



ON BEHALF OF
Sharpes Tractors

PROJECT DETAILS
4 INDUSTRIAL UNITS & ASSOCIATED SITE WORKS

LOCATION
LOT 18 - D.P. 264183
52 RACECOURSE ROAD
RUTHERFORD NSW 2320

SUBMISSION DATE
26 October 2021

ACID SULFATE SOIL MANAGEMENT PLAN



The
WILLIAMS
 RIVER STEEL
 GROUP OF COMPANIES
There is a Difference

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Table of Contents

ACID SULFATE SOILS	3
PURPOSE OF MANAGEMENT PLAN	3
RECOGNITION OF ACID SULFATE SOILS	3
MINIMISING DISTURBANCE	3
LIMING	4
DEVELOPMENT	4
CLASSIFICATION OF ACID SULFATE	4
MANAGEMENT PRINCIPLES	4

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ADDRESS OF LAND TO BE DEVELOPED: Lot 18 - D.P 264183
 52 Racecourse Road
 Rutherford NSW 2320

SITE AREA: 11406m2

LOCAL AUTHORITY: Maitland City Council

STATUS: D.A. Submission

ZONING: B5 – Business Development



AERIAL MAP – Lot 18, D.P 264183 Rutherford

ACID SULFATE SOILS

Acid sulfate soils are widespread along the margins of the NSW coast, in estuarine floodplains and coastal lowlands, including urban areas, farmland, mangrove tidal flats, salt marshes and tea-tree swamps. Disturbance or poor management and use of ASS can generate sulfuric acid and salts. Acid Sulfate Soils can lower soil and water pH and increase salinity, reducing or precluding vegetation growth and producing soil conditions which may be detrimental to concrete and steel components of structures.

Appropriate planning and management of urban and agricultural land to prevent damage associated with acid sulfate soils is now recognised as an extremely important issue for the NSW coast.

The possibility of locating Acid Sulfate Soils within the subject site is acknowledged with Williams River Steel to implement appropriate management strategies where required.

PURPOSE OF MANAGEMENT PLAN

- Identify possible areas of concern and sources of Acid Sulfate Soils affected by construction;
- Evaluate potential environmental impacts associated with construction;
- Provide preventative and control measures during and after construction;

RECOGNITION OF ACID SULFATE SOILS

Williams River Steel is a design and construct company that is able to recognise potential Acid Sulfate Soils through a number of key indicators including:

- If disturbed, may smell of rotten eggs;
- The presence of Jarosite, usually found as amber-yellow to brown crusts or coatings of minute crystals;
- Monosulfides, appear as a black ooze, can form at the bottom of slow-moving or still waters in Acid Sulfate prone areas;
- Stunted or dead vegetation;
- Rust –coloured iron stains and oily-looking water;
- Clear blue-green water body.
- Water logged soils that may range from dark grey mud to grey sands

MINIMISING DISTURBANCE

In the event of Acid Sulfate Soils being identified in the area of proposed works Williams River Steel minimise the disturbance of Acid Sulfate Soils where possible to ensure water quality is acceptable at receiving waters and property is not detrimentally affected.

If there is no alternative but to disturb affected soils Williams River Steel have a management strategy to deal with the ever increasing issue of Acid Sulfate Soils.

LIMING

Sulfuric acid can be neutralised with agricultural lime, but this is too costly for large areas of badly affected land. One technique that has had good results to date is liming of drains so that the sulfuric acid produced in the drain walls is neutralised by the lime as it is washed out. Acid water can also be neutralised by lime.

DEVELOPMENT

The proposed development will involve the erection 4 industrial units.

CLASSIFICATION OF ACID SULFATE

The proposed development site has been identified as land possibly affected by “Class 5” Acid Sulfate Soils in accordance with Maitland City Council’s Local environment Plan 2011.

MANAGEMENT PRINCIPLES

The proposed development involves the construction of steel framed free standing units with minor excavation and earthworks to achieve level building footings. The required footings will be kept to a minimum where possible with footings and piling to be contained within the building envelope.

Due to the site’s category of Acid Sulphate Soils and the volume of excavation required below the natural ground level, we see the development having no impact on existing acid sulfate levels.

The following principles are adopted by Williams River Steel to combat any potential impact of Acid Sulfate Soils being identified on the subject site:

- The disturbance of Acid Sulfate Soils should be avoided wherever possible.
- Where disturbances of Acid Sulfate Soils is unavoidable, preferred management strategies are:
 - Minimisation of disturbance.
 - Neutralisation.
 - Hydraulic separation of sulfides either on its own or in conjunction with dredging.
 - Strategic reburial.
- Stockpiling of untreated Acid Sulfate Soils above the permanent groundwater table with (or without) containment is not an acceptable long-term management strategy. For example, soils that are to be stockpiled, disposed of, used as fill, placed as temporary or permanent cover on land or in waterways, sold or exported off the treatment site or used in earth bunds, should be treated/managed in a timely manner.
- All excavated materials which need to be stockpiled should be covered to reduce exposure to the weather.
- Neutralisation can be achieved by using agricultural lime. Mix excavated soil material and surfaces with lime at a rate recommended by manufacturer’s instructions.
- Reburial location must be one that is permanent.
- When reburying materials precaution should be taken to avoid oxidation.

The effective management of Acid Sulfate Soils will reduce the potential for acid damage and corrosion of surrounding structures and prevent any detrimental effects to the environment.