

Schedule 1: Waste Acceptance Criteria (WAC)

Woodstock Landfill

- 1 The Landfill shall accept the following wastes subject to visual inspection only:
 - a. Demolition waste that has been processed at an accredited demolition waste sorting facility or from a demolition site that has been subject to a detailed site investigation.
 - b. Untreated wood: and
 - c. Putrescible material content comprising less than five percent by weight.

Waste may include a small proportion of hazardous waste that is not detectable using standard screening procedures at either transfer stations or other waste reception facilities. Such quantities are small - generally <200 ml/t, or <200 g/tonne. It also includes site-generated process sludges in comparatively small quantities (e.g., LCS condensate, evaporator sludges, sludges from leachate treatment and sediment control facilities).

- 2 Special Wastes shall only be accepted for disposal subject to:
 - a. An approval process that requires the issuing of a Special Waste Permit for each waste type, that details its nature, composition, and source in sufficient detail to demonstrate compliance with the special waste acceptance criteria; and
 - b. A Manifest for every load of waste related to the Special Waste Permit;
 - c. Meeting the Waste Acceptance Limits for the range of compounds as detailed in the schedule of Acceptable Waste (attached)
- 3 Notwithstanding the requirements of Condition 1, Special Waste (being Solid Waste but which require special handling or testing or certification procedures), shall only comprise the following:
 - a. Any cleanfill material or soil sourced from any site on the Listed Land Use Register, or where a Hazardous Activities and Industries List activity (as defined by the Ministry for the Environment) subject to further testing.
 - b. Asbestos containing waste, which shall be handled in accordance with WasteMINZ publication "Waste industry guidelines to manage the collection, receipt, transport and disposal of asbestos waste – 2019" or any subsequent update to that publication.
 - c. Treated hazardous waste.
 - d. Waste containing PFAS products as detailed in Section 14 (Landfill Acceptance Criteria) of the current PFAS National Environmental Management Plan (NEPM) Version 2.0, or any subsequent updates to that publication.

For clarity:

- i. Section 14 of the Australian NEPM is explicit that *waste concentrations must be less than both the relevant leachable concentrations **and** the total concentration values for the type of landfill*. In other words, PFAS

contaminated soil/material cannot be accepted on total concentrations alone.

- ii. The leachable concentration must be carried out using the ASLP test, i.e., the Australian Standard Leaching Procedure, as described in Section 14.6 of the NEPM, version 2.
- iii. Where significant PFAS are present beyond PFOS, PFHxS and PFOA, these solid PFAS-contaminated materials may not be acceptable for landfill disposal. This must be discussed with ECan and Waikmakariri District Council.
- iv. No PFAS-contaminated soil shall be used as Daily Cover, Intermediate Cover or Final Cover of the landfill.

4 Special Wastes, shall only be accepted if their disposal has been pre-booked, and meeting the requirements of Condition 2. All Special Wastes shall be specifically buried on a load by load basis, and immediately covered.

5 The following wastes are not acceptable for disposal at the landfill:

- a. Municipal solid waste
- b. Putrescible waste, except for the proportion contained within the wastes listed in Condition 1.
- c. Prohibited wastes as detailed on the schedule of Prohibited Wastes (attached).
- d. Wastewater treatment plant (WWTP) sludges and other industrial sludges
- e. Any liquid wastes as defined by condition 6 of this consent, with the exception of landfill leachate, site generated sludges, and landfill gas condensate;
- f. Wastes or substances classified as explosive, flammable, oxidising or corrosive under the Hazardous Substances and New Organisms Act 1996.
- g. Medical waste.

6 The definition of liquid waste shall be any waste that has a solids content of less than 20 percent, except such waste that passes the Paint Filter Liquids Test (EPA Method 9095A)

7 The Consent Holder shall maintain a record of:

- a. The quantities and types of waste accepted at the Landfill; and
- b. The actual location of the disposal of any special and odorous wastes.

A copy of this record shall be forwarded to the Canterbury Regional Council by 31 August each year, unless otherwise agreed in writing by the Canterbury Regional Council.

