

Resource Recovery Exemption under Part 9, Clauses 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014

The acid sulfate soil (ASS) exemption 2025

Introduction

This exemption:

- is issued by the Environment Protection Authority (**EPA**) under clauses 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014 (**Waste Regulation**); and
- exempts a consumer of acid sulfate soil from certain requirements under the *Protection of the Environment Operations Act 1997* (**POEO Act**) and the Waste Regulation in relation to the application of that waste to land, if the consumer complies with the conditions of this exemption.

This exemption should be read in conjunction with ‘the acid sulfate soil (ASS) order 2025’. Any words or phrases set out in bold in this order are defined in condition 7 of this exemption.

1. Waste to which this exemption applies

- 1.1. This exemption applies to acid sulfate soil (**ASS**).
- 1.2. In this exemption, **ASS** means soil (including but not limited to sand, gravel, silt, clay and rock) that:
 - a) has either been affected by the oxidation of **reduced inorganic sulfur (RIS)** (such as **actual ASS**), or has the capacity to be affected by the oxidation of their **RIS** constituents (such as **potential ASS**, or **hyposulfidic materials**); and
 - b) may be treated by mixing **agricultural lime**; and
 - c) is either **Virgin Excavated natural material** or **Excavated natural material**, as defined in this exemption.

In this exemption, **ASS** does not include **monosulfidic black ooze** or **acid mine drainage materials**.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies or intends to apply **ASS** to land as set out in condition 6.3 of this exemption.

3. Duration

- 3.1. This exemption commences on 5 December 2025 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Premises to which this exemption applies

- 4.1. This exemption applies to premises at which the consumer’s actual or intended application of **ASS** to land is carried out.

5. Exemption

- 5.1. Subject to the conditions of this exemption, the EPA exempts each **consumer** from the following provisions of the POEO Act and the Waste Regulation in relation to the consumer's actual or intended application of ASS to land as **engineering fill** or for use in **earthworks** at the **premises**:
- section 48 of the POEO Act in respect of the scheduled activities described in clauses 39 and 42 of Schedule 1 of the POEO Act;
 - Part 4 of the Waste Regulation;
 - section 88 of the POEO Act; and
 - clause 109 and 110 of the Waste Regulation
- 5.2. The exemption does not apply in circumstances where **ASS** is received at the **premises** for which the **consumer** holds a licence under the POEO Act that authorises the carrying out of the scheduled activities on the premises under clause 39 'waste disposal (application to land)' or clause 40 'waste disposal' (thermal treatment) of Schedule 1 of the POEO Act.

6. Conditions of exemption

A **consumer** who applies or intends to apply **ASS** to land in accordance with this exemption must comply with the following conditions.

- 6.1. At the time **ASS** is received at the **premises**, it must meet all **supplier requirements** for ASS which are required under 'the ASS order 2025'.
- 6.2. Prior to receiving **ASS** at the **premises**, the **occupier** of the **premises** must have:
- a) all necessary development consents under Part 4 of the **EP&A Act**;
 - b) all the necessary approvals to carry out the project or infrastructure under the former Part 3A or Division 5.2 of Part 5 of the **EP&A Act**; and
 - c) complied with any applicable requirements in Division 5.1 of Part 5 of the **EP&A Act** to receive waste subject to a resource recovery order and resource recovery exemption.
- 6.3. **ASS** can only be applied to land as **engineering fill** or for use in **earthworks**. See Notes about engineering and geotechnical considerations.
- 6.4. The consumer must keep a written record of the following for a period of six years:
- a) the quantity of **ASS** received;
 - b) the name and address of the **supplier** of **ASS** received; and
 - c) any records the **consumer** receives from the **supplier** in connection with the supply of the **ASS**.
- 6.5. The **consumer** must make any records required to be kept under this exemption available to the EPA on request.
- 6.6. The **consumer** must ensure that any application of **ASS** to land must occur within a reasonable period of time after receipt.

7. Definitions

In this exemption:

acid mine drainage materials means mine waste materials such as waste rock, tailings, overburden and other materials that contain sulfide minerals such as pyrite that have been, or may be, exposed to oxygen and water.

actual ASS means soils containing highly acidic soil horizons resulting from the oxidation of soil materials that are rich in RIS primarily pyrite. When this oxidation of RIS produces acidity in excess of the soil material's capacity to neutralise this acidity, the soil material will often acidify to a pH 4 or less, forming an actual ASS. The recognition of actual ASS materials can be confirmed by the presence of jarosite in these materials, or the location of other actual ASS or PASS materials within or in the nearby vicinity to the sampling location.

