



## Acid Sulfate Soil Management Plan for Minor Works

### A1. Land Description

Lot Number:	<input type="text"/>	Section:	<input type="text"/>	DP/NPP/SP:	<input type="text"/>
	<input type="text"/>		<input type="text"/>		<input type="text"/>
	<input type="text"/>		<input type="text"/>		<input type="text"/>

Unit/Street No:	<input type="text"/>	Street:	<input type="text"/>
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Suburb/Town:	<input type="text"/>	Postcode:	<input type="text"/>
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### A2. Proposed Development

The development is considered as "Minor Works" as defined in the attached Management Plan:

- Dwelling
- Dwelling Additions
- Sewage Management Facility
- Effluent Land Application Area
- Dividing or Other Residential Fence
- Domestic Swimming Pool (Proposed Excavation less than 10 Tonnes of Acid Sulfate Soil)
- Other Development Considered by Council planning and environmental staff to be "Minor Works"

### A3. Soil Type

- ☐ Sandy Material
- ☐ Clayey or Other Materials

**NOTE:** A separate owner's consent form will be generated depending on what option is selected.  
This signed form will need to be scanned for inclusion with your submission to Council.

### A5. Applicants Declaration

It is accepted that Acid Sulfate Soils are present on the site and may be disturbed during the proposed development of the site. It is confirmed that the proposed project will be carried out in compliance with the attached Acid Sulfate Soil Management Plan.

Applicant's Name:

Date:

# Acid Sulfate Soil Management Plan for Minor Works

## NOTES:

This plan provides guidance for the management of acid sulfate soils where they are disturbed during minor works including the installation of:

- Footings for single dwelling and duplex developments
- Sewer and stormwater drainage associated with single dwellings and duplex developments
- Swimming pools (residential only)
- Domestic sewage management facilities and associated land application areas.
- Other works determined by Council's Environmental Health staff as minor which disturb less than 10 tonnes of soil

## Acid Sulfate Soils

Acid Sulfate Soils (ASS) are extremely acidic and sulphur rich soils found within the floodplain of coastal areas generally below RL 5m AHD. Potential Acid Sulfate Soils (PASS) is the common name given to soil and sediment containing iron sulfide (usually pyrite). They can become Actual Acid Sulfate Soils (AASS) and produce sulfuric acid if they become exposed to air through excavation or lowering of the watertable.

Problems caused by Acid Sulfate Soils include:

- Fish kills and aquatic habitat changes
- Corrosion of concrete, iron and steel
- Reduced plant growth – bare patches and scalds
- Poor foundation bearing capacity (clay sediments only)
- Iron staining of paths, driveways and retaining walls

## Where does this plan apply?

Under Clause 6.1 of Council's Local Environment Plan 2012 a person is required to obtain development consent to undertake works on land shown as being Class 1, 2, 3, 4 or 5 on the Acid Sulfate Soil Planning Maps.

Class of Land	Specified Works
1	<ul style="list-style-type: none"><li>▪ Any works</li></ul>
2	<ul style="list-style-type: none"><li>▪ Works below the ground surface</li><li>▪ Works by which the watertable is likely to be lowered</li></ul>
3	<ul style="list-style-type: none"><li>▪ Works beyond 1 metre below the natural ground surface</li><li>▪ Works by which the watertable is likely to be lowered beyond 1 metre below the natural ground surface</li></ul>
4	<ul style="list-style-type: none"><li>▪ Works beyond 2 metre below the natural ground surface</li><li>▪ Works by which the watertable is likely to be lowered beyond 2 metres below the natural ground surface</li></ul>
5	<ul style="list-style-type: none"><li>▪ Works within 500 metres of Class 1, 2, 3 or 4 land which are likely to lower the watertable below 1 metre AHD in adjacent Class 1, 2, 3 or 4 land</li></ul>

Council must not grant consent unless it has considered:

- (a) A preliminary soil assessment to ascertain the presence or absence of acid sulfate soils within the area of proposed works unless the applicant agrees that acid sulfate soils are present within the area of proposed works; and
- (b) Where the preliminary soil assessment ascertains (or the applicant agrees) that acid sulfate soils are present, the adequacy of an acid sulfate soils management plan prepared in accordance with guidelines, as amended from time to time, published by the Environment Protection Authority; and

## Acid Sulfate Soil Management Plan for Minor Works

- (c) The likelihood of the proposed development resulting in the oxidation of acid sulfate soils and discharge of acid water from the area of the proposed works; and
- (d) Any comments received from any relevant public authority the Council may consult with in respect of the application.