8 To minimise the potential for non-compliant waste to be disposed of at the Landfill, the following measures shall be taken:

- a. A notice shall be clearly positioned at the Landfill entrance to identify wastes which are not accepted at the Landfill; and
- b. Random inspections of incoming loads for the presence of hazardous waste shall be undertaken; and
- c. The delivery of material onto the site shall be supervised by the consent holder or their representative at all times; and
- d. Each waste generator delivering waste to the landfill site shall sign a written declaration or formal agreement with the consent holder that the deposited material meets the acceptance criteria specified in Conditions 1 to 3 of this consent. These records shall be held at the landfill site and shall be provided to the Canterbury Regional Council on request.

9 The Consent Holder shall immediately notify the Canterbury Regional Council if any vehicle(s) is turned away from the Landfill with waste that does not comply with the waste acceptance criteria detailed in Conditions 1 to 5 above. This notification shall include the vehicle registration number and source of the waste (if known).

10 The Consent Holder shall require that the waste generator's site investigations and remedial action plans for all contaminated soils received at the Woodstock Landfill be required to comply with the NZ Contaminated Land Management Guidelines No 5, and certified by a Suitably Qualified and Experienced Person (SQEP) as defined in NZ Contaminated Land Management Guidelines No 5.

11 If topsoil is imported to the site, for temporary stockpiling and use in the landfill capping layer at a later date, or imported to the site for direct use in the final capping layer, it shall be tested:

- a) for the parameters:
 - i. Heavy metals (HM): Arsenic, Cadmium, Chromium (total), Copper, Lead, Nickel, Zinc and Mercury;
 - ii. Polycyclic Aromatic Hydrocarbons (PAH)
 - iii. Organochlorine Pesticides (OCP)
 - iv. Asbestos (semi-qualitative analysis)
- b) at a rate of 1 test per 500 m³ of incoming material with a minimum of 3 tests.
- c) in an IANZ certified laboratory

12 Topsoil shall only be accepted where it meets the following Topsoil Waste Acceptance Criteria (TWAC):

- a. For HM, PAH and OCP: The Class 5 Waste Acceptance Criteria of the WasteMINZ Landfill Guidelines (2022).

- b. Will not contain asbestos.

13 An annual Topsoil Acceptance Report shall be prepared and submitted to Environment Canterbury and Waimakariri District Council describing, as a minimum, the source of the topsoil, the volume of topsoil accepted, a summary table of all laboratory test results

Acceptable Wastes

This schedule of acceptable wastes is an extract from Appendix D of the 2022 WasteMINZ Landfill Guidelines, and applies to all wastes considered to be Special Waste that require testing. Leachability testing should be completed to provide assurance that waste materials meet the following recommended waste acceptance criteria. The waste acceptance criteria leachability limits represent maximum values which should not be exceeded and should be viewed as a minimum treatment specification for a landfill. If the following limits are exceeded by a leachate extract of the waste with respect to any of the listed constituents, then the material is not suitable for disposal to the facility.

Table D-1 Waste Acceptance Criteria for Inorganic and Organic Elements³

Contaminant of concern	Unit	Maximum allowable TCLP concentration
Arsenic	mg/L	5
Barium	mg/L	100
Benzene	mg/L	0.5
Cadmium	mg/L	1
Carbon Tetrachloride	mg/L	0.5
Chlordane	mg/L	0.03
Chlorobenzene	mg/L	100
Chloroform	mg/L	6
Chromium	mg/L	5
Endrin	mg/L	0.02
m-Cresol	mg/L	200
o-Cresol	mg/L	200
p-Cresol	mg/L	200
Total cresol	mg/L	200
1,4-Dichlorobenzene	mg/L	7.5
1,2-Dichloroethane	mg/L	0.5
1,1-Dichloroethylene	mg/L	0.7
2,4-Dinitrotoluene	mg/L	0.13
2,4-Dichlorophenoxyacetic acid	mg/L	10
Heptachlor	mg/L	0.008
Hexachloro – 1,3-butadiene	mg/L	0.5
Hexachlorobenzene	mg/L	0.13
Hexachloroethane	mg/L	3
Lead	mg/L	5
Lindane	mg/L	0.4

