressure); flammable liquids; substances liable to spontaneous combustion (excluding organic waste, and all physical forms of carbon such as activated carbon and graphite); substances which on contact with water emit flammable gases; oxidising agents and organic peroxides; toxic substances; corrosive substances. • Biomedical and related wastes. • Pharmaceuticals and poisons, being waste generated by activities carried out for business or other commercial purposes and that consists of pharmaceutical or other chemical substances specified as poisons in the Standard for the Uniform Scheduling of Medicines and Poisons No. 16 (2017)
Special	• Special Waste Type 1: Stabilised asbestos waste in bonded matrix (e.g. asbestos cement sheeting). Asbestos fibre and dust waste (e.g. dust resulting from the removal of thermal or acoustic insulating materials or from processes involving asbestos material, and dust from ventilation collection systems). • Special Waste Type 2: Biomedical waste which does not require incineration, and which is approved for supervised burial. • Special Waste Type 3: PFAS-containing solid waste e.g. soil/sediment, timber, asphalt, concrete, equipment
Inert Waste Type 1	• Raw excavated natural material such as clay, gravel, sand, soil or rock fines (excluding contaminated soils); • Rocks/soils arising from the excavation of a site (excluding contaminated soils) which has been previously developed or used; • Building and demolition waste (e.g. bricks, concrete and associated unavoidable small quantities of paper, plastics, glass, metal and timber1 that should be recovered), being material resulting from the demolition, erection, construction, refurbishment or alteration of buildings or from the construction, repair or alteration of infrastructure-type development such as roads, bridges, dams, tunnels, railways, and airports, and which is not mixed with any other type of waste (specifically green and food waste), and does not contain any asbestos or PFAS. • Asphalt waste (e.g. resulting from road construction and waterproofing works). • Biosolids categorised for unrestricted use.

	• Casting sand (that does not contain leachable components which would require disposal in a higher class of landfill). • Blasting sand or garnet (excluding that used for stripping tributyl tin containing paints).
Inert Waste Type 2	• Used, rejected or unwanted tyres (including shredded tyres or tyre pieces).
Putrescible	• Municipal waste, consisting of: - household domestic waste that is set aside for kerb-side collection or delivered by the householder directly to the waste facility; or - other types of domestic waste (e.g. domestic clean-up, furniture and residential garden waste, grass sods); or - local council generated waste (e.g. waste from street sweeping, litter bins and parks); or - commercial waste generated from food preparation premises, supermarkets etc). • Food waste • Biosolids other than those categorised for unrestricted use. • Sewage treatment plant grits and screenings. • Animal manures and carcasses. • Office and packaging waste (eg paper, cardboard, plastics, wood) that is not mixed with any other type of waste. • Cleaned pesticide, biocide, herbicide or fungicide containers. • Drained and mechanically crushed oil filters, and rags and oil absorbent materials (not containing free liquids) from automotive workshops. • Disposable nappies, incontinence pads and sanitary napkins (not otherwise classified as biomedical wastes due to the presence of infectious material). • Vegetative waste generated from commercial, public and residential sources, agriculture or horticulture. • Non-chemical waste generated from manufacturing and services (including timber, paper, plastics, thermosets and composites.

2 Waste Acceptance

2.1 Waste Application Process

If you wish to dispose of contaminated waste you will need to complete and submit a Waste Application Form along with a Waste Declaration Form, which can be provided on request by the Manager of Waste Services. Information to be provided in the application includes:

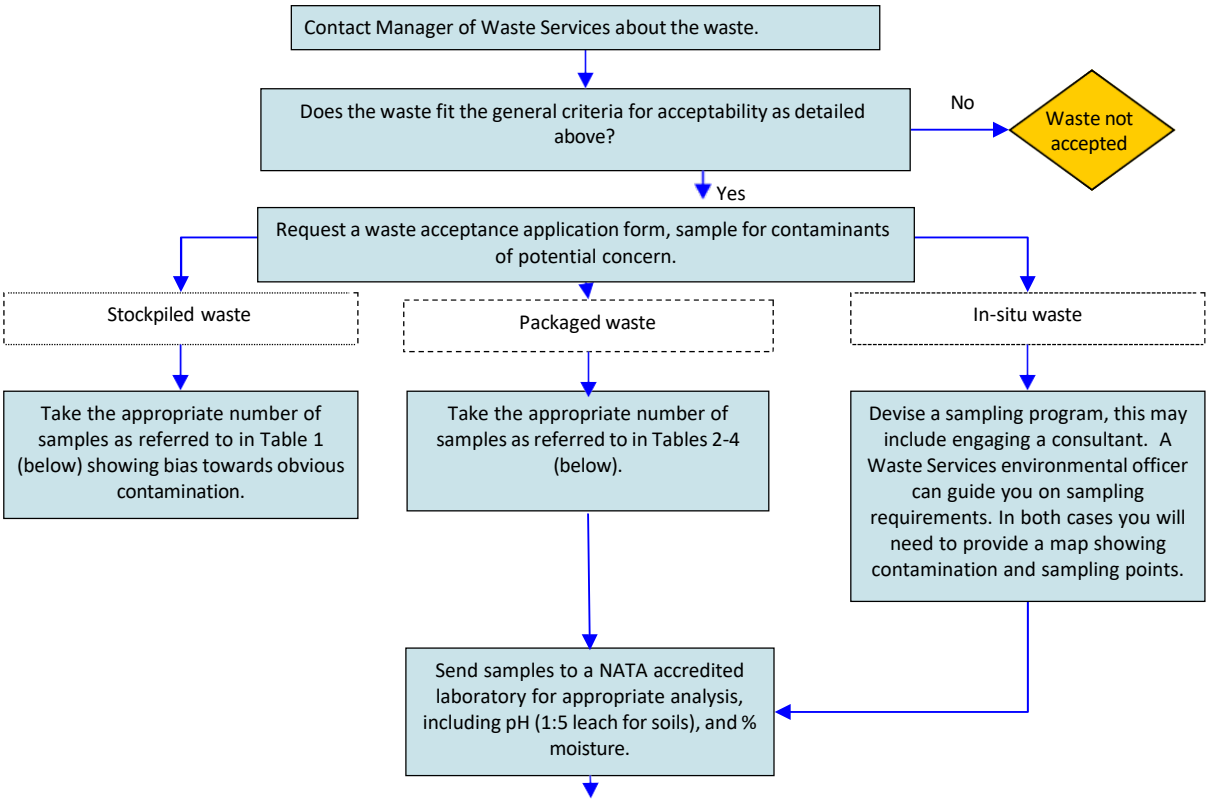
- A full description of the waste;
- Estimated quantity;
- Physical characteristics;
- Origin;
- Sampling procedure;

- Transport arrangements; and
- A copy of your NATA approved laboratory analysis.

Prior to disposal, contaminated waste must be analysed to determine the total concentration of contaminants (measured in mg/kg) and, if necessary, leachability. Following analysis, the contaminated waste is assessed by the Waste manager in accordance with the Department of Water and Environment Regulations' (DWER) *Landfill Waste Classification and Waste Definitions 1996 (As amended 2019)*. If the waste is acceptable for disposal at Coolgardie Waste Facility, a Waste Acceptance Approval will be issued.

Waste approvals are valid for a one-month period and must be handed to the Weighbridge Attendant with each load of waste taken. Contaminated waste transported to Coolgardie Waste Facility without a Waste Acceptance Approval and a declaration form will not be accepted.

The Waste Application Process - An Overview



Note: This flowchart is a brief overview of the waste application process and should be read in conjunction with the information presented in this factsheet.

Wastes Accepted

Coolgardie Waste Facility is a Class II and III facility and is licensed by the DWER to accept Class I-III waste. Wastes which can be accepted include a range of domestic and residential waste, contaminated wastes (contaminated soils and waste from industrial processes) and asbestos waste.

2.2 Wastes Not Accepted

Certain wastes are not acceptable for disposal at Red Hill due to varying chemical and physical characteristics that do not meet DWER landfill guidelines, license requirements or SOC standard operating procedures. These include:

- Liquids and sludges (material that is not spade-able and/or contains free liquid).
- Waste that has a pH that falls outside the acceptable range
- Corrosive waste e.g. metal wastes, lead assay slags.
- Reactive waste e.g. pool chlorine (strong oxidiser).
- Flammable waste e.g. high sulphur wastes > 20 w/w%
- Radioactive waste.
- Infectious material (clinical and medical waste).
- Scheduled Organochlorine pesticide waste.
- Explosives such as fireworks, ammunition or marine flares.
- Wastes which are dangerous when contacted with water e.g. bromine trifluoride, calcium carbide, sodium metal.
- Highly odorous waste (except where special arrangements are made with the Site Manager) e.g. dead or rotting animal waste, biosolids, tannery waste and highly contaminated hydrocarbon waste.
- Selected controlled wastes.

