



# Acid Sulfate Soils

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## What are acid sulfate soils?

The term acid sulfate soils (ASS) refers to soils that contain iron sulfides which, when exposed to oxygen, generate sulfuric acid. Any lowering of the watertable or physical disturbance of the soil in potential ASS areas will result in the exposure of the iron sulfide sediments to oxygen, which react to form sulfuric acid, hence the term 'acid sulfate soils'. This acid can leak into drains, wetlands, creeks and estuaries causing severe environmental damage. It can also affect industries such as fishing, tourism and oyster growing, and impact infrastructure by corroding steel and concrete structures such as the foundations of buildings or bridges.

## Where are acid sulfate soils found?

Acid sulfate soils are typically found in low-lying areas near the coast generally where surface elevation is less than five metres above mean sea level. Parts of the Greater Taree Local Government Area are affected by ASS. A map identifying the likely occurrence of these areas has been prepared as part of the Greater Taree [Local Environmental Plan \(LEP\) 2010](#) and can be accessed through Council's on-line mapping tool on its website ([www.gtcc.nsw.gov.au](http://www.gtcc.nsw.gov.au)). This map identifies five classes of land (see table below), with Class 1 having the highest risk for ASS.

## What if I want to develop land that may be affected by acid sulfate soils?

Where there is potential for ASS to occur it is desirable to minimise soil excavation or disturbance, and to design developments appropriately.

If you believe your land may be affected by ASS and you propose to carry out works that will disturb more than one tonne of soil or are likely to lower the water table for the construction or maintenance of drains; carry out dredging; construct artificial water bodies (including canals, dams and detention basins); construct building foundations (footings); or undertake flood mitigation works, you should refer to the [planning maps](#) to verify if your land is affected.

Once you know the class of your land you can refer to the following table to see if you require Council's consent to undertake the works. The second column describes the type of work that requires Council consent:

<b>Class of land as shown on the ASS map</b>	<b>Development</b>
Class 1	Any works
Class 2	Works below natural ground surface Works by which the watertable is likely to be lowered
Class 3	Works beyond one metre below natural ground surface Works by which the watertable is likely to be lowered beyond one meter below natural ground surface
Class 4	Works beyond two metres below natural ground surface Works by which the watertable is likely to be lowered beyond two metres below natural ground surface
Class 5	Works within 500 metres of adjacent Class 1,2,3, or 4 land, which are likely to lower the watertable below one metre AHD on adjacent Class 1,2,3 or 4 land

### **What if Council consent is required?**

If your land is classed 1 – 5 and you are undertaking the works described in column 2, you can either:

- accept that ASS is likely present and prepare a development application and an ASS Management Plan as set out in the [NSW ASS Manual](#); or
- undertake a preliminary assessment as set out in the NSW ASS Manual, to determine whether ASS is present and whether the proposed works are likely to disturb or oxidise these soils or lower the watertable.

If the preliminary assessment concludes that ASS is not present and Council agrees with this conclusion, Council will provide written advice confirming that you do not need to prepare an ASS Management Plan and that development consent will not be required in relation to ASS.

### **What must Council consider in relation to ASS before granting approval?**

If the preliminary assessment reveals ASS is present, Council must consider the following matters before it can grant consent:

- the adequacy of any ASS Management Plan prepared for the proposed development in accordance with the [ASS Assessment Guidelines](#); and
- the likelihood of the proposed development resulting in the discharge of acid water.

Council may also refer a copy of the development application and the related ASS Management Plan to the relevant NSW Government Department, and take into account any comments received.

**Note:** Digging holes for fence posts and burying deceased livestock are not considered to be works that require consent.

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