Contaminant of concern	Unit	Maximum allowable TCLP concentration
Mercury	mg/L	0.2
Methoxychlor	mg/L	10
Methyl ethyl ketone	mg/L	200
Nitrobenzene	mg/L	2
Pentachlorophenol	mg/L	100
Pyridine	mg/L	5
Selenium	mg/L	1
Silver	mg/L	5
Tetrachloroethylene	mg/L	0.7
Toxaphene	mg/L	0.5
Trichloroethylene	mg/L	0.7
2,4,5-Trichlorophenol	mg/L	400
2,4,5-Trichlorophenoxypropionic acid	mg/L	1
2,4,6-Trichlorophenol	mg/L	2
Vinyl chloride	mg/L	0.2
Sulfides	ppm	50
Cyanides	ppm	50
Total halogenated compounds	ppm	1,000
Total synthetic non-halogenated compounds	ppm	10,000
Polychlorinated biphenyls	ppm	50

Table D-2 Waste Acceptance Criteria for Inorganic and Organic Elements⁴

Contaminant of concern	Unit	Maximum allowable TCLP concentration
Aluminium	ppm	40
Aniline	ppm	0.2
Antimony	ppm	0.6
Beryllium	ppm	10
Boron	ppm	20
Bromodichloromethane	ppm	1
Bromoform	ppm	10
Carbon disulphide	ppm	3
2 Chlorophenol	ppm	0.05
Copper	ppm	5.0
1,2 Dibromo-3-chloropropane	ppm	0.2
Dibromochloromethane	ppm	10

Contaminant of concern	Unit	Maximum allowable TCLP concentration
1,2 Dichlorobenzene	ppm	0.2
1,2 Dichloroethene	ppm	10
Dichloromethane	ppm	2
2,4 Dichlorophenol	ppm	0.05
1,2 Dichloropropane	ppm	1
1,3 Dichloropropene	ppm	2
Diethylphthalate	ppm	100
Dimethylphthalate	ppm	400
Ethyl benzene	ppm	50
Fluoride	ppm	200
Lithium	ppm	20
Molybdenum	ppm	10
Naphthalene	ppm	10
Nickel	ppm	10
Phenol	ppm	40
1,1,2,2 Tetrachloroethane	ppm	50
Tin	ppm	1000
Toluene	ppm	100
Tributyltin oxide (TBTO)	ppm	3
1,1,1 Trichloroethane	ppm	200
1,1,2 Trichloroethane	ppm	500
Vanadium	ppm	2.0
Xylene (m,o,p)	ppm	100
Zinc	ppm	10.0

These limits for PAHs have been taken from the Queensland Model Conditions for Landfills that are equivalent to the WasteMINZ Class 1 landfill classification.

Polycyclic aromatic hydrocarbons (PAH)	
Contaminant	Maximum TCLP (mg/l)
Anthracene	0.7
Benz (a) anthracene	0.05
Benz (c) phenanthrene	0.05
Benzo (a) pyrene	0.02
Benzo (b) fluoranthene	0.05
Benzo (k) fluoranthene	0.05
Chrysene	0.1
Dibenz (a,h) anthracene	0.02
Dibenz (a,h) pyrene	0.1
Dimethylbenz (a) anthracene	0.05
Fluoranthene	0.2
Indeno (1,2,3-cd) pyrene	0.1
Naphthalene	0.7
Phenanthrene	0.1
Pyrene	0.7
Total PAH	1

These limits for PFAS have been taken from Section 14 of the PFAS National Environmental Management Plan (NEMP) 2.0 published by the Australian Department of Agriculture, Water and the Environment in 2020, for Landfills that are equivalent to the WasteMINZ Class 1 landfill classification.

Per-and poly-fluoroalkyl substances (PFAS)		
Measurement	Sum of PFOS + PFHxS	PFOA
ASLP leachable concentration (µg/L)	7 µg/L	56 µg/L
Total concentration (mg/kg)	50 mg/kg	50 mg/kg

Prohibited Wastes

This schedule of Prohibited Wastes is an extract from Appendix I of the 2022 WasteMINZ Landfill Guidelines. Numbering and terminology used are generally consistent with the ANZECC classification system and refer in the first instance to untreated wastes. As the system contains both waste types and constituents, more than one category may be applicable to a particular waste and therefore all categories need to be checked to determine whether landfill disposal may be appropriate.