2.3 Waste Application Form

A common mistake made by applicants is that not enough information is provided on the characteristics of the waste and the process generating the waste. At a minimum, a short paragraph explaining how the waste was created and the physical description plus any other relevant background information should be provided. Manger of Waste Services can then make an informed assessment and be confident that all contaminants have been identified.

Please note that the Waste Application Form must be signed for the application to be processed.

3 Sampling of the Waste

3.1 How to Take Samples

We would generally ask that the samples be taken from the most contaminated areas to give the worst-case scenario. For in-situ sampling you will need to provide specific details on your sampling regime, which should include a map detailing the distribution of the contamination and the locations from which the samples were taken. If you have limited experience in this area you may wish to engage an environmental consultant to provide advice.

Soil samples should be stored with no head space in a glass jar with a PTFE lined cap which can be supplied upon request from most laboratories. Samples should be kept refrigerated and transported to a NATA accredited laboratory within 24 hours of sampling. A list of NATA accredited laboratories can be found at www.nata.com.au.

3.2 How Many Samples Need to be Taken

3.2.1 Bulk Waste

For bulk wastes the following table should act as a guide for the sampling requirements (From *Landfill Waste Classification and Waste Definitions 1996 (As amended December 2009*).

Table 1: Sampling requirements for bulk waste

Bulk Waste (Stockpiled)	Quantitative Assessment
<100m^3	3 samples
100m^3 to 200m^3	4 samples
200m^3 to 500m^3	6 samples
500m^3 to 1,000m^3	8 samples
1,000m^3 to 2,000m^3	11 samples
2,000m^3 to 3,000m^3	15 samples
3,000m^3 to 4,000m^3	18 samples
4,000m^3 to 5,000m^3	20 samples
5,000m^3 to 10,000m^3	24 samples
> 10,000m^3	Take 24 samples for volumes 5,000m^3 to 10,000m^3, plus 4 more samples for each additional 10,000m^3.

3.2.2 Packaged Waste

For packaged waste the number of samples required is determined by the amount of information that is known regarding the source of the waste and the contaminants. The sampling requirements outlined below are taken directly from the *Landfill Waste Classification and Waste Definitions 1996 (As amended 2009)*. Sufficient information will need to be provided to justify the scenario on which your sampling is based.

Table 2: Sampling requirements when contaminants are unknown or no previous sampling has been conducted

Number of Containers	Sampling Requirements	Value to be compared with waste classification criteria
1 to 3	Three per container – one from the top, one from the middle and one from the bottom of each container.	The average of the analysis results.
More than 3	Three containers selected randomly and sampled as for 1 to 3 containers above. One sample from each other container, with depth selected randomly.	The average plus the standard deviation of the analysis results.

Table 3: Sampling requirements for known contaminants or when some previous sampling has been conducted

Number of Containers	Sampling Requirements	Value to be compared with waste classification criteria
1 to 3	One per container – with sampling depth selected randomly.	The average of the analysis results.
3 to 6	Four containers selected randomly and one sample taken from each at a depth selected randomly.	The average plus the standard deviation of the analysis results*.
> 6	Three containers selected randomly and one sample taken from each at a depth selected randomly. One sample from each set of three (or part thereof) remaining containers, with containers and depths selected randomly.	The average plus the standard deviation of the analysis results*.

Table 4: Sampling requirements for Homogenous Process Waste

Number of Containers	Sampling Requirements	Value to be compared with waste classification criteria
<10	Two containers selected randomly and one sample taken from each at a depth selected randomly.	The average of the analysis results.
10 – 20	Three containers selected randomly and one sample taken from each at a depth selected randomly.	The average plus the standard deviation of the analysis results.
> 20	Three containers selected randomly and one sample taken from each at a depth selected randomly. One sample from each set of twenty (or part thereof) remaining containers, with containers and depths selected randomly. Eg. 45 containers = 5 samples 90 containers = 7 samples 105 containers = 8 samples	The average plus the standard deviation of the analysis results.

4 Laboratory Analysis of Waste

4.1 Getting Samples Analysed

4.1.1 What contaminants do I test for?

Analytical requirements vary depending on the type of waste and what contaminants are likely to be present. It is recommended that guidance is sought from Manager of Waste Services regarding the necessary analysis to be conducted for your particular waste.