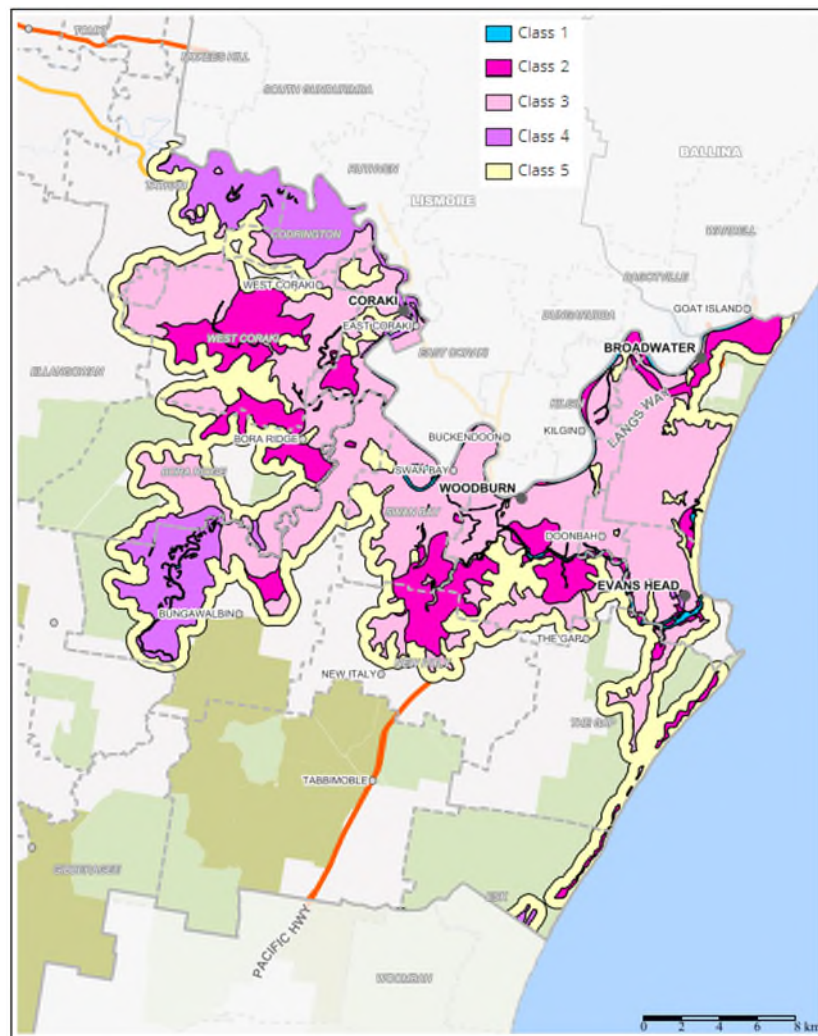
The guidelines nominated in (b) above (Acid Sulfate Soil Manual produced by the Acid Sulfate Soil Management Advisory Committee) require soil and water assessment including chemical analysis to develop a detailed management plan. However, the guidelines note that the level of assessment undertaken or the complexity of an acid sulfate soils management plan, should match the level of risks to the environment from the proposed activity. Council has concluded that the risk to the environment from the defined minor works is very low and the conservative liming rates adopted will address any likely negative impacts.

### Exemption

If the applicant can demonstrate the land has been **lawfully** filled, and any excavation will not extend below the depth of the fill, consent and thus an Acid Sulfate Soil Management Plan is not required.

### Acid Sulfate Soil Planning Maps

The NSW Department of Land & Water Conservation have produced maps which indicate the likely presence of acid sulfate soils and what depth below natural ground surface they may be expected to occur. These maps may be viewed on Council's intramaps facility via Council's website.



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Acid Sulfate Soils Map - RVC LGA

Richmond Valley Council  
Projection: GDA94 / MGA zone 56  
Date: 10/07/2023

## Attachment 1: Acid Sulfate Soil Management Plan for Minor Works

Procedures and management of acid sulfate soil (ASS) material for minor works are in accordance with management guidelines defined in the Acid Sulfate Soil Manual (1998).

### Minor Works

Minor works are those associated with the excavation of acid sulfate soils for the installation of minor works, including pools, septic tanks, footings for dwellings, and minor service trenches or as agreed in writing with Council.

### Handling and Management of Excavated ASS

Excavated ASS material is to be separated from overlying topsoil and temporarily stockpiled for later treatment. Ideally treatment is to commence immediately following the excavation of ASS material.

When ASS material is required to be temporarily stockpiled, provision is to be made for the safe storage to ensure minimal environmental impact. ASS stockpile area must be located away from waterways and contained to prevent any runoff to receiving waters. Stockpile pad is to be limed with fine grade-1 agricultural lime prior to stockpiling. A base layer of lime 5mm thick is adequate. All stockpiles are to be bunded and any leachate contained and limed with fine grade-1 agricultural lime.

### Liming and Treatment Procedure

1. Treatment is to occur on site unless prior written approval has been obtained from Council.
2. Provide a bed of agricultural lime beneath the excavated material.
3. Excavated ASS is to be spread into layers 10cm thick and treated within 48 hours of excavation.
4. Apply fine grade-1 agricultural lime at liming rates provided below. Hydrated or slaked lime must not be used without prior written agreement from Council.
5. Cultivate lime into the ASS material well, preferably using a rotary hoe or similar. Ensure an even homogenous mix of soil and lime is created before spreading the next soil layer, as this is crucial in treating ASS effectively.
6. Where required, repeat spreading and cultivation of lime into layers over successive treated layers.
7. Treated material should be pH tested to ensure treatment is effective.
8. As much of the treated material as possible should be returned to the excavation. Excess may be re-used on-site, or otherwise disposed in an appropriately licenced facility if necessary.

NOTE: The treatment of ASS will be carried out in accordance to standard Occupational Health and Safety Guidelines.

### Liming Rates

*Sandy material* – (assuming maximum 1% pyrite) – apply a minimum of 50kg agricultural lime per tonne of excavated acid sulfate soil

*Clay type material* – (assuming 3% pyrite) – apply a standard default rate of 150 kg of lime per tonne of excavated acid sulfate soil