I.1 Waste Prohibited at All Landfills (Class 1, 2, 3, 4 or 5)

Characteristics

H1	Explosives
H2	Gases
H3	Flammable liquids
H4.1	Flammable solids
H4.2	Substances or wastes liable to spontaneous combustion
H5.1	Oxidising substances
H5.2	Organic peroxides
H6.2	Infectious substances
H7	Radioactive materials
H8	Corrosives
H10	Liberation of toxic gases in contact with air or water
H13	Capable, by any means after disposal, of yielding another material i.e., leachate which possesses any of the above characteristics

Waste Types which may exhibit the above Characteristics

Cyanides, surface treatment and heat treatment	
A100	Cyanide containing waste from treatment of metals
A110	Cyanide containing waste
A120	Complexed cyanides
A130	Other cyanides
Acids	
B100	Sulfuric acid
B110	Hydrochloric acid
B120	Nitric acid
B130	Phosphoric acid
B140	Chromic acid

B150	Hydrofluoric acid
B160	Sulfuric/hydrochloric acid mixtures
B170	Other mixed acids
B180	Organic acids
Alkalis	
C100	Caustic soda, potash, alkaline cleaners
C110	Ammonium hydroxide
C140	Other (hazardous substances must be specified)
Inorganic chemicals	
D100	Metal carbonyls
D120	Mercury
D280	Alkali metals
D330	Sulfur
Reactive chemicals	
E100	Oxidising agents
E110	Reducing agents
E120	Explosives
E130	Highly reactive chemicals
Paints, lacquers, varnishes, inks, dyes, pigments, adhesives	
F200	Uncured adhesives or resins
Organic solvents	
G100	Ethers
G110	Non-halogenated (FP>61°C), n.o.s
G130	Halogenated (FP>61°C), n.o.s
G140	Halogenated (FP>61°C), n.o.s
G150	Halogenated n.o.s
G160	Wastes from the production and formulation of organic solvents
G180	Others (hazardous substances must be specified)
Pesticides	
H100	Inorganic, organometallic pesticides
H110	Organophosphorus pesticides
H180	Organic wood preserving compounds
H120	Nitrogen-containing pesticides
H130	Halogen-containing pesticides
H140	Sulfur-containing pesticides
H150	Mixed pesticide residues

H160	Copper-chrome-arsenic (CCA)
H170	Other inorganic wood preserving compounds
Oils, hydrocarbons, emulsions	
J100	Waste mineral oils unfit for their original intended use (lubricating, hydraulic)
J110	Waste hydrocarbons
J120	Waste oils/water, hydrocarbon/water mixtures, emulsions (mainly oil and or hydrocarbons, i.e. >50%)
J130	Waste oils/water, hydrocarbon/water mixtures, emulsions (mainly water, i.e. >50%)
J140	Transformer fluids (excluding PCBs)
J150	Other (cutting, soluble oils)
J160	Tars and tarry residues (including tarry residues arising from refining)
Putrescible, organic wastes	
K100	Liquid animal effluent (poultry and fish processing)
K150	Liquid vegetable oils and derivatives
K170	Liquid animal oils and derivatives
K180	Abattoir effluent
K200	Food processing effluent
Industrial washwaters, effluents	
L100	Truck, machinery washwaters with or without detergents
L101	Car wash waters with or without detergents
L120	Cooling tower washwater
L130	Fire wastewaters
L140	Textile effluent
L150	Other industrial plant washdown water
Organic chemicals	
M100	Polychlorinated biphenyls (PCBs) and/or polyterphenyl (PCTs) and/or polybrominated biphenyls (PBBs)
M110	Equipment containing PCBs and/or PCTs

	and/or PBBs
M120	Solvents and materials contaminated with PCBs and/or PCTs and/or PBBs
M150	Phenols, phenol derivatives including chlorophenols
M160	Halogenated compounds n.o.s.
M170	Any congener of poly-chlorinated dibenzofuran
M180	Any congener of poly-chlorinated dibenzop-dioxin
M210	Organic cyanides
M250	Liquid surfactants and detergents
Chemical and pharmaceutical wastes	
R100	Infectious substances
R110	Pathogenic substances
R130	Cytotoxic substances
Miscellaneous	
T100	Waste chemical substances arising from research and development or teaching activities, which are not identified