Regardless of the type of waste, you will always be required to provide the pH (1:5) of the material. If you are required to test for hydrocarbons it is necessary to ask the laboratory to report the aromatic and aliphatic results separately. When analysing for chromium, it is necessary to provide the hexavalent chromium speciation. If the average result plus the standard deviation of the total concentration exceeds the contaminant thresholds given in the *Landfill Waste Classification and Waste Definitions 1996 (amended 2019*), a leaching procedure (ASLP) will need to be carried out on the sample. For Class III waste the ASLP will need to be carried out using acetic acid. It is important that the laboratory determines the correct acetic acid leaching fluid using 1:20 pH measurements as per the Australian Standard Leaching Procedure. It may be necessary to tell the laboratory to conduct the ASLP using the leaching fluid as determined by them in accordance to the ASLP method.

4.1.2 Getting the Samples Analysed

Analysis must be performed by a NATA (National Association Testing Authority) approved laboratory. Details of approved laboratories can be found at www.nata.com.au or by calling NATA on 1800 621 666. It is important to ensure that the laboratory of choice is NATA accredited for the actual tests required, and ask the laboratory to display their NATA accreditation on the laboratory reports to be submitted to SOC. Under no circumstances will a preliminary report be accepted. It is required that you request all Quality Control data associated with the samples to be included in the laboratory report. A chain of custody detailing the transfer of samples from the sampling stage to being accepted at the laboratory also needs to be submitted to SOC with your application.

4.1.3 Holding Times

You will need to ensure that samples are analysed within the appropriate holding times for the analysis required. Results obtained that are determined outside the holding times will not be accepted. This may be of high importance if additional analysis required and may in some cases result in the need for re-sampling to perform the additional analysis.

4.1.4 Interpretation of results

Once the laboratory results are obtained, they will be compared to the landfill criteria in *Landfill Waste Classification and Waste Definitions 1996 (amended 2019*) by SOC Waste Manager. If the average result plus the standard deviation of the total concentration exceeds the contaminant threshold, a leaching procedure (ASLP) will need to be carried out on the sample. These results are then compared to the leachable concentration values given in the *Landfill Waste Classification and Waste Definitions 1996 (amended 2019)*. If the values are less than the thresholds your waste may be accepted providing that all other criteria are met.

4.2 The PPE Requirements of Class III

The Class III landfill is a highly active cell, and the tip face is accessed not only by SOC operating staff but also by external contractors daily. To minimize potential health risks to SOC staff and other contractors. Standard Class III PPE at SOC is steel capped boots, high visibility vest, long sleeved shirt and long trousers. Nitrile gloves and safety/sunglasses are also used in Class III when required.

4.3 Asbestos Contaminated Soil

Asbestos contaminated soil can only be accepted in bulk without containment if the quantity of asbestos fibres have been quantified by a NATA certified laboratory as being less than 0.001 % (w/w).

All asbestos soil with greater than 0.001% or more asbestos fibres:

- Must be separated from other material for disposal where reasonably practicable.
- Be contained in a manner that prevents asbestos fibres escaping to the atmosphere during transport and disposal. This involves containing the material in sealed drums, bulka bags or an SOC approved container.
- The container must be labelled as "Caution Asbestos" with writing no less than 50 mm high.
- All containers must be transported on pallets for easy unloading of the material into the landfill cell.

5 Asbestos Products

To ensure the correct disposal of all other asbestos products (e.g. sheets, pipes, lagging etc.), customers are to be aware of the following conditions:

- Asbestos products must be separated from other material.
- Asbestos products are to be wrapped in bundles
- Each bundle is to be double wrapped in heavy-duty black plastic and sealed with adhesive tape to prevent asbestos fibres entering the atmosphere during transport and disposal.
- Bundles are to be labelled with the words "CAUTION ASBESTOS" in letters not less than 50 mm high.

6 Consequences for the incorrect classification of waste

The Shire of Coolgardie reserves the right to sample and test any contaminated waste accepted at the Coolgardie Waste Facility to verify the levels of contaminants present in the waste. Any waste that is found to be of a higher class than that originally indicated will be reported to DWER. The Shire will also meet with the applicant to determine the reason for the non-conformance and may take other action as appropriate.

Regular reclassification of waste from a single customer, may lead to the Shire banning waste from that customer. *For these reasons, The Shire strongly encourages customers to ensure that the waste sampling methods and laboratory analysis adequately represent the waste, and that the application form depicts the true nature and origin of the waste.*