agricultural lime means alkaline calcium carbonate (CaCO_3) based neutralising agent with a particle size <500 micron used to treat ASS. It is recommended that the agricultural lime should be at least 95% calcium carbonate and hence has a neutralising value of 95. Agricultural lime must not include quick lime, burnt lime, or hydrated lime, where hydrated lime means calcium hydroxide created by adding calcium oxide to water.

application or apply to land means applying to land by:

- spraying, spreading or depositing on the land; or
- ploughing, injecting or mixing into the land; or
- filling, raising, reclaiming or contouring the land.

consumer means a person who applies, or intends to apply, ASS to land.

earthworks means filling to achieve the required topography subject to meeting appropriate engineering and geotechnical requirements. Earthworks does not include use of ASS as a growing medium, such as being used to grow vegetation.

engineering fill means material that is required to support structures or associated pavements, or for which engineering properties are to be controlled subject to meeting appropriate engineering and geotechnical requirements. Engineering fill does not include use of ASS as a growing medium, such as being used to grow vegetation.

EP&A Act means the *Environment Planning and Assessment Act 1979*.

excavated natural material has the same meaning as defined in *The excavated natural material order 2014*, except for the reference to:

- acid sulfate soils, potential acid sulfate soils or sulfidic ores; and
- pH from Table 4 of the order.

hyposulfidic materials means sulfidic soil that would not become severely acidic if allowed to oxidise completely.

monosulfidic black ooze means black, gel-like materials (moisture content greater than 70%), often oily in appearance, greatly enriched in monosulfides (up to 27%), high in organic matter (usually 10% organic carbon) that can form thick (greater than 1.0 m) accumulations in waterways (including drains), in ASS wetlands.

potential ASS ('PASS') means soils that contain appreciable RIS that have not oxidised but will acidify to a pH of less than 4.0 after oxidation. The soils are also known as hypersulfidic soil materials. The field pH of these soils in their undisturbed state is pH 4 or more, and may be neutral or slightly alkaline.

premises has the same meaning as in the POEO Act.

reduced inorganic sulfur includes iron disulfides (FeS_2), most commonly pyrite but also marcasite and

lower amounts of other compounds such as monosulfides (FeS) and elemental sulfur.

supplier has the same meaning as set out in *'The acid sulfate soil (ASS) order 2025'*.

supplier requirements mean the conditions set out in Condition 4 of *'The acid sulfate soil (ASS) order 2025'*.

virgin excavated natural material has the same meaning as in Schedule 1 to the POEO Act, except for the reference to sulfidic ores or soils.

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Notes

The EPA may amend or revoke this exemption at any time. It is the responsibility of the **consumer** to comply with all relevant requirements of the most current exemption. The current version of this exemption will be available on www.epa.nsw.gov.au.

In gazetting or otherwise issuing this exemption, the EPA is not in any way endorsing the use of this substance or guaranteeing that the substance will confer benefit.

The conditions set out in this exemption are designed to minimise the risk of potential harm to the environment, human health or agriculture, although neither this exemption nor the accompanying order guarantee that the environment, human health or agriculture will not be harmed.

It should be acknowledged that **ASS**, following treatment with agricultural lime, may undergo swelling over time due to the formation of secondary minerals such as gypsum and ettringite. Consequently, the material may not exhibit consistent geotechnical stability and may be unsuitable for use as a structural fill in certain construction situations.

While neutralised **ASS** may be utilised as backfill or for preloading purposes, its appropriateness for load-bearing applications or as engineered fill requires careful evaluation on a case-by-case basis.

A consumer of **ASS** should assess whether the material is fit for the purpose, whether the use may cause harm, and whether the use is appropriate in acidophilic environments. The **consumer** may need to seek professional engineering or technical advice.

Regardless of any exemption provided by the EPA, the person who causes or permits the application of the substance to land must ensure that the action is lawful and consistent with any other legislative requirements including, if applicable, any development consent(s) for managing operations on the site(s).

The receipt of **ASS** remains subject to other relevant environmental regulations in the POEO Act and the Waste Regulation. For example, a person who pollutes land (s. 142A) or water (s. 120), or causes air pollution through the emission of odours (s. 129), or does not meet the requirements for asbestos waste (s 144AAB), regardless of having an exemption, is guilty of an offence and subject to prosecution.

This exemption does not alter the requirements of any other relevant legislation that must be met in utilising this material, including for example, the need to prepare a Safety Data Sheet (SDS).

You will no longer receive the benefit of this exemption if you fail to comply with any condition of this exemption. Failure to make or keep records in accordance with this exemption constitutes an offence under section 286B of the POEO Act. It is also an offence under section 286C of the POEO Act to fail to give another person information or records where required under this exemption.