

ACID SULFATE SOILS

FACT SHEET

What are Acid Sulfate Soils?

Acid Sulfate Soils (ASS) are soils that contain iron sulphides that are stable and do not cause a problem when waterlogged. However, when they are exposed to air, after drainage or excavation, the soils rapidly form sulphuric acid. This acid can leach into the surrounding area acidifying neighbouring drains, wetlands, creeks, estuaries and bays, causing severe environmental damage. It can affect industries such as fishing and tourism, and can impact on public and private infrastructure by causing serious damage to steel and concrete structures.

Where do Acid Sulfate Soils occur?

ASS occur in low-lying coastal areas less than 5m above the high tide level. In NSW ASS have been found on every coastal estuary and embayment. ASS planning maps developed by the Office of Environment & Heritage (OEH) show areas that may be affected by the presence of ASS. This can be viewed at <http://www.environment.nsw.gov.au/acidsulfatesoil/riskmaps.htm>

ASS Maps and Liverpool Local Environmental Plan 2008

The ASS maps identify 5 classes of land, with Class 1 being the highest at risk of ASS. If you require further information, please visit Council's e-planning portal www.liverpoolplanning.com.au or view the Liverpool Local Environmental Plan 2008 (LLEP) maps on www.legislation.nsw.gov.au

The Acid Sulfate Soil Manual can be downloaded from the NSW Environment Protection Authority (EPA) website at <http://www.epa.nsw.gov.au/mao/acidsulfatesoils.htm>

The ASS maps further identify the types of work likely to present an environmental risk if undertaken. If these types of works are proposed, then pursuant to Clause 7.7 Acid Sulfate soils of LLEP 2008, further investigation is required

Class of land	Works
1	Any works.
2	Works below the natural ground surface. Works by which the water table is likely to be lowered.
3	Works more than 1 metre below the natural ground surface. Works by which the water table is likely to be lowered more than 1 metre below the natural ground surface.
4	Works more than 2 metres below the natural ground surface. Works by which the water table is likely to be lowered more than 2 metres below the natural ground surface.
5	Works within 500 metres of adjacent Class 1, 2, 3 or 4 land that is below 5 metres Australian Height Datum by which the water table is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land.

Mitigation Strategies

If acid sulfate soils are present on a site there are a number of ways of avoiding or mitigating possible impacts:

- Avoid disturbing acid sulfate soils by not undertaking works where they are located
- Avoid works which are likely to lower the water table
- If the acid sulfate soils are to be disturbed, manage the acid generation potential by neutralising any acid produced (e.g. with lime), preventing acid water leaving the site; and use of acid resistant construction materials
- Avoid using acid sulfate soils for land formation – if the soils are present manage the acid generation potential before the material leaves the site from where it originates.
- Keep the acid sulfate soils below the permanent water table.

What if I want to develop land that has been identified as containing acid sulfate soils?

Acid sulfate soils are manageable. Development does, however require that the constraints they pose are recognised and planned accordingly. The LLEP 2008 states the following:

- An acid sulfate soils management plan shall be prepared for the proposed works in accordance with the Acid Sulfate Soils Manual and has been provided to the consent authority.
- A copy of the plan and a copy of the development application have been provided to the Director-General of the Office of Environment and Heritage and the consent authority has considered any comments of the Director-General made within 21 days after those copies were provided to the Director-General.

Is a development consent required?

Development consent is required for many activities under LLEP 2008. However, development consent specifically under Clause 7.7 of LLEP 2008 for the carrying out of works is not required if:

- A preliminary assessment of the proposed works prepared in accordance with the Acid Sulfate Soils Manual indicates that an acid sulfate soils management plan need not be carried out for the works, and
- The preliminary assessment has been provided to the consent authority and the consent authority has confirmed the assessment by notice in writing to the person proposing to carry out the works.
- A development consent is not required under clause 7.7 of LLEP 2008 unless the works involve the disturbance of 1 tonne or more of soil.
- A development consent is not required under clause 7.7 of LLEP 2008 unless works are likely to lower the water table.

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Who can I speak with for more information?

You can contact Council's Planning Advisory Officer on 1300362170 to discuss if an acid sulfate soils assessment is required for your development.